CONFERENCE GUIDE

16TH PACIFIC RIM CONFERENCE ON CERAMIC AND GLASS TECHNOLOGY AND THE GLASS & OPTICAL MATERIALS DIVISION MEETING (GOMD 2025)

A World of Science and Technology

PACRIM 16

MAY 4–9, 2025
VANCOUVER, BC, CANADA

The American Ceramic Society
ceramics.org

PACRIM WELCOME

I am pleased to welcome you to the 16th Pacific Rim Conference on Ceramic and Glass Technology (PACRIM 16) including Glass and Optical Division Meeting (GOMD 2025). The Pacific Rim Conference on Ceramic and Glass Technology is a bi-annual conference held in collaboration with the ceramic societies of the Pacific Rim countries, namely the American Ceramic Society, Chinese Ceramic Society, Ceramic Society of Japan, Korean Ceramic Society, and the Australian Ceramic Society. The 1st PACRIM conference was hosted by the American Ceramic Society (ACerS) in Honolulu, Hawaii, in 1993. For this 16th PACRIM, we are happy to welcome all of you to Vancouver, BC.

The comprehensive PACRIM 16 technical program offers a wide range of very exciting and emerging topics with 34 symposia. The PACRIM 16 program provides participants with a forum to identify global challenges and opportunities in various ceramic technologies and for knowledge exchange to facilitate the establishment of new contacts from all over the world.

I highly encourage you to join your colleagues in attending the plenary sessions on Monday and Tuesday. Monday morning features plenary talks by Martin Harmer, Lehigh University, Yuichi Ikuhara, University of Tokyo, Jia Lu, University of California, San Diego, and Haiyan Wang, Purdue University.
Seungbum Hong, Korea Advanced Institute of Science and Technology and Liangbi Su, Chinese Academy of Science, will be speaking on Tuesday morning.

Please also plan to attend our special networking events including the Welcome Reception on Sunday night, the Poster Session and Reception on Tuesday night, and the Conference Dinner on Thursday night. These events offer the opportunity to network with colleagues from around the globe.

PACRIM 16 also includes the important topics covered in the Glass and Optical Materials Division (GOMD) Annual Meeting, including five award lectures and a student poster competition. Please refer to the GOMD section of this program for all the details.

Finally, we appreciate the support of our sponsors for their generosity. Please refer to this program for the full list of sponsors.

We sincerely hope you take advantage of all the opportunities PACRIM16 offers to learn about the latest technologies, meet friends and acquaintances, share ideas, and form collaborations.

Yiquan Wu
Chair, PACRIM16
Alfred University

YIQUAN WU
PACRIM CHAIR

BRIAN HUEY
PACRIM CO-CHAIR

TABLE OF CONTENTS

Welcome from The American Ceramic Society (ACerS)

The ACerS community is open to all, and we're happy to have you with us. ACerS values diverse and inclusive participation within the field of ceramic science and engineering. We strive to promote involvement and access to leadership opportunity regardless of race, ethnicity, gender, religion, age, sexual orientation, nationality, disability, appearance, geographic location, career path or academic level.

If you are a new member or joining us for the first time, please visit the ACerS registration desk to learn more.

We hope you enjoy the conference and want you to know that all individuals are welcome at ACerS conferences and events.

MEETING REGULATIONS

Cell phones silent

During oral sessions conducted during Society meetings, unauthorized photography, videotaping, and audio recording is strictly prohibited for two reasons:

1. Conference presentations are the intellectual property of the presenting authors and as such are protected, and
2. Engaging in photography, videotaping, or audio recording is disruptive to the presenter and the audience.

Failure to comply may result in the removal of the offender from the session or from the remainder of the meeting.

Note: The Society may engage photographers to photograph sessions for marketing and promotional purposes.

No photography/ recording

MEETING REGULATIONS

The American Ceramic Society is a nonprofit scientific organization that facilitates the exchange of knowledge meetings and publication of papers for future reference. The Society owns and retains full right to control its publications and its meetings. The Society has an obligation to protect its members and meetings from intrusion by others who may wish to use the meetings for their own private promotion purpose. Literature found not to be in agreement with the Society's goals, in competition with Society services or of an offensive nature will not be displayed anywhere in the vicinity of the meeting. Promotional literature of any kind may not be displayed without the Society's permission and unless the Society provides tables for this purpose. Literature not conforming to this policy or displayed in other than designated areas will be disposed. The Society will not permit unauthorized scheduling of activities during its meeting by any person or group when those activities are conducted at its meeting place in interference with its programs and scheduled activities. The Society does not object to appropriate activities by others during its meetings if it is consulted with regard to time, place, and suitability. Any person or group wishing to conduct any activity at the time and location of the Society meeting must obtain permission from the Executive Director or Director of Meetings, giving full details regarding desired time, place and nature of activity.

The American Ceramic Society values diverse and inclusive participation within the field of ceramic science and engineering. ACerS strives to promote involvement and access to leadership opportunity regardless of race, ethnicity, gender, religion, age, sexual orientation, nationality, disability, appearance, geographic location, career path or academic level. Visit the registration desk if you need access to a nursing mother's room or need further assistance. For childcare services, please check with the concierge at individual hotels for a listing of licensed and bonded child care options. The American Ceramic Society plans to take photographs and video at the conference and reproduce them in educational, news or promotional materials, whether in print, electronic or other media, including The American Ceramic Society's website. By participating in the conference, you grant The American Ceramic Society the right to use your name and photograph for such purposes. All postings become the property of The American Ceramic Society. During oral sessions conducted during Society meetings, unauthorized photography, videotaping and audio recording is prohibited. Failure to comply may result in the removal of the offender from the session or from the remainder of the meeting.

Registration Requirements: Attendance at any meeting of the Society shall be limited to duly registered persons.

Disclaimer: Statements of fact and opinion are the responsibility of the authors alone and do not imply an opinion on the part of the officers, staff or members of The American Ceramic Society. The American Ceramic Society assumes no responsibility for the statements and opinions advanced by the contributors to its publications or by the speakers at its programs; nor does The American Ceramic Society assume any liability for losses or injuries suffered by attendees at its meetings. Registered names and trademarks, etc. used in its publications, even without specific indications thereof, are not to be considered unprotected by the law. Mention of trade names of commercial products does not constitute endorsement or recommendations for use by the publishers, editors or authors.

Final determination of the suitability of any information, procedure or products for use contemplated by any user, and the manner of that use, is the sole responsibility of the user. Expert advice should be obtained at all times when implementation is being considered, particularly where hazardous materials or processes are encountered.

SPECIAL EVENTS

Welcome Reception

Sunday, May 4
4:30 – 6 p.m.
Hyatt Regency

Pick up your conference badge and then join your friends and colleagues for a drink and some light appetizers to kick off the conference. All conference attendees are encouraged to attend.

Kreidl Lunch

Tuesday, May 6
12 p.m. – 1:15 p.m.
Fairmont

Network with colleagues and enjoy the presentation and box lunches provided by AGC. Pre-registration is required for this event.

All-Conference Poster Session

Tuesday, May 6
5:30 – 7 p.m.
Hyatt Regency

Interact with all PACRIM and GOMD poster presenters while enjoying a drink and some hand-passed appetizers. All conference attendees are encouraged to attend.

Student and Young Professional Networking Event

Tuesday, May 5
7:30 p.m. – 9 p.m.
Hyatt Regency

Have a drink and pizza on us as you network with other young professionals at this PACRIM/GOMD event!

Free Time on Own

Wednesday, May 7
12 p.m. - on
Various

Stop by the registration desk or visit our conference website for ideas to tour the city of Vancouver during this planned conference down time.

Our Past and Future with Glasses and Ceramics: Young Professionals Luncheon, sponsored by Owens Corning

Thursday, May 6
12 p.m. - 1:15 p.m.
Fairmont

This is for young professionals to discuss both the past and future of glass and ceramics. The event will begin with a group activity to place into context the past of glass and ceramics. Lunch will start with a discussion of the future of glass and ceramics with invited panelists.

All-Conference Celebration

Thursday, May 8
7-9:30 p.m.
Hyatt Regency

Join us for drinks and a sit-down buffet dinner that will feature an awards presentation, followed by a special performance by a local professional indigenous dance company. This is included as a part of your conference registration and no additional ticket is required.

PLENARY SPEAKERS

MARTIN HARMER, LEHIGH UNIVERSITY

A Commentary on Complexions: Conception, Controversy and Adoption

Abstract
What are interface complexions and how has this concept evolved? What has been the controversy behind this subject during its evolution? How can the concept of complexions be applied to design, tailor and engineer materials with controlled microstructures and greatly improved material properties and performance? How widely has it been successfully applied in other disciplines? What are the obstacles to getting a new concept adopted by a community and how can they be minimized? What are the future predictions, directions and needs in complexions research? If you are interested in these sorts of questions I welcome you to participate in this plenary lecture and share your thoughts.

JIAN LUO, UNIVERSITY OF CALIFORNIA, SAN DIEGO

From Ultrafast Sintering to Controlling Microstructures with Electric Fields

Abstract
This talk will first review a series of mechanistic studies of flash sintering. In 2015, we reported that flash sintering generally starts as a thermal runaway, along with other independent studies. In 2017, we further reported a mechanistic study to suggest ultrahigh heating rates as the key factor in enabling ultrafast sintering by demonstrating that similar densification rates can be achieved for ZnO via (1) flash sintering and (2) rapid thermal annealing (intense infrared heating without an electric field) with similar heating rates of ~200 K/s. A similar conclusion was also obtained by Professor Richard Todd and co-workers via an independent "ultra-fast firing" study of YSZ. Subsequently, general ultrafast sintering methods, enabled by the same underlying mechanism, were demonstrated in collaborative studies. Although we have demonstrated that ultrafast sintering can be achieved without an electric field, we recognize that electric fields can influence microstructural evolution. For example, we discovered an electrochemically induced grain boundary disorder-to-order transition to trigger abnormal grain growth in Bi_2O_3-doped ZnO. Moreover, combined aberration-corrected electron microscopy and ab initio molecular dynamics simulations showed that applied electric fields can induce grain boundary oxidation transitions near the anode to create continuously graded microstructures in undoped ZnO. Several ongoing projects and unpublished results will also be discussed.

YUICHI IKUHARA, UNIVERSITY OF TOKYO

Grain Boundary Atomic Structures and Their Dynamics in Ceramics

Abstract
Grain boundary (GB) properties in ceramics are known to be strongly influenced by factors such as misorientation angle and the orientation of the GB plane, but the exact effects of these factors have yet to be fully understood. Additionally, dopant segregation at GBs plays a crucial role in modifying these properties. In this study, we systematically fabricated various types of bicrystals from ceramics like such as Al_2O_3, ZrO_2, $SrTiO_3$, with and without dopants, in order to investigate their GB atomic structures. Using aberration-corrected scanning transmission electron microscopy (STEM), the atomic structures and chemical compositions of these GBs were thoroughly characterized. Beyond structural analysis, the dynamics of GBs, such as fracture and migration, were also studied using in-situ TEM straining experiments combined with nano-indentation and MEMS techniques. The results showed that GB fractures tend to occur along specific crystal planes, and dislocations were observed to emit from the crack front. Furthermore, we recently demonstrated that high-energy electron beam irradiation can precisely control GB migration in ceramics. This migration occurs via the cooperative shuffling of atoms in the GB ledges along defined routes, offering new insights into how GB migration proceeds. These findings provide valuable contributions to understanding various GB phenomena in ceramics.

HAIYAN WANG, PURDUE UNIVERSITY

Complex Hybrid Metamaterials Designs based on Functional Ceramics and Beyond

Abstract
Functional ceramics are widely used in various electronic, optical and magnetic devices, as well as structural components. Coupling their unique multifunctionalities, ceramics and their nanocomposites with unique nanoscale interfaces and defect designs have allowed a new class of ceramic-based hybrid metamaterial designs. In this talk, multiple ceramic-based hybrid metamaterial systems that couple 2 or more functional materials in a vertically aligned nanocomposite (VAN) thin film form, are introduced. Such hybrid metamaterial designs provide unlimited possibilities in developing new materials with multifunctionalities and/or unique functionalities for future plasmonics and optics, electronics and energy applications. The talk will cover some of the pioneering VAN demonstrations in oxide-oxide systems for low field magnetoresistance materials and multiferroics, recent oxide-metal nanocomposites with superior anisotropic optical and magnetic properties, and very recent nitride-metal and nitride-oxide based VANs coupling ferroelectric, ferromagnetic, plasmonic, hyperbolic optical response, and superconductivity in a single material platform. We also demonstrate that it is possible to transfer these epitaxially grown complex hybrid metamaterials onto various device relevant substrates for on-chip integration and flexible sensors. We envision that achieving highly ordered VAN-based hybrid metamaterials will provide enormous opportunities in new device concepts and nanoscale fabrication paths that could not be easily achieved by single materials or current lithography and patterning methods.

PLENARY SPEAKERS

SEUNGBUM HONG, KOREA ADVANCED INSTITUTE OF SCIENCE & TECHNOLOGY

Imaging Polarization and Ion Distribution in Functional Materials

Abstract
Ion is the building block of most of the ceramic materials. In ceramic materials, positive ions and negative ions are neighboring each other with mostly ionic bonding at atomic scale. Sometimes, polymer and semiconductor materials contain ions that can diffuse in and out of them. In the meantime, polarization charges of ferroelectric materials are screened by equal amount of surface charges with opposite polarity in ambient conditions. As such, imaging the location, charge as well as the velocity of each ion and polarization will greatly enhance our understanding of electrochemical properties of ferroelectric materials. Here I present our research on various imaging methods of polarization using proxies like piezoelectric strain, screening charges, and friction coefficient, which can be used to image ferroelectric polarization. Furthermore, I will show how these contrast mechanisms can be applied to energy harvesting and chemical mechanical polishing. In addition, I present our research on various imaging methods of ions and charged defects using proxies like electrochemical strain, and electric charges, which can be used to image ion distribution. Finally, I will show how imaging ion and electron conduction path can help understand the nanoscale behavior of battery materials.

LIANGBI SU SHANGHAI INSTITUTE OF CERAMICS, CHINESE ACADEMY OF SCIENCES

Local structure tailoring of rare-earth doped fluoride materials for optical applications

Abstract
The traditional strategy for development of novel laser crystals mainly adopts the combination of lattice crystals and active ions, therefore the availability of spectroscopic parameters is seriously limited and can not meet the requirements of the rapidly developing laser applications. Alkaline earth fluoride crystals MF_2 (M=Ca, Sr, Ba) combine the characteristics of wide transmittance range, high thermal conductivity and low phonon energy, which is favorable for application as optical components. Additionally, rare earth (RE) dopants tend to form atomic scale clusters of various structure, thus could serve as platform for tailoring local coordination of rare earth laser active ions. We proposed the strategy of designing the luminescent behaviors of rare earth doped MF_2 crystals by tailoring the local coordinate structure via co-doping regulating ions. The spectroscopic parameters of RE ions could be modulated within a large range, meanwhile the energy transfers between RE dopants could be well controlled. Using RE doped MF_2 crystal components of high-quality as gain materials, a series of breakthroughs in laser performances were achieved: in the ~1 micron spectral region, the laser pulse duration of solid-state laser based on Nd^{3+} doped CaF_2 crystals was suppressed to sub-100 fs range for the first time; in the ~2 micron spectral region, CW laser of a slop efficiency of over 80% was realized using Tm^{3+}:SrF_2 crystals, corresponding to a quantum efficiency close to 200%; in the ~3 micron spectral region, high efficiency CW laser was generated using Er:CaF_2 crystals and the Er^{3+} doping concentration (0.5 at.%) was decreased by two orders of magnitude comparing to commercial mid-infrared laser crystals. The outstanding laser performances indicate that rare earth doped fluorite-type crystals are promising candidates for high-performance solid-state lasers.

THE SAMUEL GEIJSBEEK PACRIM INTERNATIONAL AWARDS

Award honors Samuel Geijsbeek, one of the founders of The American Ceramic Society, who died in 1943.

The award recognizes individuals who are members of the Pacific Rim Conference (PACRIM) societies, for their contributions in the field of ceramics and glass technology that have resulted in significant industrial and/or academic impact, international advocacy, and visibility of the field.

Two Geijsbeek Awards will be presented during the plenary session honoring **Dileep Sing**h and **Junichi Tatami.**

DILEEP SINGH

Thermal and Structural Materials (TSM) Group Lead
Argonne National Laboratory's Applied Materials Division.

JUNICHI TATAMI

Professor in the Graduate School of Environment and Information Sciences
Yokohama National University, Japan.

PACRIM SYMPOSIA ORGANIZERS

PACRIM SYMPOSIUM 1

ENVIRONMENTAL BARRIER COATINGS FOR HIGH-PERFORMANCE CERAMICS

Organizers:
Anant Setlur, GE Aerospace, USA
Kang N. Lee, NASA Glenn Research Center, USA
K. Chen, National Research Council-Canada, Canada
E. Godbole, GE Aerospace, USA
D. Poerschke, University of Minnesota, USA
R. Vassen, Forschungszentrum Jülich GmBH, Germany
J. Wan, GE Aerospace, USA
Jie Zhang, Institute of Metal Research, Chinese Academy of Sciences, China
Makoto Hasegawa Yokohama National University, Japan

PACRIM SYMPOSIUM 2

FRONTIER OF MODELING AND DESIGN OF CERAMICS AND COMPOSITES

Organizers:
Gerard L. Vignoles, University of Bordeaux, France
Gustavo Costa, NASA Glenn Research Center, USA
Peter Kroll, University of Texas at Arlington, USA
Kwang-Ryeol Lee, Korea Institute of Science and Technology, Korea
Shuzhou Li, Nanyang Technological University, Singapore
Jian Luo, University of California, San Diego, USA
Yixiu Luo, Institute of Metal Research, Chinese Academy of Sciences, China
Sergei Manzhos, Tokyo Institute of Technology, Japan
Katsuyuki Matsunaga, Nagoya University, Japan
Bin Liu, Shanghai University, China
Jingyang Wang, Institute of Metal Research, Chinese Academy of Sciences, China
Sergei Manzhos, Tokyo Institute of Technology, Japan

PACRIM SYMPOSIUM 3

SOLID OXIDE FUEL CELLS AND GREEN HYDROGEN TECHNOLOGIES

Organizers:
Fatih Dogan, Missouri University of Science and Technology, USA
Hiroyuki Shimada, National Institute of Advanced Industrial Science and Technology, Japan
Minfang Han, Tsinghua University, China
Guntae Kim, Shanghai Institute of Applied Physics, China
Sebastian Molin, Gdansk University of Technology, Poland
Isao Kagomiya, Nagoya Institute of Technology, Japan
Yasunobu Mizutani, National Institute of Advanced Industrial Science and Technology, Japan
Kevin Huang, University of South Carolina, USA
Kwati Leonard, Kyushu University, Japan
Tae Ho Shin, KICET, Korea

PACRIM SYMPOSIUM 4

POLYMER-DERIVED CERAMICS, COMPOSITES AND NANO-COMPOSITES AS FUNCTIONAL INORGANIC MATERIALS

Organizers:
Samuel Bernard, CNRS, France
Zhaoju Yu, Xiamen University, College of Materials, China
Yuji Iwamoto, Nagoya Institute of Technology, Japan
Günter Motz, University of Bayreuth, Germany
Rajendra K. Bordia, Clemson University, United States

PACRIM SYMPOSIUM 5

GEOPOLYMERS: LOW ENERGY AND ENVIRONMENTALLY FRIENDLY, SCALABLE CERAMICS

Organizers:
Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA
Ana Constancia Trinadade, University of Sao Paolo, Brazil
Peigang He, Harbin Institute of Technology, China
Henry A. Colorado, Universidad de Antioquia, Colombia
Hao Wang, University of Southern Queensland, Australia
John L. Provis, Paul Scherrer Institute Switzerland

PACRIM SYMPOSIUM 6

DIELECTRIC CERAMICS FOR MICROWAVE AND SUBMILLIMETER-WAVE APPLICATIONS

Organizers:
Rick Ubic, Boise State University, USA
Hong Wang, Southern University of Science and Technology, China
Xiang Ming Chen, Zhejiang University, China
Michael Lanagan, The Pennsylvania State University, USA
Heli Jantunen, University of Oulu, Finland
Nate Orloff, NIST, USA
Zhifu Liu, Shanghai Institute of Ceramics, China

PACRIM SYMPOSIUM 7

DIRECT HEAT-TO-ELECTRICITY ENERGY CONVERSION MATERIALS AND THERMAL ENERGY HARNESSING CHALLENGES

Organizers:
Michitaka Ohtaki, Kyushu University, Japan
Lidong Chen, Shanghai Institute of Ceramics, China
Soonil Lee, Changwon National University, Korea
Takao Mori, National Institute for Materials Science, Japan
Takayoshi Katase, Tokyo Institute of Technology, Japan
Sunmi Shin, National University of Singapore, Singapore
Mona Zebarjadi, University of Virginia, USA
Jing-Feng Li, Tsinghua University, China

PACRIM SYMPOSIA ORGANIZERS

PACRIM SYMPOSIUM 8

STE(A)M OUTREACH, EDUCATION, ENGAGEMENT AND RETENTION (JOINT WITH GOMD)

Organizers:
Charmayne Lonergan, Missouri University of Science and Technology, USA
Kim Scott, Colorado School of Mines, USA
Casey Schwarz, Ursinus College, USA
Amanda Engen, The American Ceramic Society, USA
Kathryn Goetschius, Corning Inc., USA

PACRIM SYMPOSIUM 9

FUNDAMENTALS OF INTERFACES, GRAIN BOUNDARIES AND SURFACES: FROM INTERATOMIC BONDING TO MACROSCOPIC PROPERTIES

Organizers:
Klaus van Benthem, University of California, Davis, USA
Naoya Shibata, University of Tokyo, Japan
Si-Young Choi, Pohang University, Korea
Jiangyu Li, Southern University of Science and Technology, China
Hui Gu, Shanghai University, China
Rajendra Bordia, Clemson University, USA

PACRIM SYMPOSIUM 10

CERAMICS OF TOMORROW FOR GREEN ENERGY AND CLEANER ENVIRONMENT

Organizers:
Alberto Vomiero, Lulea University of Technology, Sweden
Federico Rosei, University of Trieste, Italy,
Gaixia Zhang, École de Technologie Supérieure (ÉTS), Université du Québec, Canada
Kassa Belay Ibrahim, Ca'Foscari University of Venice, Italy
Shaowei Zhang, University of Exeter, United Kingdom
Yawei Li, Wuhan University of Science and Technology, China
Dong Hao, Shanghai Institute of Ceramics, China
Csaba Balázsi, HUN-REN Centre for Energy Research, Hungary

PACRIM SYMPOSIUM 11

OPTICAL AND ELECTRONIC PHASE CHANGE MATERIALS: SCIENCE AND APPLICATION

Organizers:
Carlos Rios Ocampo, University of Maryland, College Park, USA
Juejun Hu, Massachusetts Institute of Technology, USA
Kathleen Richardson, University of Central Florida, USA
Matthias Wuttig, University of Aachen, Germany
Syed Ghazi Sarwat, IBM, Switzerland
Lan Li, Westlake University, China

PACRIM SYMPOSIUM 12

ENGINEERING CERAMICS AND CERAMIC MATRIX COMPOSITES: PROCESSING, DESIGN, AND APPLICATIONS

Organizers:
Hua-Tay Lin, Guangdong University of Technology/Hunan University of Humanities, Science and Technology, China
Junichi Tatami, Yokohama National University, Japan
Young-Wook Kim, University of Seoul, Korea
Michael C. Halbig, NASA Glenn Research Center, USA
Salvatore Grasso, Queen Mary University of London, United Kingdom
De-Chang Jia, Harbin Institute of Technology, China
Gerard L. Vignoles, University of Bordeaux, France
Kevin Plucknett, Dalhousie University, Canada
Tatsuki Ohji, National Institute of Advanced Industrial Science and Technology, Japan
Andrew Wereszczak, Oak Ridge National Laboratory, USA
Yu-Ping Zeng, Shanghai Institute of Ceramics, China
Henry Colorado, University of Antioquia, Columbia
Young-Jo Park, Korea Institute of Materials Science, Korea
Gunter Motz, University of Bayreuth, Germany
Ján Dusza, Institute of Materials Research of SAS, Slovakia
Zbigniew Pędzich, AGH, University of Krakow, Poland
Monica Ferraris, Politecnico di Torino, Italy

PACRIM SYMPOSIUM 13

FUNCTIONAL DEFECTS IN CERAMIC MATERIALS

Organizers:
Hui (Claire) Xiong, Boise State University, USA
Candace Chan, Arizona State University, USA
Janelle Wharry, Purdue University, USA
Munekazu Motoyama, Kyushu University, Japan
Haixue Yan, Queen Mary University of London, United Kingdom
Bo Zhang, Xinjiang Technical Institute of Physics & Chemistry of CAS, China
Palani Balaya, National University of Singapore, Singapore

PACRIM SYMPOSIUM 14

ADVANCED STRUCTURAL CERAMICS AND CMCS FOR ULTRA EXTREME ENVIRONMENTS

Organizers:
Tessa Davey, Bangor University, United Kingdom
William G. Fahrenholtz, Missouri University of Science and Technology, USA
Ji Zou, Wuhan University of Technology, China
Jon Binner, University of Birmingham, United Kingdom
Bikramjit Basu, Indian Institute of Science, Bangalore, India
Ryo Inoue, Tokyo University of Science, Japan
Sea-Hoon Lee, Korea Institute of Materials Science, Korea
Scott McCormack, University of California Davis, USA
Laura Silvestroni, Institute of Science, Technology and Sustainability for Ceramics, CNR, Italy
Chris Weinberger, Colorado State University, USA
Yanchun Zhou, Zhengzhou University, China
Jie Yin, Shanghai Institute of Ceramics, China

PACRIM SYMPOSIA ORGANIZERS

PACRIM SYMPOSIUM 15

POROUS CERAMICS: FROM INNOVATIVE PROCESSING TO ADVANCED INDUSTRIAL APPLICATIONS

Organizers:
Tobias Fey, Friedrich-Alexander University of Erlangen-Nürnberg, Germany
Manabu Fukushima, National Institute of Advanced Industrial Science and Technology, Japan;
Paolo Colombo, University of Padova, Italy
Yuping Zeng, Shanghai Institute of Ceramics, China
Samuel Bernard, Institute of Research for Ceramics-CNRS, Limoges, France
Doug Wing, Corning Incorporated, USA
Jian-feng Yang, Xi'an Jiaotong University, China
NV Ravikumar, IIT Madras, India
Carlos Rambo, University of Santa Catarina Florianopolis, Brazil

PACRIM SYMPOSIUM 16

ADVANCED POWDER PROCESSING AND MANUFACTURING TECHNOLOGIES

Organizers:
Junichi Tatami, Yokohama National University, Japan
Dechang Jia, Harbin Institute of Technology, P.R., China
Makio Naito, Osaka University, Japan
Masayoshi Fuji, Nagoya Institute of Technology, Japan
Fiqiri Hodaj, Grenoble Institute of Technology, France
Yuji Hotta, National Institute of Advanced Industrial Science and Technology, Japan
C.C.Huang, Hosokawa Micron Powder Systems, USA
Jian Luo, University of California, San Diego
Taeseup Song, Hanyang University, Korea
Tohru Suzuki, National Institute of Materials Science (NIMS), Japan
Satoshi Tanaka, Nagaoka University of Technology, Japan
Chiharu Tokoro, Waseda University, Japan
Wei-Hsing Tuan, National Taiwan University, Taiwan, ROC
Jingxian Zhang, Shanghai Institute of Ceramics, P.R. China

PACRIM SYMPOSIUM 17

ADDITIVE MANUFACTURING OF CERAMICS AND COMPOSITES

Organizers:
Bai Cui, University of Nebraska-Lincoln, USA
Xuan Song, University of Iowa, USA
Yiquan Wu, Alfred University, USA
Fei Peng, Clemson University, USA
Nicholas Ku, Army Research Laboratory, USA
Eduardo Saiz, Imperial College London, United Kingdom
Soshu Kirihara, Osaka University, Japan
Hui-Suk Yun, Korea Institute of Materials, Korea
George V. Franks, The University of Melbourne, Australia
Zehui Du, Nanyang Technology University, Singapore
Rujie He, Beijing Institute of Technology, China
Zhangwei Chen, Shenzhen University, China
Martin Schwentenwein, Lithoz GmbH, Austria
Paolo Colombo, University of Padova, Italy
Alberto Ortona, The University of Applied Sciences and Arts of Southern Switzerland, Switzerland
Jia-Min Wu, Huazhong University of Science and Technology, China

PACRIM SYMPOSIUM 18

NANOSTRUCTURED METAL OXIDES AND METAL CHALCOGENIDES FOR ADVANCED FUNCTIONAL APPLICATIONS

Organizers:
Pelagia-Irene (Perena) Gouma, The Ohio State University, USA
Joerg Jinschek, Technical University of Denmark, Denmark
Na Ni, Shanghai Jiao Tong University, China
Wei Pan, Tsinghua University, China

PACRIM SYMPOSIUM 19

NANOSTRUCTURED BIOCERAMICS AND CERAMICS FOR BIOMEDICAL APPLICATIONS

Organizers:
Roger J Narayan, University of North Carolina and North Carolina State University, USA
Min Wang, The University of Hong Kong, China
Markus Reiterer, Medtronic, USA
Suwan Jayasinghe, University College London, United Kingdom
Chikara Ohtsuki, Nagoya University, Japan
Akiyoshi Osaka, Okayam University, Japan
Rizhi Wang, University of British Columbia, Canada
Chengtie Wu, Shanghai Institute of Ceramics, China
Hala Zreiqat, University of Sydney, Australia
Xuanyong Liu, Shanghai Institute of Ceramics, China
Yu Zhang, University of Pennsylvania, USA
Congqin Ning, Shanghai Normal University, China

PACRIM SYMPOSIUM 20

ADVANCED FUNCTIONAL MATERIALS FOR CLEAN ENERGY SOLUTIONS

Organizers:
Sanjay Mathur, University of Cologne, Germany
Gunnar Westin, Uppsala University, Sweden
Sehun Kwon, Pusan National University, Korea
Ahsan Qurashi, Khalifa University, United Arab Emirates
Tohru Sekino, Osaka University, Japan
Ravi Kumar, IIT Madras, India
Wenbin Cao, USTB, Beijing, China
Graziella Malandrino, University of Catania, Italy
Ji-Hyun Jang, UNIDST, Ulsan, Korea
Flavio de Souza, CNPEM, Brazil
Daniel Chua, NUS, Singapore
Xun Shi, Shanghai Institute of Ceramics, China
Katalin Balázsi, HUN-REN Centre for Energy Research, Hungary
Qinghong Zhang, Donghua University, China

PACRIM SYMPOSIA ORGANIZERS

PACRIM SYMPOSIUM 21

CULTURAL HERITAGE OF THE PACIFIC RIM

Organizers:
Fumie Iizuka, University of Wisconsin, USA
Christina Bisulca, Detroit Institute of Arts, USA
Xiao Ma, Shanghai University, China
Yae Ichimiya, Tokyo University, Japan

PACRIM SYMPOSIUM 22

7TH INTERNATIONAL PACRIM RICHARD M. FULRATH MEMORIAL SYMPOSIUM ON ADVANCED CERAMICS

Organizers:
Bryan D. Huey, University of Connecticut, USA
Tomoyuki Nakamura, Murata Manufacturing Company, Japan
Hirokazu Sasaki, Shoei Chemical Inc., Japan

PACRIM SYMPOSIUM 23

ADVANCED PROCESSING AND MANUFACTURING TECHNOLOGIES FOR CERAMICS

Organizers:
Lianjun Wang, Donghua University, China
Koji Morita, National Institute for Materials Science, Japan
Yuchi Fan, Donghua University, China
Hidehiro Yoshida, The University of Tokyo, Japan
Qiaodan Hu, Shanghai Jiaotong University, China
Fei Zhang, KU Leuven, Belgium
Sea-Hoon Lee, Korea Institute of Materials Science, Republic of Korea
Jie Yin, Shanghai Institute of Ceramics, China
Weiwei Zhou, Tohoku University, Japan
Wei Ji, Wuhan University of Technology, China
Pavol Sajgalik, Slovak Academy of Sciences, Slovakia
Shijie Wang, Institute of Materials Research and Engineering, Agency for Science, Technology and Research, Singapore

PACRIM SYMPOSIUM 24

SOLID-STATE OPTICAL MATERIALS AND LUMINESCENCE PROPERTIES

Organizers:
Yiquan Wu, Alfred University, USA
Shiwei Wang, Chinese Academy of Sciences, China
Akio Ikesue, World-lab Corp, Japan
Liangbi Su, Shanghai Institute of Ceramics, China
Rong-Jun Xie, Xiamen University, China
DoKyung Kim, Korea Advanced Institute of Science and Technology, Korea
Tatami Junichi, Yokohama National University, Japan
Hao Wang, Wuhan University of Technology, China
Mathieu Allix, University of Orleans, France
Dariusz Hreniak, Polish Academy of Sciences, Poland
Jianqi Qi, Sichuan University, China

PACRIM SYMPOSIUM 25

SYNTHESIS, PROCESSING, AND MICRO-STRUCTURAL CONTROL OF MATERIALS USING ELECTRIC CURRENTS, MAGNETIC FIELDS AND/OR PRESSURES

Organizers:
Javier E. Garay, University of California, San Diego
Yasuhiro Kodera, Ryukoku University, Japan
Alexander D. Dupuy, University of Connecticut, USA

PACRIM SYMPOSIUM 26

MATERIALS FOR ADVANCED NUCLEAR ENERGY SYSTEMS AND NUCLEAR WASTE MANAGEMENT

Organizers:
Xiao-Ying Yu, Oak Ridge National Laboratory, USA
Guo-Jun Zhang, Donghua University, China
Ji-Yeon Park, Korea Atomic Energy Research Institute, Korea
Yutai Katoh, Oak Ridge National Laboratory, USA
Hua-Tay Lin, Guangdong University of Technology, China
Young-Wook Kim, University of Seoul, Korea
Houzheng Wu, SIAMC Advanced Material Corporation, China
Yingjie Zhang, Australian Nuclear Science and Technology Organization, Australia
Libin Sun, Tsinghua University, China
Hans J. Seifert, Karlsruhe Institute of Technology, Germany
Jia-Xiang Xue, China Nuclear Power Technology Research Institute Co., Ltd., China
Tatsuya Hinoki, Kyoto University, Japan
Monica Ferraris, Politecnico di Torino, Italy
Ping Xiao, The University of Manchester, United Kingdom
Haibin Zhang, China Academy of Engineering Physics, China

PACRIM SYMPOSIUM 27

INTERNATIONAL SYMPOSIUM OF FUNDAMENTAL AND FRONTIER SCIENCES OF CERAMICS

Organizers:
Yiquan Wu, Alfred University, USA
John Mauro, The Pennsylvania State University, USA
Shaoming Dong, Shanghai Institute of Ceramics, China
Zhengyi Fu, Wuhan University of Technology, China
Junichi Tatami, Yokohama National University, Japan
Richard Todd, University of Oxford, United Kingdom
Liangbi Su, Shanghai Institute of Ceramics, China
Yanhao Dong, Tsinghua University, China
Paolo Colombo, University of Padova, Italy
Olivier Guillon, Institute of Energy and Climate Research, Germany
Nina Obradovic, Institute of Technical Sciences of SASA, Serbia
Mathieu Allix, University of Orleans, France
Zbigniew Pędzich, AGH University of Science and Technology, Polish

PACRIM SYMPOSIA ORGANIZERS

PACRIM SYMPOSIUM 28

JOINING AND INTEGRATION OF CERAMICS FOR ENABLING COMPLEX COMPONENTS AND ADVANCED APPLICATIONS

Organizers:
Michael C. Halbig, NASA Glenn Research Center, USA
Monica Ferraris, Politecnico di Torino, Italy
Valentina Casalegno, Politecnico di Torino, Italy
Wayne Kaplan, Israel Institute of Technology, Israel
Xiaobing Zhou, Ningbo Institute of Materials Technology and Engineering, China
Rajiv Asthana, University of Wisconsin-Stout, USA
Anming Hu, University of Tennessee-Knoxville, USA
Jon Binner, Birmingham University, United Kingdom
Gerard Vignoles, University of Bordeaux, France
Yanhui Chu, South China University of Technology, China

PACRIM SYMPOSIUM 29

PROGRESS IN HIGH-ENTROPY MATERIALS

Organizers:
Michael C. Gao, National Energy Technology Laboratory, USA
Peter K. Liaw, University of Tennessee, USA
Yiquan Wu, Alfred University, USA
Jian Luo, University of California, San Diego, USA
Xingbo Liu, West Virginia University, USA
Yong Zhang, University of Science and Technology Beijing, China
Wei Chen, Buffalo University, USA
Bai Cui, University of Nebraska at Lincoln, USA
Yu Zou, University of Toronto, Canada
Hailong Wang, Zhengzhou University, China

PACRIM SYMPOSIUM 30

THE ROLES OF EXPERIMENTAL THERMODYNAMICS AND THERMAL ANALYSIS IN THE DESIGN OF MATERIALS FOR ENERGY SUSTAINABILITY

Organizers:
Di Wu, Washington State University, USA
Jianqi Qi, Sichuan University, China
Ricardo Castro, Lehigh University, USA
Alexandra Navrotsky, Arizona State University, USA
Quan Shi, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
Hui Sun, Xinjiang University & East China University of Science and Technology, China
Xianghui Hou, Northwestern Polytechnical University, China

PACRIM SYMPOSIUM 31

NEXT-GENERATION NANOLAYERED STRUCTURAL/FUNCTIONAL MATERIALS: TERNARY TRANSITION METAL CARBIDES/NITRIDES (MAX PHASES) AND BORIDES (MAB PHASES), SOLID SOLUTIONS THEREOF, AND 2D COUNTERPARTS (MXENES, MBENES)

Organizers:
Surojit Gupta, University of North Dakota, USA
Miladin Radovic, Texas A&M, USA
Christina Birkel, Arizona State University, USA
Babak Anasori, Purdue University, USA
Aiguo Zhao, Henan Polytechnic University, China
Jesus Gonzalez-Julian, RWTH Aachen University, Germany
Qing Huang, Ningbo Institute of Materials Technology and Engineering, China

PACRIM SYMPOSIUM 32

ADVANCED CHARACTERIZATION, TESTING, AND ANALYSIS OF MATERIALS

Organizers:
Scott T. Misture, Alfred University, USA
Bryan D. Huey, University of Connecticut
Amanda R. Krause, Carnegie Mellon University, USA
Jie Zhang, Institute of Metal Research, Chinese Academy of Sciences, China
Miaofang Chi, Duke University, USA
Yunseok Kim, Sungkyunkwan University, Korea
Qiang Zheng, National Center for Nanoscience and Technology, China

PACRIM SYMPOSIUM 33

CERAMICS FOR ELECTROCHEMICAL ENERGY STORAGE

Organizers:
Olivier Guillon, Forschungszentrum Jülich GmbH, Germany
Michael Naguib, Tulane University, USA
Kun Liang, Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences, China
Naoaki Yabuuchi. Yokohama National University, Japan
Do Kyung Kim, Korea Advanced Institute of Science & Technology, Korea

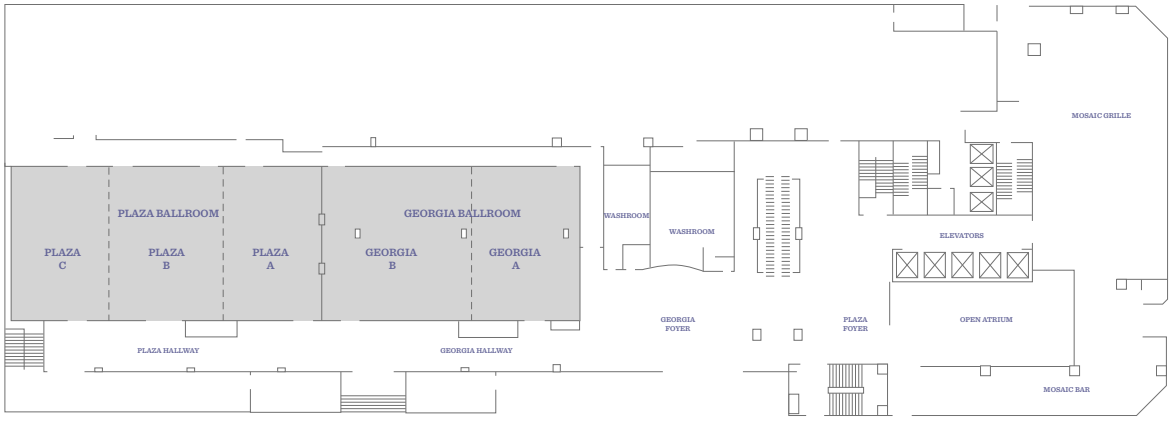
PACRIM SYMPOSIUM 34

CARBON BASED MATERIALS AND SMART STRUCTURES FOR ELECTRONIC, PHOTONICS, ELECTROCHEMICAL, MEMS AND ENERGY APPLICATIONS

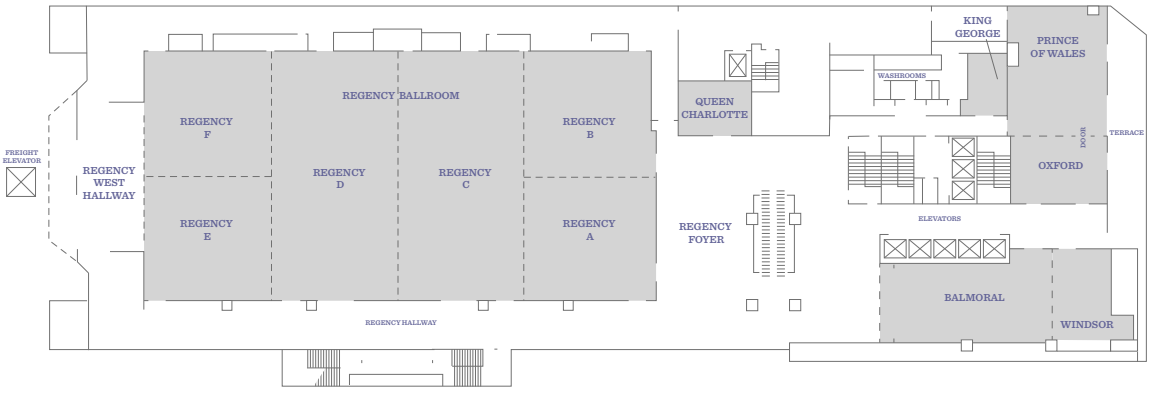
Organizers:
Haitao Ye, University of Leicester, United Kingdom
Richard Yongqing Fu, Northumbria University at Newcastle, United Kingdom
Cinzia Casiraghi, University of Manchester, United Kingdom
Changzhi Gu, Institute of Physics, Chinese Academy of Science, China
Jihua Luo, Zhejiang University, China
Liping Wang, Ninbo Institute of Materials Technology and Engineering, Chinese Academy of Science, China
Peyman Servati, University of British Columbia, Canada

HYATT REGENCY VANCOUVER

FLOOR PLAN
Plaza Level (Second Floor)



Convention Level (Third Floor)



GOMD WELCOME

Dear Colleagues and Friends,

Welcome to Vancouver! On behalf of The American Ceramic Society, welcome to 16th Pacific Rim Conference on Ceramic and Glass Technology including Glass & Optical Materials Division Meeting (GOMD 2025). We have over 300 oral and poster presentations that explore the fundamental nature of the glassy state, glass applications in healthcare, energy and environment, glass manufacturing challenges, nuclear waste immobilization, optical and optoelectronic materials, and more. The program also features honorary symposia for Jonathan Stebbins.

GOMD 2025 covers the latest advances in glass science and technology. Technical leaders from industry, national laboratories, and academia will lead seven symposia and over 20 technical sessions that provide an open forum for glass scientists and engineers from around the world to present and exchange findings on recent advances in various aspects related to glass science and technology. The poster session will highlight late-breaking research.

Several special activities are planned in addition to the technical program:

- Renew acquaintances and get to know new faces during the Welcome Reception on Sunday from 4:30 p.m. – 6:00 p.m.
- Special Award Lectures: The George W. Morey Award (Tuesday morning), the Norbert J. Kreidl Award for Young Scholars (Tuesday at 12 Noon), the Stookey Lecture of Discovery Award (Wednesday morning) the Darshana and Arun Varshneya Frontiers of Glass Science and Glass Technology lectures (Thursday morning).
- Continue your learning experience by attending the Poster Session and Student Poster Competition on Tuesday from 5:30 p.m. – 7 p.m. at the Hyatt Regency.
- Attendees are invited to enjoy dinner, drinks, live entertainment, and continued networking with their colleagues during the Conference Celebration on Thursday from 7 – 9:30 p.m. at the Hyatt Regency.

The American Ceramic Society thanks you for participating in and being part of this year's meeting.
GOMD 2025 PROGRAM CHAIRS:

MADOKA ONO
GOMD CO-CHAIR
Tohoku University, Japan

COLLIN WILKINSON
GOMD CO-CHAIR
Alfred University, USA

GOMD OFFICERS

2024–2025 GOMD OFFICERS

CHAIR: Jessica Rimsza | Sandia National Laboratory

CHAIR-ELECT: Jose Marcial | Pacific Northwest National Laboratory

VICE CHAIR: Collin Wilkinson | Alfred University

SECRETARY: Charmayne Lonergan | Missouri University of Science and Technology

CHAIR EMERITUS: Irene Peterson | Corning Incorporated

ACERS BOARD OF DIRECTORS DIVISION LIAISON: Rajendra Bordia | Clemson University

PRESIDENT'S COUNCIL OF STUDENT ADVISORS DELEGATE:

John Bussey | Washington State University; Elizabeth Aichele | The Pennsylvania State University

YOUNG PROFESSIONAL NETWORK DIVISION LIAISON: Katie Kirchner | Celsian Glass

DEI REPRESENTATIVE: Kathryn Goetschius | Corning Incorporated

GEORGE W. MOREY AWARD

TUESDAY, MAY 6, 2025
8 A.M.
SATURNA ISLAND BALLROOM

The Properties of Glass and Melt

Daniel R. Neuville,
Geomat Lab, CNRS-IPGP, Université de Paris,
Paris, France

Between 1938 and 2025, our understanding of glass has evolved dramatically. Once thought to be limited to silicate-based systems, we now know that glass can be formed with nearly every element in the periodic table and across all types of chemical bonds. Today, glass is best defined as a state of matter characterized by structural disorder and the glass transition phenomenon. Yet, fundamental questions remain: What exactly governs the glass transition? How do different chemical elements influence the properties of both glass and melts? And most importantly, how can we bridge the gap between atomic-scale structure and macroscopic behavior?
In my talk, I will explore the structural roles of chemical elements—as network formers, charge compensators, or network modifiers—and their direct impact on material properties like viscosity. Beyond that, I will examine how these roles influence nucleation mechanisms and redox reactions. Understanding these processes is not just a matter of academic curiosity; it has real-world implications, from deciphering mass transfer in magmatic chambers to engineering low-carbon glass compositions that are essential for the energy transition.

NORBERT J. KREIDL AWARD

TUESDAY, MAY 6, 2025
12 P.M.
SATURNA ISLAND BALLROOM

The Structure-Property Relationships of Iron Phosphate Nuclear Waste Glasses: A Combined MD Simulation and QSPR Approach

Jayani Kalahe
Materials Science and Engineering, University of North Texas
Houston, TX, United States

Abstract
Iron phosphate glasses are highly durable and versatile, ideal for immobilizing nuclear wastes. Understanding their composition and properties is crucial for optimization in nuclear waste management and other applications. Molecular dynamics (MD) simulations have been invaluable in elucidating their structures, revealing how Fe_2O_3 content, alkali concentrations, and iron redox ratios affect network connectivity and glass properties. Structural analyses highlight the roles of P^{5+} and Fe^{3+}, with P-O and Fe-O bond distances aligning well with experimental values. Higher Fe_2O_3 levels enhance connectivity through more P-O-Fe linkages, reduce non-bridging oxygens, and shift from Q1 and Q2 to polymerized Q4 units. Alkali modifiers associate with Fe^{3+}, while Fe^{2+} disrupts P-O-P bonds, depolymerizing the network. Mechanical properties and glass transition temperatures show monotonic trends with increasing Fe_2O_3. QSPR analyses correlate MD structural features with glass properties. Data from over 30 glasses identify descriptors like Fe-O-P linkage density and modified Fnet parameters as effective predictors of density, elastic moduli, and dissolution rates. These insights underline the critical roles of glass formers, modifiers, and redox conditions in shaping iron

STOOKEY LECTURE OF DISCOVERY AWARD

WEDNESDAY, MAY 7, 2025
8 A.M.
SATURNA ISLAND BALLROOM

Discovery of strong and damage-resistant glasses through indentation studies

Timothy M. Gross
Corning Incorporated
Corning, NY, United States

The response of glass to indentation provides considerable information regarding modes of deformation and propensity towards cracking. Learning to tailor the observed glass response through composition design has resulted in several key discoveries including numerous versions of Corning® Gorilla® Glass, Corning® Fusion5® (break resistant windshield glass), and glasses with hydration-induced compressive stress profiles.
In between normal glasses that deform with a considerable volume displacing shear component and anomalous glasses that deform primarily by densification, a third type of glass, defined as intermediate, was shown to deform with less subsurface damage while also displaying high indentation crack resistance. By designing ion-exchangeable compositions with intermediate deformation behavior, Vickers cracking threshold values exceeding 30 kilograms force were observed for the first time. This discovery paved the way for multiple generations of Corning® Gorilla® Glass. To fully understand the significance and utility of this breakthrough, an investigation of damage from various contact geometries was conducted to mimic all possible real-world events. While intermediate glass provides an advantage against a significant population of contact types, the damage resistance advantage is no longer present under ultra-sharp contact. This understanding led to another directional change for Gorilla® Glass. With the knowledge that there is no defense against ultra-sharp contact, glasses were then designed to contain this inevitable type of damage within ultra-deep compressive layers. These glasses maintained the inherent damage resistance, resulting in glasses that could protect against all contact types.

Understanding sharp contact deformation continues to evolve. It was recently shown that the amount of densification vs. shear is inadequate to predict the crack resistance of intermediate glasses. The way in which volume is displaced via shearing is critical, with high shear band density resulting in improved crack resistance. On the anomalous end of the deformation spectrum, another unique and useful sub-category has also been recently defined. A small composition space that produces large ring cracks has been discovered and commercialized as Corning® Fusion5® windshield glass. The large ring crack provides a barrier to the extension of the radial cracks that result in windshield failure.
Lastly, indentation studies on glasses designed specifically to enable high water diffusion resulted in a surprising observation of high stored strain energy at failure. Subsequent stress analyses revealed a significant stress profile induced by hydration. Mechanical analyses showed that these glasses with hydration-induced stress profiles offer strength and damage resistance comparable to ion-exchanged glass. This alternative to ion-exchange provides a highly sustainable strengthening solution with lower carbon footprint, less waste byproduct, and ease of recycling.

DARSHANA AND ARUN VARSHNEYA FRONTIERS OF GLASS LECTURES - GLASS TECHNOLOGY AWARD

THURSDAY, MAY 8, 2025
8 A.M. AND 9 A.M.
SATURNA ISLAND BALLROOM

Glass for a Sustainable Future

John C. Mauro
Dorothy Pate Enright Professor
and Associate Head for Graduate Education
Department of Materials Science and Engineering
The Pennsylvania State University, United States

Abstract
Glass has proven to be a critically important material for the development of contemporary human civilization. Its influence continues to grow as new glass products and processes are developed to address global challenges in energy, the environment, healthcare, information technology, and more. Despite recent advances in glass science and technology, major challenges remain with respect to the sustainability of the glass industry, which generates more than 86 million tons of carbon dioxide annually. In this presentation, I will describe my own personal journey in glass from Alfred, New York to Happy Valley, Pennsylvania. After reviewing some recent advances in glass physics and chemistry, we'll peer into our glass (not "crystal") ball to discuss future glass technologies for a more sustainable future. The latter part of the presentation will introduce LionGlass, Penn State's patent-pending glass compositional family that offers, for the first time, an alternative to standard soda lime silicate glass for reducing the carbon footprint of the glass industry by ~50%. LionGlass achieves this goal by lowering the melting temperature of everyday glass products by 400°C and eliminating the use of carbonate batch materials. LionGlass also offers 10× improvement in damage resistance compared to soda lime silicate, enabling the lightweighting of everyday glass products.

DARSHANA AND ARUN VARSHNEYA FRONTIERS OF GLASS LECTURES - GLASS SCIENCE AWARD

"What use is a really bad glass?"

Stephen Elliott
Physical and Theoretical Chemistry Laboratory
University of Oxford
Oxford, United Kingdom

Abstract
In conventional glass science and technology, the thermal stability of a glass is often of primary importance. What then, rather counter-intuitively, might be the technological applications, if any, of glasses exhibiting extremely bad thermal-stability characteristics, i.e. with exceedingly fast crystallization kinetics?
In this lecture, I will discuss such glassy materials, principally tellurides alloyed with metalloid elements, such as germanium or antimony, which exhibit crystallization times of a few nanoseconds. In other words, these must be among the worst possible glass formers from a thermal-stability viewpoint. However, the fact that such materials have large opto-electronic property contrasts between metastable crystal (electrically-conducting 'SET' state, {1}) and glass (electrically-resistive 'RESET' state, {0}) means that they can form the basis of new non-volatile electronic (or optical) solid-state memory devices – so-called 'phase-change memory' (PCM). Binary bits of information {0,1} are stored as the structural state of the memory material, rather than as electrons trapped at the floating gate in conventional silicon CMOS flash-memory devices.
I will discuss our recent million-atom, device-scale computer simulations of SET and RESET processes in Ge-Sb-Te PCMs using machine-learned interatomic potentials with density-functional-theory (DFT) levels of accuracy. In addition, I will provide experimental evidence that, intriguingly, the GeTex system exhibits three distinct types of switching/memory behaviour, depending on the composition: i) non-volatile crystal-glass-crystal PCM behaviour for x = 1-2 (GeTe); ii) volatile all-glass electronic-switching 'Ovshinsky-threshold-switch' (OTS) behaviour for x = 2-7; and iii) volatile crystal-liquid-crystal 'phase-change-switch' (PCS) behaviour for compositions from x = 8 to pure Te.

L. DAVID PYE AWARD

Delbert E. Day
Curators' Distinguished Professor Emeritus of Ceramic Engineering
Missouri University of Science and Technology (Missouri S&T), Rolla, MO

Presented to Delbert Day in recognition of his success as an inventor of various bio-glasses, nano-spheres and wound healing materials resulting in over 50 US and foreign patents as well as leading to the creation of Mo-Sci; his impactful contributions to the global glass science and technology communities including book editorship and serving on numerous committees and panels; his prolific mentorship of many important contributors to the field; his own significant list of more than 400 publications; and his leadership and support to the American Ceramic Society across roles and committees.

GOMD SYMPOSIA ORGANIZERS

GOMD SYMPOSIUM 1: FUNDAMENTALS OF THE GLASSY STATE

SESSION 1: GLASS FORMATION AND STRUCTURAL RELAXATION

Organizers:

- Ozgur Gulbiten, Corning Inc., USA
- Roger Loucks, Alfred University, USA
- Katelyn Kirchner, CelSian, USA

SESSION 2: GLASS CRYSTALLIZATION AND GLASS-CERAMICS

Organizers:

- Laurent Cormier, French National Center for Scientific Research, France
- Benjamin Moulton, Alfred University, USA
- Kenji Shinozaki, National Institute of Advanced Industrial Science and Technology, Osaka, Japan

SESSION 3: STRUCTURAL CHARACTERIZATIONS OF GLASSES AND MELTS

Organizers:

- Daniel Neuville, CNRS-IPGP-UP, France
- Dominique de Ligny, Friedrich-Alexander-Universität, Germany
- Shinji Kohara, NIMS, Japan
- John McCloy, Washington State University, USA

SESSION 4: ATOMISTIC SIMULATION AND PREDICTIVE MODELING OF GLASSES

Organizers:

- Jincheng Du, University of North Texas, USA
- Alfonso Pedone, University of Modena and Reggio Emilia, Italy
- Shingo Urata, AGC Inc., Japan

SESSION 5: DATA-DRIVEN MODELING AND MACHINE LEARNING FOR GLASS SCIENCE

Organizers:

- Xiaonan Lu, Pacific Northwest National Laboratory, USA
- N.M. Anoop Krishan, Indian Institute of Technology, India

SESSION 6: MECHANICAL PROPERTIES OF GLASSES

Organizers:

- Satoshi Yoshida, AGC Inc., Japan
- Linfeng Ding, Donghua University, China
- Yueh-Ting (Tim) Shih, Taipei Tech, Taiwan

SESSION 7: GLASS UNDER NON-AMBIENT CONDITIONS

Organizers:

- Tomoko Sato, KEK, Japan
- Anita Ziedler, University of Bath, United Kingdom
- Lawerence Gammond, Corning Inc., USA

SESSION 8: CHALCOGENIDE GLASSES AND AMORPHOUS MATERIALS

Organizers:

- Pierre Lucas, The University of Arizona, USA
- Changgui Lin, Ningbo University, China

GOMD SYMPOSIA ORGANIZERS

GOMD SYMPOSIUM 2: GLASS AND INTERACTIONS WITH ITS ENVIRONMENT- FUNDAMENTALS AND APPLICATIONS

SESSION 1: GLASSES, GLASS-CERAMICS, AND GLASS-BASED BIOMATERIALS

Organizers:

- Delia Brauer, University of Jena, Germany
- Leena Hupa, Åbo Akademi, Finland
- Maziar Montazerian, The Pennsylvania State University, USA

SESSION 2: DISSOLUTION AND INTERFACIAL REACTIONS

Organizers:

- Nick Smith, Corning Inc., USA
- Seong H. Kim, The Pennsylvania State University, USA
- Stephane Gin, CEA Marcoule, France
- Nicholas Stone-Weiss, Corning Inc., USA

SESSION 3: MATERIALS FOR WASTE IMMOBILIZATION

Organizers:

- Jaime George, Pacific Northwest National Laboratory, USA
- Jake Amoroso, Savannah River National Laboratory, USA

GOMD SYMPOSIUM 3: OPTICAL AND ELECTRONIC MATERIALS AND DEVICES- FUNDAMENTALS AND APPLICATIONS

SESSION 1: LASER INTERACTIONS WITH GLASSES

Organizers:

- Casey Schwarz, Ursinus College, USA
- Keith J. Veenhuizen, Lebanon Valley College, USA
- Rashi Sharma, University of Central Florida, USA

SESSION 2: GLASSES FOR ENERGY APPLICATIONS

Organizers:

- Caio Bragatto, Alfred University, USA
- Gabriel Agnello, Corning Inc., USA
- Takahisa Omata, Tohoku University, Japan

SESSION 3: OPTICAL FIBERS AND WAVEGUIDES, OPTOELECTRONIC GLASS-BASED DEVICES

Organizers:

- Xianghua Zhang, Université de Rennes 1, France
- Jiawei Luo, OFS Laboratories, New Jersey, USA
- Juejun Hu, Massachusetts Institute of Technology, USA
- Laeticia Petit, Tampere University, Italy
- Sylvain Danto, ICMCB, University of Bordeaux, France

SESSION 4: RARE-EARTH AND TRANSITION METAL-DOPED GLASSES AND CERAMICS FOR PHOTONIC APPLICATIONS

Organizers:

- Jumpei Ueda, JAIST, Japan
- Volkmar Dierolf, Lehigh University, USA
- Brian Topper, Clemson University, USA

GOMD SYMPOSIUM 4: OUTREACH (JOINT WITH PACRIM)

SESSION 1:
STE(A)M OUTREACH, EDUCATION, ENGAGEMENT AND RETENTION

Organizers:

Charmayne Lonergan, Missouri University of Science and Technology, USA
Kim Scott, Colorado School of Mines, USA
Casey Schwarz, Ursinus College, USA
Amanda Engen, The American Ceramic Society, USA
Kathryn Goetschius, Corning Inc., USA

GOMD SYMPOSIUM 5: GLASS MANUFACTURING

SESSION 1:
CHALLENGES IN GLASS MANUFACTURING AND RECYCLING

Organizers:

- Irene Peterson, Corning Inc., USA
- Scott Cooper, CelSian, USA
- Hiroyuki Inano, Hokkaido Research Organization, Japan
- Teretaka Maehara, AGC Inc., Japan

SESSION 2:
ADDITIVE MANUFACTURING OF GLASS

Organizers:

- Beck Walton, Lawerence Livermore National Laboratory, USA
- Giorgia Franchin, University of Padova, Italy

GOMD SYMPOSIUM 6: JONATHAN STEBBINS HONORARY SYMPOSIUM

Organizers:

- Jingshi Wu, Corning Inc, USA
- Scott Kroeker, University of Manitoba, Canada
- Sabyasachi Sen, University of California, Davis, USA
- Sung Keun Lee, Seoul National University, Korea

GOMD SYMPOSIUM 7: EMERGING FRONTIERS: GLASSES IN NEW TECHNOLOGY

Organizers:

- Madoka Ono, Tohoku University, Japan
- Collin Wilkinson, Alfred University, USA

Special thanks to our sponsors for their generosity

AGC
Your Dreams, Our Challenge

AMERICAN ELEMENTS
THE MATERIALS SCIENCE MANUFACTURER®

calnano

ceramics
an Open Access Journal by MDPI

CTL PHOTONICS
From Poled Crystal to Dazzling Laser

Interdisciplinary Materials
Open Access

MSE Supplies®
We Enable Innovation

MTI
KJ GROUP

OWENS CORNING

CHEN HUA

Since 1928
SICCAS

WILEY

SCHEDULE AT A GLANCE

SUNDAY, MAY 4, 2025

Registration	Hyatt Regency or Fairmont	4 – 7 p.m.
Welcome Reception	Hyatt Regency	4:30 – 6 p.m.

MONDAY, MAY 5, 2025

Registration	Hyatt Regency or Fairmont	7:30 a.m. – 5:30 p.m.
PACRIM Plenary	Hyatt Regency	8 a.m. – 12 p.m.
All-Conference Break	Hyatt Regency	10 – 10:20 a.m.
Lunch On Own		12 – 1:15 p.m.
PACRIM Programming	Hyatt Regency	1:15 – 5:30 p.m.
GOMD Programming	Fairmont	1:15 – 5:30 p.m.
PACRIM Break	Hyatt Regency	3:15 – 3:30 p.m.
GOMD Break	Fairmont	3:15 – 3:30 p.m.
GOMD General Business Meeting	Fairmont	5:45 – 6:45 p.m.

TUESDAY, MAY 6, 2025

Registration	Hyatt Regency or Fairmont	7:30 a.m. – 5:30 p.m.
PACRIM Plenary	Hyatt Regency	8 – 9:50 a.m.
GOMD Morey Award	Fairmont	8 – 9 a.m.
GOMD Break	Fairmont	9 – 9:20 a.m.
GOMD Programming	Fairmont	9:20 a.m. – 12 p.m.
PACRIM Break	Hyatt Regency	9:50 – 10:10 a.m.
PACRIM Programming	Hyatt Regency	10:10 a.m. – 12 p.m.
Lunch On Own		12 – 1:15 p.m.
GOMD Kreidl Award	Fairmont	12 – 1:15 p.m.
PACRIM Programming	Hyatt Regency	1:15 – 5:30 p.m.
GOMD Programming	Fairmont	1:15 – 5:30 p.m.
PACRIM Break	Hyatt Regency	3:15 – 3:30 p.m.
GOMD Break	Fairmont	3:15 – 3:30 p.m.
All-Conference Poster Session	Hyatt Regency	5:30 – 7 p.m.

WEDNESDAY, MAY 7, 2025

Registration	Hyatt Regency or Fairmont	7:30 a.m. - 12 p.m.
GOMD Stookey Award	Fairmont	8 – 9 a.m.
PACRIM Programming	Hyatt Regency	8 a.m. – 12 p.m.
GOMD Break	Fairmont	9 – 9:20 a.m.
GOMD Programming	Fairmont	9:20 a.m. – 12 p.m.
PACRIM Break	Hyatt Regency	10 – 10:20 a.m.
IJAGS Award Luncheon	Fairmont	12 – 1:15 p.m.
Free Time on Own		12 p.m. –

THURSDAY, MAY 8, 2025

Registration	Hyatt Regency or Fairmont	7:30 a.m. – 5:30 p.m.
PACRIM Programming	Hyatt Regency	8 a.m. – 12 p.m.
GOMD Varshneya Awards	Fairmont	8 – 10 a.m.
PACRIM Break	Hyatt Regency	10 – 10:20 a.m.
GOMD Break	Fairmont	10 – 10:20 a.m.
GOMD Programming	Fairmont	10:20 a.m. – 12 p.m.
Lunch on Own		12 – 1:15 p.m.
GOMD Programming	Fairmont	1:15 – 5:30 p.m.
PACRIM Programming	Hyatt Regency	1:15 – 5:30 p.m.
GOMD Break	Fairmont	3:15 – 3:30 p.m.
PACRIM Break	Hyatt Regency	3:15 – 3:30 p.m.
All-Conference Celebration	Hyatt Regency	7 – 9:30 p.m.

FRIDAY, MAY 9, 2025

Registration	Hyatt Regency	8 a.m. – 12 p.m.
PACRIM Programming	Hyatt Regency	8 a.m. – 12 p.m.
PACRIM Break	Hyatt Regency	10 – 10:20 a.m.

About SICCAS

Shanghai Institute of Ceramics *(SICCAS)* as a research institute affiliated to the Chinese Academy of Sciences (CAS), welcomes excellent researchers in the research of advanced inorganic materials science and engineering from all over the world to join us. Generous start-up package, competitive salary and benefits will be provided based on different recruitment programs.

Main Research Direction

Research on Smart material	Structure Ceramics
Functional Ceramics	Ceramic Matrix Composites
Artificial Crystals	Inorganic Coating Materials
Biomaterials	Energy Materials
Transparent Ceramics	Ancient Ceramics

Institute Homepage

WeChat Official Account

More Details About SICCAS

Join Us

Contact Us

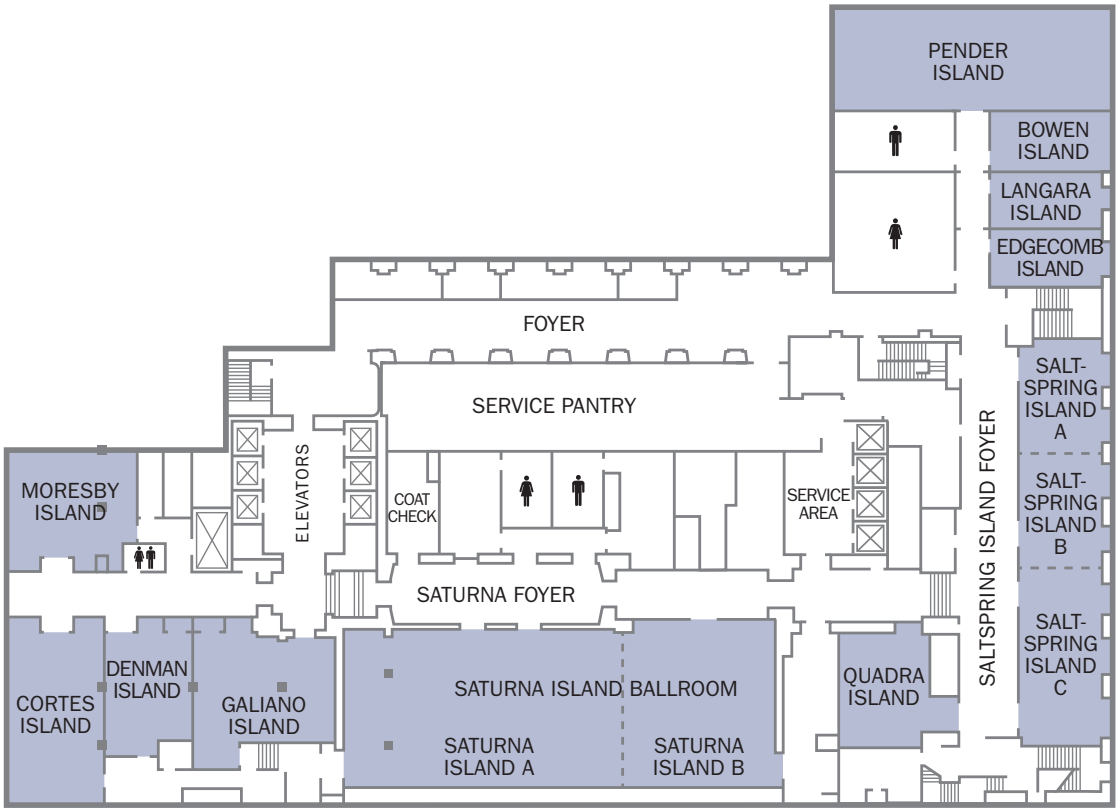
Tianhou He +8621-69906609 thhe@mail.sic.ac.cn

Fang Xu +8621-69906271 xufang@mail.sic.ac.cn

Add., No. 585, Heshuo Road, Jiading Dist., Shanghai.

FAIRMONT HOTEL VANCOUVER FLOOR PLAN

DISCOVERY FLOOR

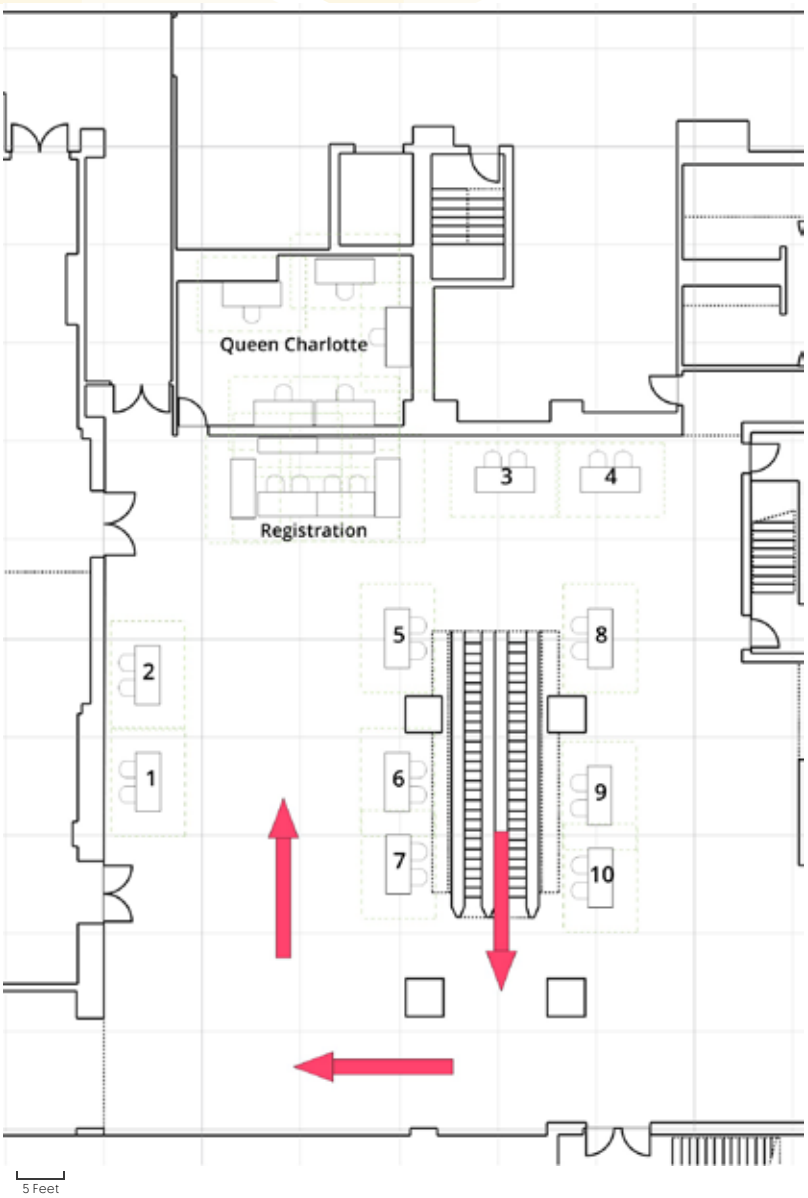


Exhibitor Move-In and Registration:
Sunday, May 4, 2025
10:00 a.m.– 12:00 p.m.

Exhibition Hours:
Sunday, May 4: 4:00 p.m. – 7:00 p.m.
Monday, May 5: 8:00 a.m. – 5:00 p.m.
Tuesday, May 6: 8:00 a.m. – 7:00 p.m.
Wednesday, May 7: 8:00 a.m. – 12:00 p.m.

Exhibitor Move-Out:
Wednesday, May 7, 2025
12:00 p.m. – 2:00 p.m.

TABLETOP EXHIBIT HALL FLOOR PLAN



Convention Level (Third Floor) for 28843508 - ACerS PACRIM Conference - May 2, 2025 at 11:00 AM

LIST OF EXHIBITORS

American Ceramic Society (The)
TABLETOP NO. TBD
More than 10,000 scientists, engineers, researchers, manufacturers, plant personnel, educators, students, marketing and sales professionals from more than 80 countries make up the members of The American Ceramic Society. The Society provides members and subscribers access to an extensive array of periodicals and books, meetings and expositions, and online technical information. In addition, ACerS Journals are three of the most cited ceramic publications in the world. ACerS educates and provides forums to connect individuals working in ceramics-related materials through hosted technical meetings and communities in order to better advance the ceramics community. Since 1898, ACerS has been the hub of the global ceramics community and one of the most trusted sources of ceramic materials & applications knowledge. If ceramic material and technologies are a significant part of your work, then ACerS is the professional society for you.
customerservice@ceramics.org | ceramics.org

California Nanotechnologies
TABLETOP NO. 9
California Nanotechnologies (Cal Nano) is North America's leader in advanced materials processing. We offer cryogenic milling and Spark Plasma Sintering (SPS) to develop and manufacture next-gen ceramics, composites, and glass-ceramics. Stop by to explore how we enable rapid prototyping and scalable production!
e.eyerman@calnanocorp.com | https://calnanocorp.com

DrySci
TABLETOP NO. 1
From the laboratory to the boardroom, make best practice practical with DrySci's R&D software platform. Track research projects, record data, optimize your team, and organize business strategies in a single app tailored to your lab.
contact@drysci.com | https://DrySci.com

MTI Corporation
TABLETOP NO. 3
MTI Corporation is a leading manufacturer of oxide crystals, substrates and lab equipment for material research. Our products include low-speed cutting saws, wire diamond saws, auto polishing machines, high-temperature ovens, tube furnaces, and complete sets of equipment for rechargeable battery materials research.
andy@mtixtl.com | https://mtixtl.com/

ScienceEdge, Inc.
TABLETOP NO. 2
ScienceEdge Inc. is an innovative Japanese startup pioneering nanoscale thermophysical property analysis with its cutting-edge FDTR (Frequency-Domain ThermoReflectance) microscope. Our FDTR microscope is the world's first to measure thermal conductivity of microscale thermal conductive filler particles, offering unprecedented precision for materials science and industry.
tomoya.uchiyama@scienceedge.com | https://scienceedge.com/

Shanghai Institute of Ceramics, Chinese Academy of Sciences
TABLETOP NO. 6
Shanghai Institute of Ceramics (SICCAS) as a research institute affiliated to the Chinese Academy of Sciences (CAS), welcomes excellent researchers in the research of advanced inorganic materials science and engineering from all over the world to join us.
xufang@mail.sic.ac.cn | http://www.sic.ac.cn

PACRIM TECHNICAL SESSIONS BY SYMPOSIA

Session Title CURRENT CATEGORY	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
Plenary				
A Commentary on Complexions: Conception, Controversy and Adoption	Monday, May 05, 2025	8:20 AM	9:10 AM	Regency ABC
Grain Boundary Atomic Structures and Their Dynamics in Ceramics	Monday, May 05, 2025	9:10 AM	10:00 AM	Regency ABC
From Ultrafast Sintering to Controlling Microstructures with Electric Fields	Monday, May 05, 2025	10:20 AM	11:10 AM	Regency ABC
Complex Hybrid Metamaterials Designs based on Functional Ceramics and Beyond	Monday, May 05, 2025	11:10 AM	12:00 PM	Regency ABC
Imaging Polarization and Ion Distribution in Functional Materials	Tuesday, May 06, 2025	8:10 AM	9:00 AM	Regency ABC
Local structure tailoring of rare-earth doped fluoride materials for optical applications	Tuesday, May 06, 2025	9:00 AM	9:50 AM	Regency ABC
PacRim S1: Environmental barrier coatings for high-performance ceramics				
PACRIM Symposium 1- Environmental barrier coatings for high-performance ceramics I	Thursday, May 08, 2025	10:20 AM	12:00 PM	Oxford (Hyatt Regency)
PACRIM Symposium 1- Environmental barrier coatings for high-performance ceramics II	Thursday, May 08, 2025	1:15 PM	3:30 PM	Oxford (Hyatt Regency)
PACRIM Symposium 1 Environmental barrier coatings for high-performance ceramics III	Thursday, May 08, 2025	3:30 PM	4:20 PM	Oxford (Hyatt Regency)
PacRim S2: Frontier of modeling and Design of Ceramics and composites				
PACRIM Symposium 2- Modeling Surfaces, interfaces, defects, amorphous matter	Thursday, May 08, 2025	8:00 AM	10:00 AM	Balmoral (Hyatt Regency)
PACRIM Symposium 2- Machine Learning and Artificial Intelligence in Materials Modeling	Thursday, May 08, 2025	10:20 AM	11:40 AM	Balmoral (Hyatt Regency)
PACRIM Symposium 2- Modeling insights into physical properties	Thursday, May 08, 2025	1:15 PM	3:05 PM	Balmoral (Hyatt Regency)
PACRIM Symposium 2- Modeling mechanical behavior at various scales	Thursday, May 08, 2025	3:30 PM	4:20 PM	Balmoral (Hyatt Regency)
PACRIM Symposium 2- Modeling materials structure, stability, formation and degradation	Friday, May 09, 2025	8:00 AM	9:20 AM	Balmoral (Hyatt Regency)
PacRim S3: Solid Oxide Fuel Cells and Green Hydrogen Technologies				
PACRIM Symposium 3- Solid Oxide Fuel Cells and Green Hydrogen Technologies I	Wednesday, May 07, 2025	10:20 AM	12:00 PM	English Bay (Hyatt Regency)
PACRIM Symposium 3- Solid Oxide Fuel Cells and Green Hydrogen Technologies II	Thursday, May 08, 2025	8:00 AM	10:00 AM	English Bay (Hyatt Regency)
PACRIM Symposium 3- Solid Oxide Fuel Cells and Green Hydrogen Technologies III	Thursday, May 08, 2025	10:20 AM	11:50 AM	English Bay (Hyatt Regency)
PACRIM Symposium 3- Solid Oxide Fuel Cells and Green Hydrogen Technologies IV	Thursday, May 08, 2025	1:15 PM	3:15 PM	English Bay (Hyatt Regency)
PACRIM Symposium 3- Solid Oxide Fuel Cells and Green Hydrogen Technologies V	Thursday, May 08, 2025	3:30 PM	5:00 PM	English Bay (Hyatt Regency)
PacRim S4: Polymer-Derived Ceramics, Composites and Nanocomposites as Functional Inorganic Materials				
PACRIM Symposium 4- Environmental, energy, health and functional applications I	Monday, May 05, 2025	1:15 PM	5:30 PM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Environmental, energy, health and functional applications II	Tuesday, May 06, 2025	10:10 AM	11:30 AM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Design-oriented manufacturing and processing of composites	Tuesday, May 06, 2025	1:15 PM	2:25 PM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Organic-inorganic hybrid materials: from synthesis to application	Tuesday, May 06, 2025	2:25 PM	5:00 PM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Preceramic polymer chemistry- Structural, chemical and thermal transformations	Wednesday, May 07, 2025	8:00 AM	9:30 AM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Forming technologies of preceramic polymers including 3D-printing	Wednesday, May 07, 2025	9:30 AM	10:40 AM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Detailed characterization of PDC and hybrids	Thursday, May 08, 2025	8:00 AM	9:20 AM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Development of porous architectures spanning single and multiple length scales	Thursday, May 08, 2025	9:20 AM	10:45 AM	Plaza C (Hyatt Regency)
PACRIM Symposium 4- Fundamental processing-microstructure-properties relationships	Thursday, May 08, 2025	10:45 AM	11:35 AM	Plaza C (Hyatt Regency)

PACRIM TECHNICAL SESSIONS BY SYMPOSIA

Session Title CURRENT CATEGORY	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
PacRim S5: Geopolymers: Low Energy and Environmentally Friendly, Scalable Ceramics				
PacRim S5: Geopolymers: Low Energy and Environmentally Friendly, Scalable Ceramics	Thursday, May 08, 2025	1:15 PM	3:05 PM	Stanley (Hyatt Regency)
PacRim S6: Dielectric Ceramics for Microwave and Submillimeter-Wave Applications				
PACRIM Symposium 6- Dielectric Measurements	Monday, May 05, 2025	1:15 PM	3:05 PM	Balmoral (Hyatt Regency)
PACRIM Symposium 6- Glass for Microwave and Submillimeter-Wave Applications	Monday, May 05, 2025	3:30 PM	5:20 PM	Balmoral (Hyatt Regency)
PACRIM Symposium 6- Low-Temperature & Additive Fabrication I	Tuesday, May 06, 2025	10:10 AM	12:00 PM	Balmoral (Hyatt Regency)
PACRIM Symposium 6- Low-Temperature & Additive Fabrication II	Tuesday, May 06, 2025	1:15 PM	4:40 PM	Balmoral (Hyatt Regency)
PACRIM Symposium 6- Materials for Microwave and Millimeter-Wave Applications	Wednesday, May 07, 2025	8:00 AM	9:20 AM	Balmoral (Hyatt Regency)
PACRIM Symposium 6- Domain Structures/Engineering	Wednesday, May 07, 2025	10:20 AM	11:20 AM	Balmoral (Hyatt Regency)
PacRim S7: Direct Heat-to-Electricity Energy Conversion Materials and Thermal Energy Harnessing Challenges				
PACRIM Sym 7 - Direct Heat-to-Electricity Energy Conv Mtls & Thermal Energy Harnessing Challenges I	Monday, May 05, 2025	1:15 PM	5:30 PM	Dover/Tennyson
PACRIM Sym 7 - Direct Heat-to-Electricity Energy Conv Mtls & Thermal Energy Harnessing Challenges II	Tuesday, May 06, 2025	10:10 AM	11:20 AM	Dover/Tennyson
PacRim S8: STE(A)M Outreach, Education, Engagement and Retention (Joint with GOMD)				
PacRim S8: STE(A)M Outreach, Education, Engagement and Retention (Joint with GOMD)	Tuesday, May 06, 2025	1:15 PM	5:30 PM	Dover/Tennyson
PacRim S9: Fundamentals of interfaces, grain boundaries and surfaces: from interatomic bonding to macroscopic properties				
PACRIM Symposium 9- Thermodynamic and kinetic stability of interfaces	Monday, May 05, 2025	1:15 PM	4:10 PM	Oxford (Hyatt Regency)
PACRIM Symposium 9- Novel Characterizations Techniques	Tuesday, May 06, 2025	10:10 AM	12:00 PM	Oxford (Hyatt Regency)
PACRIM Symposium 9- Microstructure evolution through sintering and grain growth	Tuesday, May 06, 2025	1:15 PM	2:55 PM	Oxford (Hyatt Regency)
PACRIM Symposium 9- Fundamentals of Space Charge	Tuesday, May 06, 2025	2:55 PM	4:50 PM	Oxford (Hyatt Regency)
PacRim S10: Ceramics of Tomorrow for Green Energy and Cleaner Environment				
PACRIM Symposium 10- Ceramics of Tomorrow for Green Energy and Cleaner Environment I	Thursday, May 08, 2025	8:00 AM	11:50 AM	Georgia B (Hyatt Regency)
PACRIM Symposium 10- Ceramics of Tomorrow for Green Energy and Cleaner Environment II	Thursday, May 08, 2025	1:15 PM	5:40 PM	Georgia B (Hyatt Regency)
PACRIM Symposium 10- Ceramics of Tomorrow for Green Energy and Cleaner Environment III	Friday, May 09, 2025	8:00 AM	11:40 AM	Georgia B (Hyatt Regency)
PacRim S11: Optical and Electronic Phase Change Materials: Science and Application				
PACRIM Symposium 11- Optical and Electronic Phase Change Materials: Science and Application I	Monday, May 05, 2025	1:15 PM	3:15 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 11- Optical and Electronic Phase Change Materials: Science and Application II	Monday, May 05, 2025	3:30 PM	6:00 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 11- Optical and Electronic Phase Change Materials: Science and Application III	Tuesday, May 06, 2025	10:10 AM	12:00 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 11- Optical and Electronic Phase Change Materials: Science and Application IV	Tuesday, May 06, 2025	1:15 PM	2:55 PM	Georgia A (Hyatt Regency)

PACRIM TECHNICAL SESSIONS BY SYMPOSIA

Session Title CURRENT CATEGORY	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
PacRim S12: Engineering Ceramics and Ceramic Matrix Composites: Processing, Design, and Applications				
PACRIM Symposium 12- Advanced design, processing, and manufacturing of CMC I	Monday, May 05, 2025	1:15 PM	3:30 PM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Advanced design, processing, and manufacturing of CMC II	Monday, May 05, 2025	3:30 PM	5:20 PM	Plaza B (Hyatt Regency)
PACRIM Symposium 12-Innovative processing and synthesis methods	Tuesday, May 06, 2025	10:10 AM	11:50 AM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Novel sintering and microstructure control I	Tuesday, May 06, 2025	1:15 PM	3:05 PM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Novel sintering and microstructure control II	Tuesday, May 06, 2025	3:30 PM	4:30 PM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Novel sintering and microstructure control III	Tuesday, May 06, 2025	4:30 PM	5:30 PM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Novel sintering and microstructure control IV	Wednesday, May 07, 2025	8:00 AM	8:30 AM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Novel sintering and microstructure control V	Wednesday, May 07, 2025	8:30 AM	9:00 AM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Novel sintering and microstructure control VI	Wednesday, May 07, 2025	9:00 AM	11:00 AM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Processing-microstructure-mechanical properties correlation I	Thursday, May 08, 2025	8:00 AM	11:00 AM	Plaza B (Hyatt Regency)
PACRIM Symposium 12- Processing-microstructure-mechanical properties correlation II	Thursday, May 08, 2025	11:00 AM	11:50 AM	Plaza B (Hyatt Regency)
PacRim S13: Functional Defects in Ceramic Materials				
PACRIM Symposium 13- Defects for energy, thermal, mechanical, and electronic applications I	Tuesday, May 06, 2025	3:30 PM	5:30 PM	Grouse (Hyatt Regency)
PACRIM Symposium 13- Characterization and applications of defect-induced emergent phenomena	Wednesday, May 07, 2025	8:30 AM	9:30 AM	Grouse (Hyatt Regency)
PACRIM Symposium 13- Defects for energy, thermal, mechanical, and electronic applications II	Wednesday, May 07, 2025	10:20 AM	11:30 AM	Grouse (Hyatt Regency)
PACRIM Symposium 13- Defect engineering in electrochemical energy materials	Thursday, May 08, 2025	9:00 AM	10:00 AM	Grouse (Hyatt Regency)
PacRim S14: Advanced Structural Ceramics and CMCs for Ultra Extreme Environments				
PACRIM Symposium 14 - Advanced Structural Ceramics and CMCs for Ultra Extreme I	Wednesday, May 07, 2025	10:20 AM	11:20 AM	Cypress (Hyatt Regency)
PACRIM Symposium 14 - Advanced Structural Ceramics and CMCs for Ultra Extreme II	Thursday, May 08, 2025	8:00 AM	11:50 AM	Cypress (Hyatt Regency)
PACRIM Symposium 14 - Advanced Structural Ceramics and CMCs for Ultra Extreme III	Thursday, May 08, 2025	1:15 PM	5:20 PM	Cypress (Hyatt Regency)
PacRim S15: Porous Ceramics: From Innovative Processing to Advanced Industrial applications				
PACRIM Sym 15- Porous Ceramics: From Innovative Processing to Advanced Industrial applications I	Wednesday, May 07, 2025	8:00 AM	9:50 AM	Seymour (Hyatt Regency)
PACRIM Sym 15- Porous Ceramics: From Innovative Processing to Advanced Industrial applications II	Wednesday, May 07, 2025	10:20 AM	11:00 AM	Seymour (Hyatt Regency)
PACRIM Sym 15- Porous Ceramics: From Innovative Processing to Advanced Industrial applications III	Thursday, May 08, 2025	8:00 AM	9:10 AM	Seymour (Hyatt Regency)
PacRim S16: Advanced Powder Processing and Manufacturing Technologies				
PACRIM Symposium 16- Novel synthesis of powder and granulation technology	Wednesday, May 07, 2025	8:00 AM	10:00 AM	Stanley (Hyatt Regency)
PACRIM Symposium 16- Novel forming and sintering technology	Wednesday, May 07, 2025	10:00 AM	11:50 AM	Stanley (Hyatt Regency)
PACRIM Symposium 16- Novel material recycling and energy-saving process	Thursday, May 08, 2025	8:20 AM	10:00 AM	Stanley (Hyatt Regency)
PACRIM Symposium 16- Characterization and evaluation of particle and powder	Thursday, May 08, 2025	10:00 AM	11:40 AM	Stanley (Hyatt Regency)

PACRIM TECHNICAL SESSIONS BY SYMPOSIA

Session Title CURRENT CATEGORY	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
PacRim S17: Additive Manufacturing of Ceramics and Composites				
PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites I	Wednesday, May 07, 2025	10:20 AM	12:00 PM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites II	Thursday, May 08, 2025	8:00 AM	11:30 AM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites III	Thursday, May 08, 2025	1:15 PM	5:20 PM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites IV	Friday, May 09, 2025	8:00 AM	9:40 AM	Prince of Wales (Hyatt Regency)
PacRim S18: Nanostructured Metal Oxides and Metal Chalcogenides for Advanced Functional Applications				
PacRim S18: Nanostructured Metal Oxides and Metal Chalcogenides for Advanced Functional Applications	Friday, May 09, 2025	8:00 AM	11:20 AM	Seymour (Hyatt Regency)
PacRim S19: Nanostructured Bioceramics and Ceramics for Biomedical Applications				
PACRIM Symposium 19:Nanostructured Bioceramics and Ceramics for Biomedical Applications I	Monday, May 05, 2025	1:15 PM	3:30 PM	Stanley (Hyatt Regency)
PACRIM Symposium 19: Nanostructured Bioceramics and Ceramics for Biomedical Applications II	Monday, May 05, 2025	3:30 PM	4:30 PM	Stanley (Hyatt Regency)
PACRIM Symposium 19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications III	Tuesday, May 06, 2025	10:10 AM	12:00 PM	Stanley (Hyatt Regency)
PACRIM Symposium 19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications IV	Tuesday, May 06, 2025	1:15 PM	3:05 PM	Stanley (Hyatt Regency)
PacRim S20: Advanced Functional Materials for Clean Energy Solutions				
PACRIM S20- Adv synthesis, characterization and modeling of catalytic and energy storage materials	Tuesday, May 06, 2025	3:30 PM	5:50 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced synthesis and characterization of photovoltaic materials	Wednesday, May 07, 2025	8:00 AM	9:50 AM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced synthesis and characterization of lanthanide materials	Wednesday, May 07, 2025	10:00 AM	12:10 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced synthesis and characterization of solar / electric fuel materials I	Thursday, May 08, 2025	8:00 AM	10:00 AM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced synthesis and characterization of solar and electric fuel materials II	Thursday, May 08, 2025	10:00 AM	11:50 AM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced characterization techniques I	Thursday, May 08, 2025	1:15 PM	3:15 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced characterization techniques II	Thursday, May 08, 2025	3:30 PM	5:30 PM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Synthesis and characterization of carbon and thermal management materials	Friday, May 09, 2025	8:00 AM	9:00 AM	Georgia A (Hyatt Regency)
PACRIM Symposium 20- Advanced synthesis and characterization of metal organic framework materials	Friday, May 09, 2025	9:00 AM	11:00 AM	Georgia A (Hyatt Regency)
PacRim S21: Cultural Heritage of the Pacific Rim				
PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim I	Monday, May 05, 2025	1:15 PM	4:10 PM	English Bay (Hyatt Regency)
PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim II	Tuesday, May 06, 2025	10:10 AM	11:50 AM	English Bay (Hyatt Regency)
PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim III	Tuesday, May 06, 2025	1:15 PM	4:30 PM	English Bay (Hyatt Regency)
PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim IV	Wednesday, May 07, 2025	8:00 AM	9:00 AM	English Bay (Hyatt Regency)
PacRim S22: 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics				
PACRIM S22 - 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics I	Monday, May 05, 2025	1:15 PM	5:40 PM	Grouse (Hyatt Regency)
PACRIM S22 - 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics II	Tuesday, May 06, 2025	10:10 AM	12:10 PM	Grouse (Hyatt Regency)

PACRIM TECHNICAL SESSIONS BY SYMPOSIA

Session Title CURRENT CATEGORY	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
PacRim S23: Advanced Processing and Manufacturing Technologies for Ceramics				
PACRIM Symposium 23- Ultra-fast high-temperature sintering	Monday, May 05, 2025	1:15 PM	2:55 PM	Georgia B (Hyatt Regency)
PACRIM Symposium23- Cold sintering and energy-efficient densification techniques	Monday, May 05, 2025	3:30 PM	5:10 PM	Georgia B (Hyatt Regency)
PACRIM Symposium 23- Flash sintering	Tuesday, May 06, 2025	10:10 AM	11:40 AM	Georgia B (Hyatt Regency)
PACRIM Symposium 23- Novel forming technologies	Tuesday, May 06, 2025	1:15 PM	2:55 PM	Georgia B (Hyatt Regency)
PACRIM Symposium 23- Spark plasma sintering	Tuesday, May 06, 2025	3:15 PM	4:50 PM	Georgia B (Hyatt Regency)
PACRIM Symposium 23- Novel forming technologies, 3D printing, near-net shaping	Wednesday, May 07, 2025	8:30 AM	10:00 AM	Georgia B (Hyatt Regency)
PACRIM Symposium 23- Joining, integration, and machining technologies	Wednesday, May 07, 2025	10:00 AM	11:40 AM	Georgia B (Hyatt Regency)
PacRim S24: Solid-State Optical Materials and Luminescence Properties				
PACRIM Symposium 24- Advanced processing of optical materials and devices	Monday, May 05, 2025	1:15 PM	2:45 PM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 24- Optical spectroscopy of crystalline and amorphous materials	Monday, May 05, 2025	3:30 PM	5:20 PM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 24- Novel optical materials design and their properties I	Tuesday, May 06, 2025	10:10 AM	11:50 AM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 24- Novel optical materials design and their properties II	Tuesday, May 06, 2025	1:15 PM	2:05 PM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 24- Optical Materials	Tuesday, May 06, 2025	2:05 PM	3:50 PM	Prince of Wales (Hyatt Regency)
PACRIM Symposium 24- Solid-State Optical Materials and Luminescence Properties	Wednesday, May 07, 2025	8:00 AM	9:50 AM	Prince of Wales (Hyatt Regency)
PacRim S25: Synthesis, Processing, and Micro-structural Control of Materials using Electric Currents, Magnetic fields and/or Pressures				
PACRIM Sym 25 - Processing & Micro-structural Control using Electric Currents, Magnetic fields and/or Pressures	Monday, May 05, 2025	1:15 PM	5:10 PM	Seymour (Hyatt Regency)
PacRim S26: Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management				
PACRIM Symposium 26 - Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management I	Thursday, May 08, 2025	1:15 PM	5:30 PM	Plaza B (Hyatt Regency)
PACRIM Symposium 26 - Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management II	Friday, May 09, 2025	8:00 AM	11:30 AM	Plaza B (Hyatt Regency)
PacRim S27: International Symposium of Fundamental and Frontier Sciences of Ceramics				
PACRIM Symposium 27 - International Symposium of Fundamental and Frontier Sciences of Ceramics I	Monday, May 05, 2025	1:15 PM	5:30 PM	Cypress (Hyatt Regency)
PACRIM Symposium 27- International Symposium of Fundamental and Frontier Sciences of Ceramics II	Tuesday, May 06, 2025	10:10 AM	12:00 PM	Cypress (Hyatt Regency)
PACRIM Symposium 27- International Symposium of Fundamental and Frontier Sciences of Ceramics III	Tuesday, May 06, 2025	1:15 PM	5:30 PM	Cypress (Hyatt Regency)
PACRIM Symposium 27- International Symposium of Fundamental and Frontier Sciences of Ceramics IV	Wednesday, May 07, 2025	8:00 AM	9:50 AM	Cypress (Hyatt Regency)
PacRim S28: Joining and Integration of Ceramics for Enabling Complex Components and Advanced Applications				
PACRIM Sym 28- Joining and Integration of Ceramics for Enabling Complex Components and Adv Apps I	Thursday, May 08, 2025	10:20 AM	11:00 AM	Seymour (Hyatt Regency)
PACRIM Sym 28: Joining and Integration of Ceramics for Enabling Complex Components and Adv Apps II	Thursday, May 08, 2025	1:15 PM	2:15 PM	Seymour (Hyatt Regency)

PACRIM TECHNICAL SESSIONS BY SYMPOSIA

Session Title CURRENT CATEGORY	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
PacRim S29: Progress in High-Entropy Materials				
PACRIM Sym 29- AI/ML- AI/ML- Model development and applications I	Monday, May 05, 2025	1:15 PM	5:05 PM	Plaza A (Hyatt Regency)
PACRIM Sym 29- AI/ML- Model development and applications II	Tuesday, May 06, 2025	10:10 AM	12:00 PM	Plaza A (Hyatt Regency)
PACRIM Symposium 29- Mechanical Properties	Tuesday, May 06, 2025	1:15 PM	4:45 PM	Plaza A (Hyatt Regency)
PACRIM Symposium 29- Multiscale modeling and simulations	Wednesday, May 07, 2025	8:00 AM	12:00 PM	Plaza A (Hyatt Regency)
PACRIM Symposium 29- Thermodynamic, kinetic, physical, and environmental properties I	Thursday, May 08, 2025	8:00 AM	11:30 AM	Plaza A (Hyatt Regency)
PACRIM Symposium 29-Thermodynamic, kinetic, physical, and environmental properties II	Thursday, May 08, 2025	1:55 PM	5:05 PM	Plaza A (Hyatt Regency)
PACRIM Symposium 29- Manufacturing and characterization	Friday, May 09, 2025	8:00 AM	10:50 AM	Plaza A (Hyatt Regency)
PacRim S31: On the design and development of next generation nanolayered (3D and 2D) structural and functional materials				
PACRIM Symposium 31- Next-generation nanolayered structural/functional materials I	Wednesday, May 07, 2025	8:00 AM	10:20 AM	Oxford (Hyatt Regency)
PACRIM Symposium 31- Next-generation nanolayered structural/functional materials II	Thursday, May 08, 2025	8:00 AM	10:00 AM	Oxford (Hyatt Regency)
PacRim S32: Advanced Characterization, Testing, and Analysis of Materials				
PACRIM Symposium 32 - Advanced Characterization, Testing, and Analysis of Materials I	Tuesday, May 06, 2025	10:10 AM	11:40 AM	Seymour (Hyatt Regency)
PACRIM Symposium 32 - Advanced Characterization, Testing, and Analysis of Materials II	Tuesday, May 06, 2025	1:15 PM	5:00 PM	Seymour (Hyatt Regency)
PacRim S33: Ceramics for Electrochemical Energy Storage				
PacRim S33: Ceramics for Electrochemical Energy Storage I	Thursday, May 08, 2025	1:15 PM	5:10 PM	Plaza C (Hyatt Regency)
PacRim S33: Ceramics for Electrochemical Energy Storage II	Friday, May 09, 2025	8:00 AM	10:50 AM	Plaza C (Hyatt Regency)
PacRim S34: Carbon based materials and smart structures for electronic, photonics, electrochemical, MEMS and energy applications				
PacRim S34: Carbon based materials and smart structures for electronic, photonics, electrochemical, MEMS and energy applications I	Thursday, May 08, 2025	1:15 PM	5:30 PM	Grouse (Hyatt Regency)
PacRim S34: Carbon based materials and smart structures for electronic, photonics, electrochemical, MEMS and energy applications II	Friday, May 09, 2025	8:00 AM	9:30 AM	Grouse (Hyatt Regency)

GOMD TECHNICAL SESSIONS BY SYMPOSIA

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
GOMD Award Presentation	George W. Morey Award	Tuesday, May 06, 2025	8:00 AM	9:00 AM	Saturna Island Ballroom
GOMD Award Presentation	Norbert J. Kreidl Award	Tuesday, May 06, 2025	12:00 PM	1:15 PM	Saturna Island Ballroom
GOMD Award Presentation	Stookey Lecture of Discovery	Wednesday, May 07, 2025	8:00 AM	9:00 AM	Saturna Island Ballroom
GOMD Award Presentation	Darshana and Arun Varshneya Frontiers of Glass Lectures- Glass Science Award	Thursday, May 08, 2025	8:00 AM	9:00 AM	Saturna Island Ballroom
GOMD Award Presentation	Darshana and Arun Varshneya Frontiers of Glass Lectures- Glass Technology Award	Thursday, May 08, 2025	9:00 AM	10:00 AM	Saturna Island Ballroom
GOMD S1: Fundamentals of the glassy state	GOMD S1 S1 - Glass Formation and Structural Relaxation	Thursday, May 08, 2025	1:15 PM	4:50 PM	Cortes
GOMD S1: Fundamentals of the glassy state	GOMD S1 S2 Glass Crystallization and Glass-Ceramics I	Tuesday, May 06, 2025	3:30 PM	5:20 PM	Pender
GOMD S1: Fundamentals of the glassy state	GOMD S1 S2 Glass Crystallization and Glass-Ceramics II	Wednesday, May 07, 2025	9:20 AM	11:30 AM	Pender
GOMD S1: Fundamentals of the glassy state	GOMD S1 S2 Glass Crystallization and Glass-Ceramics III	Thursday, May 08, 2025	10:20 AM	11:40 AM	Pender
GOMD S1: Fundamentals of the glassy state	GOMD S1 S3- Structural characterizations of glasses and melts I	Monday, May 05, 2025	1:15 PM	3:15 PM	Saltspring C
GOMD S1: Fundamentals of the glassy state	GOMD S1 S3- Structural characterizations of glasses and melts II	Monday, May 05, 2025	3:30 PM	5:30 PM	Saltspring C
GOMD S1: Fundamentals of the glassy state	GOMD S1 S3- Structural characterizations of glasses and melts III	Tuesday, May 06, 2025	9:20 AM	12:00 PM	Saltspring C
GOMD S1: Fundamentals of the glassy state	GOMD S1 S3- Structural characterizations of glasses and melts IV	Tuesday, May 06, 2025	1:15 PM	2:35 PM	Saltspring C
GOMD S1: Fundamentals of the glassy state	GOMD S1 S4- Vibration properties	Tuesday, May 06, 2025	1:15 PM	3:15 PM	Pender
GOMD S1: Fundamentals of the glassy state	GOMD S1 S4- Dynamics/Mechanical	Tuesday, May 06, 2025	3:30 PM	5:20 PM	Saltspring AB
GOMD S1: Fundamentals of the glassy state	GOMD S1 S4- AIMD/ML potentials	Wednesday, May 07, 2025	9:30 AM	12:20 PM	Saltspring AB
GOMD S1: Fundamentals of the glassy state	GOMD S1 S4- Structures-property relation	Thursday, May 08, 2025	10:20 AM	12:50 PM	Saltspring AB
GOMD S1: Fundamentals of the glassy state	GOMD S1 S5- Data-driven modeling and machine learning for glass science I	Monday, May 05, 2025	1:15 PM	2:45 PM	Moresby
GOMD S1: Fundamentals of the glassy state	GOMD S1 S5- Data-driven modeling and machine learning for glass science II	Monday, May 05, 2025	3:30 PM	5:10 PM	Moresby
GOMD S1: Fundamentals of the glassy state	GOMD S1 S6- Mechanical properties of glasses I- Indentation responses	Monday, May 05, 2025	1:15 PM	3:05 PM	Pender

GOMD TECHNICAL SESSIONS BY SYMPOSIA

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
GOMD S1: Fundamentals of the glassy state	GOMD S1 S6- Mechanical properties of glasses II- Characterization techniques	Monday, May 05, 2025	3:30 PM	5:00 PM	Pender
GOMD S1: Fundamentals of the glassy state	GOMD S1 S6- Mechanical properties of glasses III- Designing high-strength glass	Tuesday, May 06, 2025	9:20 AM	11:50 AM	Pender
GOMD S1: Fundamentals of the glassy state	GOMD S1 S7 - Glass under non-ambient conditions I	Thursday, May 08, 2025	10:20 AM	12:00 PM	Moresby
GOMD S1: Fundamentals of the glassy state	GOMD S1 S7 - Glass under non-ambient conditions II	Thursday, May 08, 2025	1:15 PM	1:55 PM	Moresby
GOMD S1: Fundamentals of the glassy state	GOMD S1 S8 - Chalcogenide glasses and amorphous materials	Wednesday, May 07, 2025	9:20 AM	12:00 PM	Cortes
GOMD S2: Glass and interactions with its environment- Fundamentals and applications	GOMD S2 S1- Glasses, glass-ceramics and glass-based biomaterials	Thursday, May 08, 2025	1:15 PM	4:10 PM	Pender
GOMD S2: Glass and interactions with its environment- Fundamentals and applications	GOMD S2 S2- Glass Surfaces and Functional Coatings	Wednesday, May 07, 2025	9:20 AM	12:00 PM	Saltspring C
GOMD S2: Glass and interactions with its environment- Fundamentals and applications	GOMD S2 S2- Glass Dissolution and Interfacial Reactions I	Thursday, May 08, 2025	10:20 AM	12:00 PM	Saltspring C
GOMD S2: Glass and interactions with its environment- Fundamentals and applications	GOMD S2 S2- Glass Dissolution and Interfacial Reactions II	Thursday, May 08, 2025	1:15 PM	4:50 PM	Saltspring C
GOMD S2: Glass and interactions with its environment- Fundamentals and applications	GOMD S2 S3- Materials for waste immobilization I	Monday, May 05, 2025	1:15 PM	4:50 PM	Cortes
GOMD S2: Glass and interactions with its environment- Fundamentals and applications	GOMD S2 S3- Materials for waste immobilization II	Tuesday, May 06, 2025	9:20 AM	12:00 PM	Cortes
GOMD S3: Optical and electronic materials and devices- Fundamentals and applications	GOMD S3 S1- Optical and electronic materials and devices- Fundamentals and applications	Wednesday, May 07, 2025	9:20 AM	11:40 AM	Saturna Island Ballroom
GOMD S3: Optical and electronic materials and devices- Fundamentals and applications	GOMD S3 S2 - Glasses for energy applications	Thursday, May 08, 2025	1:15 PM	5:40 PM	Saturna Island Ballroom
GOMD S3: Optical and electronic materials and devices- Fundamentals and applications	GOMD S3 S3 - Optical fibers and waveguides, optoelectronic glass-based devices I	Tuesday, May 06, 2025	1:15 PM	5:20 PM	Cortes
GOMD S3: Optical and electronic materials and devices- Fundamentals and applications	GOMD S3 S3- Optical fibers and waveguides, optoelectronic glass-based devices II	Thursday, May 08, 2025	10:20 AM	11:40 AM	Cortes
GOMD S3: Optical and electronic materials and devices- Fundamentals and applications	GOMD S3 S4- Rare-earth and transition metal-doped glasses and ceramics for photonic applications I	Tuesday, May 06, 2025	9:20 AM	12:00 PM	Moresby

GOMD TECHNICAL SESSIONS BY SYMPOSIA

CURRENT CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
GOMD S3: Optical and electronic materials and devices- Fundamentals and applications	GOMD S3 S4- Rare-earth and transition metal-doped glasses and ceramics for photonic applications II	Tuesday, May 06, 2025	1:15 PM	3:05 PM	Moresby
GOMD S4: Outreach (Joint with PACRIM)	PACRIM Sym 8 & GOMD Sym 4- STEAM Outreach, Education, Engagement and Retention	Tuesday, May 06, 2025	1:15 PM	5:30 PM	Dover/Tennyson (Hyatt)
GOMD S5: Glass manufacturing	GOMD S5 S1- Manufacturing I	Monday, May 05, 2025	1:15 PM	3:05 PM	Saturna Island Ballroom
GOMD S5: Glass manufacturing	GOMD S5 S1- Manufacturing II	Monday, May 05, 2025	3:30 PM	5:30 PM	Saturna Island Ballroom
GOMD S5: Glass manufacturing	GOMD S5 S1- Manufacturing III	Tuesday, May 06, 2025	9:20 AM	12:00 PM	Saturna Island Ballroom
GOMD S5: Glass manufacturing	GOMD S5 S1- Manufacturing IV	Tuesday, May 06, 2025	1:15 PM	3:05 PM	Saturna Island Ballroom
GOMD S5: Glass manufacturing	GOMD S5 S1- Manufacturing V	Tuesday, May 06, 2025	3:30 PM	4:30 PM	Saturna Island Ballroom
GOMD S5: Glass manufacturing	GOMD S5 S1- Manufacturing VI	Thursday, May 08, 2025	10:20 AM	11:40 AM	Saturna Island Ballroom
GOMD S5: Glass manufacturing	GOMD S5 S2 - Additive manufacturing of glass	Tuesday, May 06, 2025	3:30 PM	5:10 PM	Saltspring C
GOMD S6: Jonathan Stebbins Honorary Symposium	GOMD S6- Jonathan Stebbins Honorary Symposium I	Monday, May 05, 2025	1:15 PM	3:15 PM	Saltspring AB
GOMD S6: Jonathan Stebbins Honorary Symposium	GOMD S6- Jonathan Stebbins Honorary Symposium II	Monday, May 05, 2025	3:15 PM	5:30 PM	Saltspring AB
GOMD S6: Jonathan Stebbins Honorary Symposium	GOMD S6- Jonathan Stebbins Honorary Symposium III	Tuesday, May 06, 2025	9:20 AM	11:50 AM	Saltspring AB
GOMD S6: Jonathan Stebbins Honorary Symposium	GOMD S6- Jonathan Stebbins Honorary Symposium IV	Tuesday, May 06, 2025	1:15 PM	2:55 PM	Saltspring AB
GOMD S7: Emerging frontiers: Glasses in new technology	GOMD S7 - Emerging frontiers- Glasses in new technology I	Tuesday, May 06, 2025	3:30 PM	5:00 PM	Moresby
GOMD S7: Emerging frontiers: Glasses in new technology	GOMD S7 - Emerging frontiers- Glasses in new technology II	Wednesday, May 07, 2025	9:20 AM	10:50 AM	Moresby

The American Ceramic Society - Anti-Harassment Policy

Statement of Policy:

The American Ceramic Society (ACerS) is committed to ensuring that all ACerS activities are free from discrimination, harassment, and/or retaliation of any form. ACerS seeks to foster an environment promoting the free expression and exchange of scientific ideas. ACerS is committed to ensuring equality of treatment and opportunity and freedom from harassment for all members and participants regardless of race, gender, nationality, religious beliefs, gender identity, color, age, marital status, sexual orientation, disabilities, ancestry, personal appearance, or any other basis not relevant to scientific merit. Violators of this policy will be subject to discipline by the Society.

Definition of Harassment:

Harassment includes, but is not limited to, offensive verbal comments related to gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, national origin, religion, age, marital status, military status, or any other status protected by law; deliberate intimidation; stalking; following; harassing photography or recording; sustained disruption of talks or other events; and inappropriate physical contact. Attendees asked to stop any harassing behavior are expected to comply immediately.

Definition of Sexual Harassment:

Sexual harassment does not refer to occasional compliments or other generally acceptable social behavior. Sexual harassment refers to verbal, physical, and visual conduct of a sexual nature that is unwelcome and offensive to the recipient. By way of example, sexual harassment may include such conduct as sexual flirtations, advances, or propositions; verbal comments or physical actions of a sexual nature; sexually degrading words used to describe an individual; an unwelcome display of sexually suggestive objects or pictures; sexually explicit jokes; and offensive, unwanted physical contact such as patting, pinching, grabbing, groping, or constant brushing against another's body. Attendees asked to stop any sexually harassing behavior are expected to comply immediately.

Scope of Policy:

This policy applies to all attendees of ACerS meetings, events, and activities, including members, non-members, partnering organizations, volunteers, students, guests, staff, contractors, exhibitors, and all other participants related to ACerS events and activities.

Reporting an Incident:

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact an ACerS staff member immediately. ACerS staff can be identified by the official staff badge, their name and title. All complaints will be treated seriously and will be investigated promptly.

Names(s) and Contact Information Onsite to Report an Incident:

1. **ACerS Executive Director, Mark Mecklenborg, ph 614-794-5829 / email: ExecDirector@ceramics.org**
2. **ACerS President, Monica Ferraris / email: ACerSPresident@ceramics.org**

Disciplinary Action:

All reports of harassment will be directed immediately to the ACerS leadership team who may consult with and engage other ACerS staff, leaders and legal counsel as appropriate. Conference security and/or local law enforcement may be involved, as appropriate based on the specific circumstances. In response to a report of harassment, the ACerS leadership team or ACerS staff will take appropriate action. Such actions range from a verbal warning to ejection from the event without a refund. Repeat offenders may be subject to further disciplinary action, such as being banned from participating in future ACerS conferences or events and/or permanently expelled from ACerS membership.

The full policy can be viewed at: https://ceramics.org/wp-content/uploads/2018/12/Anti-Harassment-Policy.pdf

KJ GROUP

Automated & Autonomous Solutions for Materials Science R&D

MTI has been a trusted partner in materials science research for decades. Now, we are automating your exploration of the countless possibilities of the future.

Autonomous Platform for Solid-State Material Synthesis – AMSP02

Automated Powder Dispensing

Automated Centrifugal Ball Milling

Automated Pellet Pressing

Automated Sintering

1100 °C Max 6" Automated Tube Furnace OTF1200XS6-ASD

- Automated Sample Loading via Robotic Arm
- Up to 1100°C, 175+175 mm Heating Length
- Maximum Sample Size Ø120×250 mm
- Programmable Control

Automated 16-CH Powder Dispensing System AM-PD16

- 16 (250 mL) Stirring Solid Precursor Containers
- 2 (500 mL) Peristaltic Liquid Delivery Channels
- Feeding Accuracy: Up to 1 mg
- Feeding Resolution: 0.1 mg

WWW.MTIXTL.COM

California, USA

Oral Presenters

Name	Date	Time	Room	Page Number
A				
Abbasi, M.	6-May	10:10AM	Saltspring AB	59
Affatigato, M.	7-May	9:20AM	Saturna Island Ballroom	65
Agnello, G.	7-May	10:10AM	Saltspring C	64
Ahizi, E.	5-May	1:45PM	Saturna Island Ballroom	56
Ahmad, S.	8-May	4:50PM	Georgia B	45
Aidhy, D.	6-May	3:30PM	Moresby	63
Aidhy, D.	7-May	11:00AM	Plaza A	36
Aidhy, D.	8-May	2:15PM	Balmoral	44
Ajoku, I.C.	9-May	9:20AM	Plaza B	52
Akedo, J.	6-May	1:15PM	Cypress	26
Akirmak-Yamac, E.	6-May	2:15PM	Pender	60
Alam, M.	8-May	2:15PM	English Bay	44
AlHasni, B.M.	5-May	2:05PM	Saltspring C	53
AlHasni, B.M.	6-May	2:25PM	Seymour	27
Ali, S.	7-May	11:10AM	Saltspring C	64
Allen, T.	7-May	10:50AM	Prince of Wales	34
An, Q.	5-May	4:00PM	Moresby	54
An, Q.	8-May	1:15PM	Balmoral	44
An, S.	8-May	10:20AM	English Bay	38
Anasori, B.	7-May	9:00AM	Oxford	37
Anton, R.	8-May	8:20AM	Oxford	43
Antonio, R.W.	7-May	10:20AM	Saturna Island Ballroom	65
Aoki, T.	7-May	10:20AM	Moresby	65
Arai, Y.	8-May	8:00AM	Cypress	40
Arena, H.	6-May	10:20AM	Cortes	58
Arroyave, R.	5-May	1:55PM	Plaza A	16
Arshad, A.	8-May	4:00PM	Grouse	49
B				
Bae, C.	8-May	8:00AM	Prince of Wales	41
Banerjee, J.	6-May	5:00PM	Cortes	61
Banerjee, K.	7-May	11:10AM	Grouse	33
Barick, P.	7-May	10:10AM	Pender	63
Barros de Moraes, E.	6-May	11:10AM	Pender	58
Bay, M.	5-May	3:50PM	Saturna Island Ballroom	56
Bayko, D.P.	7-May	11:00AM	Cortes	64
Begos, J.	8-May	11:30AM	English Bay	38
Béland, L.	8-May	10:20AM	Balmoral	37
Benassi, M.	6-May	4:20PM	Saltspring AB	60
Bermejo, R.	5-May	3:30PM	Georgia B	14
Bermejo, R.	6-May	10:30AM	Pender	57
Bermejo, R.	7-May	11:40AM	Prince of Wales	34
Bernard, S.	6-May	2:05PM	Plaza C	21
Bernasconi, M.	7-May	10:20AM	Cortes	64
Bertani, M.	7-May	11:00AM	Saltspring AB	64
Beyerlein, I.	7-May	10:30AM	Plaza A	36
Birkel, C.	7-May	8:30AM	Oxford	37
Bishnoi, S.	5-May	2:45PM	Moresby	54
Bisulca, C.	6-May	10:50AM	English Bay	19
Blatt, R.L.	8-May	2:15PM	Pender	68
Blugan, G.	5-May	4:50PM	Plaza C	9
Boluk, Y.	8-May	2:15PM	Stanley	45
Bordia, R.	5-May	1:15PM	Cypress	15
Bordia, R.	6-May	10:10AM	Plaza C	17
Boroojerdi, M.	8-May	10:55AM	Plaza C	39
Bossen, A.	8-May	2:45PM	Cortes	67
Bosworth, B.	5-May	1:15PM	Balmoral	9
Bourgès, C.	8-May	9:00AM	English Bay	38
Bouville, F.	5-May	5:00PM	Cypress	16
Bouville, F.	8-May	1:45PM	Prince of Wales	46
Bragatto, C.B.	6-May	4:00PM	Seymour	27
Breder, K.	9-May	8:00AM	Georgia A	51
Broderick, S.	6-May	10:40AM	Plaza A	20
Broqvist, P.	8-May	5:00PM	Georgia A	47
Brune, P.	8-May	4:30PM	Prince of Wales	46
Bruns, S.	5-May	4:40PM	Pender	55
Brylewski, T.	7-May	10:20AM	English Bay	31
Bussey, J.	7-May	10:30AM	Saltspring C	64

Name	Date	Time	Room	Page Number
C				
Calahoo, C.	8-May	3:30PM	Pender	68
Calahoo, C.	8-May	4:30PM	Saltspring C	69
Camacho Ramirez, A.D.	6-May	1:45PM	Plaza C	21
Camici, H.	8-May	10:40AM	Cortes	67
Canovi, C.	8-May	11:10AM	Georgia B	39
Carlson, K.	5-May	1:15PM	Cortes	55
Carlson, K.	9-May	9:00AM	Plaza B	51
Carter, W.	5-May	2:15PM	Oxford	11
Carter, W.	6-May	10:40AM	Grouse	19
Castro, R.	6-May	10:40AM	Oxford	17
Castro, R.	6-May	5:00PM	Cypress	26
Castro, R.	8-May	4:40PM	Plaza C	49
Caurant, D.	5-May	2:15PM	English Bay	13
Caurant, D.	5-May	2:55PM	English Bay	13
Chan, C.K.	8-May	9:40AM	Grouse	40
Chan, H.M.	5-May	3:30PM	Cypress	16
Chen, H.	6-May	1:55PM	Georgia B	25
Chen, K.	6-May	1:15PM	Plaza B	23
Cheng, E.J.	6-May	4:00PM	Georgia B	25
Cheng, Z.	5-May	2:15PM	Georgia A	11
Cheng, Z.	9-May	9:00AM	Plaza A	52
Chenu, S.	6-May	1:15PM	Prince of Wales	26
Cheriyathu Valappil, A.	6-May	3:30PM	Prince of Wales	26
Cheype, M.	6-May	10:50AM	Plaza C	17
Cho, J.	6-May	10:10AM	Pender	57
Cho, J.	6-May	2:35PM	Stanley	24
Chowdhury, A.	6-May	11:40AM	Plaza A	20
Chowdhury, S.	8-May	11:20AM	Saltspring AB	66
Chuang, S.	6-May	11:20AM	Saltspring C	57
Chung, H.	6-May	1:15PM	Stanley	24
Chung, J.	8-May	2:35PM	Pender	68
Chung, S.	6-May	1:15PM	Oxford	22
Chung, W.	6-May	1:45PM	Moresby	61
Cicconi, M.	7-May	9:20AM	Pender	63
Conradt, R.	8-May	10:20AM	Saturna Island Ballroom	67
Cooper, S.	5-May	3:30PM	Saturna Island Ballroom	56
Cormack, A.	6-May	10:40AM	Saltspring C	57
Cormier, L.	6-May	1:35PM	Saltspring C	60
Coudray, S.	6-May	2:55PM	Cortes	61
Csanádi, T.	7-May	10:20AM	Cypress	33
Cui, B.	7-May	9:00AM	Grouse	33
Cui, B.	8-May	8:30AM	Cypress	40
Cui, B.	9-May	8:30AM	Plaza A	52
Cui, J.	6-May	3:30PM	English Bay	25
Curtarolo, S.	5-May	4:00PM	Cypress	16
Curtarolo, S.	7-May	8:00AM	Plaza A	36
D				
Daiko, Y.	8-May	4:50PM	Saturna Island Ballroom	69
Dailey, M.S.	6-May	4:00PM	Cortes	61
Davey, T.	8-May	3:30PM	Plaza A	48
de Ligny, D.	5-May	4:50PM	Saltspring C	54
de Souza, F.L.	8-May	10:50AM	Georgia A	42
Deringer, V.L.	6-May	11:30AM	Georgia A	18
Destino, J.F.	6-May	4:00PM	Saltspring C	62
Diegeler, A.	6-May	2:05PM	Seymour	27
Diegeler, A.	8-May	2:15PM	Prince of Wales	46
Dingwell, D.B.	5-May	5:00PM	Saltspring AB	57
Dixon Wilkins, M.C.	9-May	9:40AM	Plaza B	52
Dixon, D.	5-May	1:45PM	Cortes	55
Dogan, F.	7-May	11:30AM	English Bay	31
Dong, C.	8-May	1:15PM	Georgia A	46
Dong, Y.	5-May	4:40PM	Georgia B	14
Du, J.	6-May	1:55PM	Pender	60
Du, Y.	6-May	4:00PM	Grouse	24
Du, Z.	9-May	8:00AM	Prince of Wales	50

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
		E		
Eckert, H.	5-May	2:45PM	Saltspring AB	56
Einarsrud, M.	8-May	4:30PM	Georgia A	47
Eisawi, K.	8-May	2:15PM	Plaza C	48
El Ghazaoui, E.	5-May	4:30PM	Saltspring C	54
Elliott, S.	5-May	4:30PM	Georgia A	12
Elliott, S.	7-May	10:20AM	Saltspring AB	63
Elliott, S.	8-May	9:05AM	Saturna Island Ballroom	65
Eltantawy, M.E.	6-May	2:45PM	Balmoral	21
Elumalai, T.R.	6-May	11:00AM	Saltspring AB	59
Endo, J.	5-May	4:20PM	Pender	55
Engelmann, P.	6-May	2:25PM	Saturna Island Ballroom	62
Enright, L.	5-May	1:45PM	Balmoral	10
Eyerman, E.	6-May	4:30PM	Georgia B	25
		F		
Fadavi Firooz, A.	8-May	11:00AM	Saltspring AB	66
Fahrenholtz, W.	5-May	1:45PM	Cypress	15
Fahrenholtz, W.	8-May	1:45PM	Plaza A	48
Fan, Y.	6-May	1:45PM	Plaza B	23
Fanchini, G.	8-May	10:10AM	Georgia B	39
Fang, X.	5-May	4:30PM	Cypress	16
Farnan, I.	6-May	11:20AM	Saltspring AB	59
Fathidoost, M.	8-May	10:50AM	Balmoral	38
Feller, S.	6-May	1:15PM	Dover/Tennyson	22
Feng, B.	5-May	1:55PM	Georgia B	14
Feng, M.	8-May	11:30AM	Georgia B	39
Feng, T.	8-May	2:05PM	Cypress	46
Fensin, S.	8-May	11:00AM	Plaza A	43
Ferkl, P.	6-May	1:45PM	Saturna Island Ballroom	62
Fernandes, S.P.	8-May	4:20PM	Grouse	49
Fernández Carrión, A.J.	7-May	9:00AM	Prince of Wales	36
Ferraris, M.	6-May	1:45PM	Stanley	24
Fey, T.	7-May	10:20AM	Seymour	33
Fischer, T.	7-May	8:00AM	Georgia A	34
Fisher, C.	8-May	1:45PM	English Bay	44
Fisher, C.	9-May	8:30AM	Balmoral	49
Florez, R.F.	8-May	1:45PM	Stanley	45
Florian, P.	5-May	2:05PM	Saltspring AB	56
Fotheringham, U.G.	6-May	4:00PM	Moresby	63
Franco, D.F.	6-May	2:05PM	Prince of Wales	26
Freitas, C.M.	7-May	11:10AM	English Bay	31
Fu, M.	7-May	11:00AM	Balmoral	32
Fu, Q.	8-May	1:15PM	Pender	68
Fu, R.Y.	9-May	8:30AM	Grouse	53
Fu, S.	6-May	11:30AM	Plaza B	18
Fu, Y.	7-May	8:20AM	English Bay	35
Fuertes de la Llave, V.	7-May	9:50AM	Moresby	65
		G		
Gabriel, E.	8-May	9:00AM	Grouse	40
Galusek, D.	7-May	8:00AM	Cypress	36
Gammond, L.V.	8-May	1:15PM	Moresby	68
Gandon, S.	8-May	3:50PM	Saltspring C	69
Gao, B.	8-May	10:20AM	Prince of Wales	42
Gao, C.	7-May	11:20AM	Cortes	64
Gao, M.	7-May	8:40AM	Plaza A	36
Garcia, R.	5-May	1:15PM	Oxford	11
Garcia, R.	5-May	4:20PM	Seymour	15
Garcia, R.	8-May	3:30PM	Balmoral	44
Gautier, R.	7-May	8:00AM	Prince of Wales	36
Gaweda, M.	5-May	4:30PM	Plaza C	9
Geffroy, P.	8-May	8:00AM	English Bay	38
George, E.P.	6-May	1:55PM	Plaza A	27
George, J.	5-May	3:50PM	Cortes	55
Georges, P.	6-May	10:10AM	Saturna Island Ballroom	59
Gerczak, T.J.	9-May	10:20AM	Plaza B	52
German, G.	8-May	2:15PM	Plaza B	47
Gervais, C.	8-May	8:00AM	Plaza C	38
Ghoniem, E.	8-May	4:40PM	Grouse	49
Ghuman, K.K.	8-May	4:00PM	Georgia B	45
Ghuman, K.K.	8-May	8:30AM	Balmoral	37
Gin, S.	8-May	1:45PM	Saltspring C	68
Giorgi, G.	8-May	1:45PM	Balmoral	44
Giorgi, G.	9-May	8:00AM	Balmoral	49
Giuntini, D.	5-May	1:15PM	Seymour	15
Giuntini, D.	6-May	11:40AM	Cypress	20
Giuntini, D.	6-May	2:45PM	Plaza B	23
Giuntini, D.	9-May	9:30AM	Georgia B	50
Goel, A.	5-May	4:00PM	Saltspring C	53
Goel, A.	6-May	9:20AM	Pender	57
Gougousi, T.	9-May	9:10AM	Seymour	51
Gouma, P.	5-May	3:30PM	Stanley	13
Gouma, P.	6-May	11:40AM	Grouse	19
Goyal, S.	7-May	9:20AM	Moresby	65
Grandinetti, P.J.	6-May	9:20AM	Saltspring AB	59
Greiner, L.	8-May	3:30PM	Plaza B	47
Grejtak, T.	9-May	8:00AM	Plaza B	51
Grodsky, R.	6-May	4:50PM	Dover/Tennyson	22
Grodsky, R.	8-May	11:40AM	Saltspring C	67
Gross, T.M.	7-May	8:00AM	Saturna Island Ballroom	63
Gu, C.	8-May	3:30PM	Grouse	49
Gu, T.	5-May	2:45PM	Georgia A	11
Gubarevich, A.	5-May	5:00PM	Plaza B	12
Guillen, D.P.	8-May	2:35PM	Plaza B	47
Gunnell, L.	5-May	1:45PM	Moresby	54
Gunnell, L.	5-May	4:50PM	Moresby	54
Guo, F.	8-May	4:00PM	Cypress	46
Guo, J.	6-May	10:40AM	Balmoral	17
Gupta, S.	6-May	2:55PM	Pender	60
Gupta, S.	8-May	8:40AM	Oxford	43
Gurlo, A.	8-May	3:30PM	Prince of Wales	46
Gurlo, A.	9-May	9:30AM	Plaza A	52
		H		
Ha, J.	7-May	10:40AM	Seymour	33
Hahn, W.	5-May	3:30PM	Oxford	11
Hahn, W.	6-May	11:40AM	Oxford	18
Haight-Stott, L.	6-May	1:55PM	Saltspring C	60
Hansen, C.	8-May	2:35PM	Prince of Wales	46
Hao, D.	9-May	8:30AM	Georgia B	50
Harmer, M.	5-May	8:20AM	Regency ABC	9
Harrison, M.T.	8-May	2:55PM	Plaza B	47
Hayashi, A.	5-May	1:45PM	Grouse	13
He, J.	8-May	2:45PM	Plaza A	48
He, L.	5-May	1:15PM	English Bay	13
Heintz, J.	6-May	3:50PM	Balmoral	21
Heintz, J.	9-May	11:10AM	Plaza B	52
Hemmer, E.	6-May	10:10AM	Stanley	18
Hemmer, E.	7-May	10:50AM	Georgia A	35
Hemmer, E.	8-May	1:15PM	Georgia B	45
Henry, L.J.	6-May	11:20AM	Moresby	58
Henry, L.J.	6-May	2:05PM	Moresby	61
Heske, C.	7-May	9:20AM	Georgia A	35
Hess, K.	6-May	1:15PM	Saturna Island Ballroom	61
Hirota, Y.	6-May	3:30PM	Plaza C	21
Hoffmann, P.	7-May	8:30AM	Seymour	33
Hong, M.	6-May	10:10AM	Dover/Tennyson	17
Hong, S.	6-May	8:10AM	Regency ABC	16
Honma, T.	6-May	3:30PM	Pender	59
Hoover, C.G.	5-May	1:45PM	Pender	54
Hoy, R.S.	8-May	4:10PM	Cortes	67
Hreniak, D.	7-May	8:30AM	Prince of Wales	36
Hrma, P.	5-May	2:25PM	Cortes	55
Hu, L.	6-May	4:00PM	Cypress	26
Hu, T.	6-May	4:20PM	Cortes	61
Huang, A.	8-May	11:10AM	English Bay	38
Huang, K.	8-May	8:30AM	English Bay	38
Huang, L.	5-May	1:15PM	Pender	54
Huey, B.	5-May	5:00PM	Grouse	14
Huey, B.	6-May	10:10AM	Seymour	20
Humphry-Baker, S.A.	8-May	9:00AM	Cypress	40

Oral Presenters

Name	Date	Time	Room	Page Number
Hunt, J.	6-May	3:30PM	Saturna Island Ballroom	62
Hupa, L.	5-May	4:00PM	Stanley	13
Huttula, M.	9-May	11:10AM	Georgia B	50
		I		
Ichimiya, Y.	6-May	11:30AM	English Bay	19
Iizuka, F.	6-May	1:35PM	English Bay	25
Ikesue, A.	5-May	1:15PM	Prince of Wales	14
Ikuhara, Y.	5-May	9:10AM	Regency ABC	9
Inada, M.	8-May	8:30AM	Seymour	41
Inutsuka, M.	8-May	8:50AM	Stanley	41
Ippolito, S.	8-May	9:20AM	Oxford	43
Isari, A.	8-May	9:00AM	Oxford	43
Isari, A.	8-May	9:40AM	Oxford	43
Ishii, K.	9-May	8:00AM	Georgia B	50
Ishiyama, T.	8-May	3:30PM	Saturna Island Ballroom	69
Ito, A.	5-May	4:30PM	Plaza B	12
Iwamoto, Y.	6-May	10:30AM	Plaza C	17
		J		
Jain, H.	6-May	4:30PM	Dover/Tennyson	22
Jakubinek, M.	7-May	9:30AM	Plaza C	31
Jelen, P.	8-May	9:00AM	Plaza C	38
Jensen, P.	8-May	8:50AM	Seymour	41
Jeon, S.	8-May	11:00AM	Plaza B	40
Jia, D.	5-May	5:10PM	Plaza C	9
Jiang, S.	5-May	4:00PM	Prince of Wales	15
Jiang, X.	6-May	2:55PM	English Bay	25
Jiang, X.	8-May	1:15PM	Grouse	49
Jiang, Y.	5-May	4:50PM	Dover/Tennyson	10
Jin, X.	8-May	10:40AM	English Bay	38
Jinschek, J.	6-May	10:40AM	Seymour	20
Jomboh, K.J.	6-May	4:10PM	Saturna Island Ballroom	62
Jose, A.	5-May	4:30PM	Moresby	54
Jose, A.	8-May	2:45PM	Saltspring C	69
Joseph, N.D.	5-May	2:05PM	Moresby	54
Joseph, N.D.	5-May	3:30PM	Cortes	55
		K		
Kalahe, J.	6-May	12:00PM	Saturna Island Ballroom	59
Kaman, J.W.	6-May	1:35PM	Georgia A	23
Kanehara, K.	5-May	4:20PM	Balmoral	10
Kang, M.	6-May	1:55PM	Georgia A	23
Kang, M.	7-May	9:50AM	Saturna Island Ballroom	65
Kang, S.	7-May	9:20AM	Cortes	64
Kaplan, W.D.	5-May	2:15PM	Cypress	16
Kaplan, W.D.	6-May	11:10AM	Oxford	18
Karcher, S.	8-May	1:35PM	Seymour	48
Kaspar, T.	6-May	4:30PM	Grouse	24
Kasu, M.	8-May	1:45PM	Grouse	49
Katsura, A.	5-May	4:30PM	Dover/Tennyson	10
Katsura, A.	9-May	10:20AM	Seymour	51
Kaur, D.	8-May	10:20AM	Cortes	67
Kaur, D.	8-May	3:50PM	Pender	68
Kawahara, K.	9-May	9:10AM	Plaza C	52
Kerisit, S.	6-May	9:20AM	Cortes	58
Kerisit, S.	6-May	11:00AM	Cortes	58
Kerling, V.	6-May	11:40AM	Saltspring C	57
Keshri, S.R.	8-May	2:25PM	Saturna Island Ballroom	69
Kiczenski, T.	6-May	2:25PM	Saltspring AB	62
Kiff, W.L.	6-May	2:35PM	Pender	60
Kikuchi, M.	6-May	11:30AM	Stanley	18
Kim, G.	9-May	10:50AM	Plaza B	52
Kim, H.	6-May	2:15PM	Plaza B	23
Kim, S.	5-May	5:10PM	Dover/Tennyson	11
Kim, S.	6-May	2:45PM	Prince of Wales	26
Kim, S.H.	5-May	4:00PM	Pender	55
Kim, S.H.	7-May	9:50AM	Saltspring C	64
Kim, W.	5-May	4:00PM	Dover/Tennyson	10
Kinzel, E.	6-May	3:30PM	Saltspring C	62
Kirchner, K.	8-May	4:00PM	Balmoral	44
Kitagawa, Y.	6-May	9:50AM	Moresby	58
Kizaki, K.	7-May	10:50AM	Pender	63
Klösel, I.	7-May	8:50AM	Seymour	33
Klouzek, J.	6-May	2:45PM	Saturna Island Ballroom	62
Kob, W.	8-May	1:15PM	Cortes	67
Kodera, Y.	5-May	4:50PM	Seymour	15
Kodera, Y.	6-May	3:30PM	Georgia B	25
Koel, B.E.	8-May	2:15PM	Georgia A	46
Koh, Z.	9-May	8:30AM	Prince of Wales	50
Koide, M.	8-May	9:20AM	Stanley	41
Koledin, T.D.	5-May	4:50PM	Georgia A	12
Kolzenburg, S.	6-May	9:20AM	Saturna Island Ballroom	59
Kondo, Y.	9-May	9:30AM	Georgia A	51
Konegger, T.	8-May	9:20AM	Plaza C	38
Kovalčíková, A.	8-May	9:00AM	Plaza B	40
Krajewski, A.M.	5-May	3:45PM	Plaza A	16
Krause, A.	5-May	2:45PM	Cypress	16
Krishnamurthy, S.	9-May	9:00AM	Grouse	53
Krishnan, N.	8-May	10:20AM	Saltspring C	66
Kroeker, S.	6-May	1:45PM	Saltspring AB	62
Kuhn, W.	5-May	4:10PM	Saturna Island Ballroom	56
Kumar, V.	8-May	2:35PM	Plaza C	48
Kuroda, H.	8-May	10:50AM	Stanley	41
Kuzuya, T.	5-May	1:15PM	Saturna Island Ballroom	55
Kwati, L.	8-May	2:45PM	English Bay	44
		L		
Lamberson, L.	5-May	4:00PM	Balmoral	10
Lanagan, M.	5-May	2:35PM	Balmoral	10
Laplace, A.F.	6-May	10:40AM	Saturna Island Ballroom	59
Laplace, A.F.	6-May	11:40AM	Cortes	58
Lau, C.S.	5-May	1:35PM	English Bay	13
Le Cras, F.	9-May	8:00AM	Plaza C	52
Le Ferrand, H.	8-May	10:40AM	Prince of Wales	42
Le Paven, C.	6-May	3:20PM	Balmoral	21
Lee, C.	5-May	3:50PM	Georgia A	11
Lee, J.	5-May	5:10PM	Saturna Island Ballroom	56
Lee, J.	6-May	9:50AM	Saturna Island Ballroom	59
Lee, J.	6-May	11:10AM	Saturna Island Ballroom	59
Lee, J.	9-May	9:30AM	Plaza C	53
Lee, K.	5-May	4:00PM	Plaza B	12
Lee, K.	8-May	2:15PM	Oxford	43
Lee, K.	8-May	4:10PM	Plaza B	47
Lee, S.	5-May	4:40PM	Saltspring AB	56
Lee, Y.	8-May	11:20AM	Cypress	41
Lei, C.	7-May	8:00AM	Balmoral	31
Leite, M.	8-May	5:10PM	Georgia B	45
Leland, S.J.	8-May	1:45PM	Saturna Island Ballroom	69
Lemieszek, B.	8-May	9:20AM	English Bay	38
Lere-Adams, A.J.	6-May	11:20AM	Cortes	58
Letz, M.	5-May	3:30PM	Balmoral	10
Li, J.	5-May	1:45PM	Georgia A	11
Li, J.	6-May	2:45PM	Cypress	26
Li, J.	7-May	8:00AM	Stanley	34
Li, W.	6-May	1:15PM	English Bay	25
Li, W.	7-May	9:10AM	Plaza C	31
LI, X.	5-May	1:45PM	Prince of Wales	14
Li, Y.	6-May	1:15PM	Cortes	61
Li, Y.	6-May	2:15PM	Oxford	22
Li, Z.	9-May	8:00AM	Seymour	50
Lian, C.	5-May	4:10PM	Georgia A	12
Liang, H.	8-May	4:30PM	Cypress	46
Liang, S.	7-May	8:30AM	Grouse	32
Liao, X.	6-May	4:30PM	Plaza B	24
Link, M.	7-May	10:50AM	Saltspring C	64
Liu, J.	8-May	9:40AM	Plaza A	43
Liu, L.	7-May	8:00AM	English Bay	35
Liu, N.	6-May	2:35PM	English Bay	25
Liu, R.	7-May	10:10AM	Plaza B	32
Liu, Y.	7-May	10:20AM	Balmoral	32
Lodesani, F.	6-May	4:00PM	Saltspring AB	60

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
Lodi, T.A.	6-May	2:25PM	Prince of Wales	26
Lofaj, F.	8-May	10:20AM	Plaza B	40
Lönartz, M.I.	8-May	2:05PM	Saltspring C	68
Lopez Puga, C.	9-May	10:30AM	Plaza C	53
Losego, M.D.	6-May	2:05PM	Dover/Tennyson	22
Losego, M.D.	8-May	1:45PM	Prince of Wales	46
Lu, K.	6-May	10:40AM	Cypress	20
Lu, K.	6-May	4:40PM	Plaza C	21
Lu, X.	8-May	1:45PM	Plaza B	47
Lu, Y.	7-May	10:20AM	Plaza C	31
Lucas, P.	6-May	10:10AM	Georgia A	18
Luo, J.	5-May	10:20AM	Regency ABC	9
Luo, J.	5-May	1:15PM	Georgia B	14
Luo, J.	5-May	2:35PM	Seymour	15
Luo, J.	6-May	1:15PM	Plaza A	27
Luo, J.	7-May	10:20AM	Stanley	34
M				
Ma, B.	5-May	1:45PM	Plaza B	12
Ma, C.	7-May	10:20AM	Prince of Wales	34
Ma, D.	9-May	9:00AM	Georgia A	51
Ma, H.	8-May	10:30AM	Plaza A	43
Ma, X.	7-May	10:40AM	Balmoral	32
Maassen, J.	5-May	2:15PM	Dover/Tennyson	10
Maehara, T.	5-May	4:40PM	Saturna Island Ballroom	56
Maekawa, T.	8-May	9:30AM	Georgia B	39
Magdaluyo, E.d.	7-May	11:20AM	Prince of Wales	34
Magdaluyo, E.d.	8-May	1:15PM	Stanley	45
Majumdar, A.	5-May	1:15PM	Georgia A	11
Maksimov, V.D.	8-May	11:40PM	Saltspring AB	66
Malik, A.	5-May	4:15PM	Plaza A	16
Malviya, P.	6-May	11:00AM	Saltspring C	57
Malviya, P.	8-May	3:30PM	Cortes	67
Manan, A.	6-May	4:20PM	Balmoral	21
Manawi, Y.	7-May	10:40AM	Plaza B	32
Manière, C.	8-May	9:00AM	Prince of Wales	42
Manley, R.G.	6-May	1:45PM	Cortes	61
Mannan, S.	5-May	2:25PM	Moresby	54
Mao, X.	5-May	2:15PM	Prince of Wales	14
Marcial, J.	6-May	10:40AM	Cortes	58
Marcial, J.	6-May	2:05PM	Saturna Island Ballroom	62
Markocsan, N.	8-May	10:20AM	Oxford	37
Marrero, N.O.	8-May	3:50PM	Plaza B	47
Martin, E.	6-May	3:30PM	Saltspring AB	60
Martin, S.W.	5-May	1:15PM	Saltspring C	53
Massobrio, C.	6-May	9:40AM	Saltspring C	57
Massobrio, C.	7-May	10:00AM	Saltspring AB	63
Masuda, H.	7-May	8:00AM	Plaza B	32
Masuda, H.	7-May	10:20AM	Georgia B	35
Masuno, A.	6-May	10:00AM	Saltspring C	57
Mathur, S.	5-May	1:15PM	Stanley	12
Mathur, S.	8-May	1:15PM	Plaza C	48
Mathur, S.	8-May	2:45PM	Georgia B	45
Matsunaga, K.	6-May	10:10AM	Oxford	17
Matsunaga, K.	8-May	9:00AM	Balmoral	37
Matsuo, K.	8-May	9:40AM	Stanley	41
Mauro, J.C.	8-May	8:05AM	Saturna Island Ballroom	65
Mazumder, P.	7-May	9:20AM	Saltspring C	64
McCloy, J.	5-May	5:20PM	Grouse	14
McCloy, J.	9-May	8:30AM	Plaza B	51
McDonald, L.	6-May	1:45PM	Dover/Tennyson	22
Meechoowas, E.	6-May	10:40AM	Stanley	18
Meulenberg, W.A.	6-May	1:15PM	Georgia B	25
Meyneng, T.	6-May	3:30PM	Cortes	61
Mikaeili, F.	9-May	11:00AM	Seymour	51
Mikami, M.	5-May	2:25PM	Georgia B	14
Miller, K.D.	5-May	1:15PM	Moresby	54
Mir, A.	8-May	1:15PM	Saltspring C	68
Mishra, S.	8-May	9:00AM	Georgia A	42
Misture, S.T.	8-May	3:30PM	Georgia B	45
Misture, S.T.	8-May	4:20PM	Plaza C	49
Mitchell, A.	8-May	2:45PM	Saturna Island Ballroom	69
Miyazaki, Y.	5-May	1:45PM	Dover/Tennyson	10
Mizuno, F.	5-May	1:15PM	Grouse	13
Mochalin, V.	7-May	9:30AM	Oxford	37
Molin, S.	7-May	10:50AM	English Bay	31
Möncke, D.	6-May	9:20AM	Moresby	58
Möncke, D.	6-May	3:30PM	Seymour	27
Montazerian, M.	8-May	2:55PM	Pender	68
Moore, L.	6-May	4:20PM	Pender	60
Mori, S.	9-May	8:20AM	Plaza C	52
Morita, K.	5-May	1:45PM	Seymour	15
Morita, K.	5-May	2:45PM	Grouse	14
Morita, K.	5-May	3:30PM	Plaza B	12
Morita, K.	6-May	10:50AM	Georgia B	19
Motoyama, M.	8-May	9:20AM	Grouse	40
Motz, G.	6-May	4:00PM	Plaza C	21
Mukherjee, S.	8-May	1:45PM	Georgia A	46
N				
Naccache, R.	8-May	8:00AM	Georgia B	39
Naccache, R.	9-May	10:10AM	Georgia A	51
Nagai, S.	8-May	10:40AM	Seymour	42
Naguib, M.	7-May	8:00AM	Oxford	37
Nakamura, A.	7-May	10:20AM	Grouse	33
Nakamura, T.	6-May	3:30PM	Grouse	24
Nakayama, T.	5-May	3:30PM	Grouse	14
Nakhmanson, S.	5-May	2:05PM	Balmoral	10
Nakhmanson, S.	6-May	10:40AM	Dover/Tennyson	17
Naleway, S.E.	6-May	11:00AM	Stanley	18
Nalin, M.	6-May	10:40AM	Prince of Wales	19
Navrotsky, A.	5-May	3:30PM	Saltspring AB	56
Nawa, S.	5-May	4:00PM	Georgia B	14
Nazabal, V.	7-May	9:30AM	Prince of Wales	36
Neeway, J.	6-May	9:40AM	Cortes	58
Neeway, J.	8-May	4:30PM	Plaza B	47
Nemec, P.	9-May	8:50AM	Seymour	50
Neuville, D.R.	5-May	2:25PM	Saturna Island Ballroom	56
Neuville, D.R.	6-May	8:00AM	Saturna Island Ballroom	57
Neuville, D.R.	6-May	1:15PM	Saltspring C	60
Nie, C.	6-May	3:50PM	Saturna Island Ballroom	62
Nishiyama, H.	6-May	11:10AM	Balmoral	17
Nishiyama, T.	7-May	11:20AM	Saltspring AB	64
Noguchi, S.	6-May	11:10AM	Prince of Wales	19
Nojeh, A.	5-May	3:30PM	Dover/Tennyson	10
Nomura, N.	7-May	8:30AM	Georgia B	35
Nurak, I.S.	6-May	3:40PM	Oxford	23
O				
O'Shaughnessy, C.	8-May	10:50AM	Moresby	66
Ogawa, T.	8-May	9:30AM	Balmoral	37
Ogrinc, A.L.	8-May	10:50AM	Saltspring C	66
Ohkubo, I.	5-May	2:45PM	Dover/Tennyson	10
Ohkubo, T.	7-May	9:30AM	Saltspring AB	63
Ohtaki, M.	6-May	11:00AM	Dover/Tennyson	17
Oishi, M.	8-May	3:30PM	Plaza C	49
Okada, G.	6-May	11:00AM	Moresby	58
Okuyama, Y.	8-May	4:10PM	English Bay	45
Oliveira, I.M.	9-May	10:50AM	Georgia B	50
Omata, T.	8-May	4:30PM	Saturna Island Ballroom	69
Ong, S.	5-May	1:15PM	Plaza A	16
Ono, M.	8-May	11:20AM	Moresby	66
Onodera, Y.	5-May	3:30PM	Saltspring C	53
Onoe, T.	6-May	1:45PM	Prince of Wales	26
Opila, E.J.	8-May	9:10AM	Plaza A	43
Opila, E.J.	8-May	1:15PM	Cypress	45
Ortiz Miranda, A.S.	6-May	10:30AM	English Bay	19
Orzol, D.K.	5-May	2:45PM	Saturna Island Ballroom	56
Østergaard, M.B.	6-May	11:10AM	Plaza B	18
Østergaard, M.B.	7-May	10:30AM	Pender	63
Österlund, L.	9-May	8:30AM	Georgia A	51
Otomo, J.	8-May	3:50PM	English Bay	45
Ouyang, B.	6-May	10:10AM	Plaza A	20
Owusu, E.B.	8-May	4:00PM	Oxford	44

Oral Presenters

Name	Date	Time	Room	Page Number
		P		
Pabst, W.	6-May	5:10PM	Plaza B	24
Pallini, A.	6-May	5:00PM	Saltspring AB	60
Pao, R.J.	6-May	4:30PM	Saltspring C	62
Park, Y.	9-May	10:10AM	Plaza C	53
Parruzot, B.	8-May	2:25PM	Saltspring C	68
Patrun, D.	6-May	4:00PM	Georgia A	24
Patterson, M.C.	8-May	1:55PM	Seymour	48
Pedersen, E.J.	6-May	4:40PM	Saltspring AB	60
Pedone, A.	5-May	3:30PM	Moresby	54
Pedzich, Z.	8-May	8:30AM	Plaza B	39
Peng, L.	6-May	1:15PM	Saltspring AB	62
Pereira, L.	6-May	11:40AM	Saturna Island Ballroom	59
Perradin, J.	8-May	10:40AM	Saltspring AB	66
Phommakesone, S.	8-May	11:10AM	Stanley	41
Pinna, N.	6-May	3:30PM	Georgia A	24
Pinna, N.	7-May	11:50AM	Georgia A	35
Pitcher, M.	6-May	11:10AM	Cypress	20
Plucknett, K.P.	7-May	9:00AM	Plaza B	32
Poitou, M.	6-May	2:45PM	Moresby	61
Poitras, L.	7-May	11:40PM	Saltspring AB	64
Pokorny, R.	5-May	4:10PM	Cortes	55
Polette, P.	5-May	1:45PM	Saltspring C	53
Poletto Rodrigues, B.	6-May	2:35PM	Cortes	61
Pomerantseva, E.	8-May	2:15PM	Georgia B	45
Ponnapureddy, S.	7-May	9:30AM	Plaza B	32
Potestas, M.J.	5-May	2:15PM	Plaza C	9
Potter, A.	8-May	11:20AM	Saltspring C	67
Pralong, V.	8-May	1:45PM	Plaza C	48
Primus, C.	5-May	2:15PM	Stanley	13
Pruyn, T.	7-May	8:00AM	Plaza C	31
		Q		
Qi, L.	5-May	2:55PM	Plaza A	16
		R		
Rahaman, M.	9-May	9:40AM	Seymour	51
Ramlow, H.	8-May	1:15PM	Seymour	48
Ramond, L.	7-May	9:20AM	Stanley	34
Randall, C.	5-May	3:50PM	Seymour	15
Randall, C.	6-May	10:10AM	Grouse	19
Rasmussen, K.H.	6-May	2:45PM	Seymour	27
Reaney, I.M.	6-May	10:10AM	Balmoral	17
Reaney, I.M.	6-May	5:00PM	Grouse	24
Reimanis, I.	5-May	3:30PM	Prince of Wales	15
Ren, J.	5-May	4:50PM	Prince of Wales	15
Ren, S.	8-May	9:30AM	Prince of Wales	42
Rigby, J.C.	5-May	2:45PM	Cortes	55
Rimsza, J.M.	8-May	2:45PM	Stanley	45
Rodrigues, J.	8-May	2:45PM	Grouse	49
Rodriguez Cano, R.	5-May	4:50PM	Balmoral	10
Rohrer, G.	6-May	11:10AM	Grouse	19
Rohrer, G.	6-May	3:30PM	Cypress	26
Rohrer, J.	9-May	8:50AM	Balmoral	50
Roitzheim, C.	9-May	8:40AM	Plaza C	52
Roos, C.H.	5-May	2:05PM	Saturna Island Ballroom	56
Rosales-Sosa, G.A.	6-May	10:50AM	Pender	57
Rosei, F.	6-May	5:20PM	Georgia A	25
Rost, C.M.	6-May	1:15PM	Seymour	27
Rost, C.M.	7-May	11:30AM	Plaza A	36
Rozhin, A.	8-May	2:15PM	Grouse	49
Rubat du Merac, M.	5-May	2:45PM	Prince of Wales	14
Rufner, J.	5-May	3:20PM	Seymour	15
Russell, J.K.	8-May	11:10AM	Saturna Island Ballroom	67
Ryan, J.	5-May	3:30PM	English Bay	13
Ryu, H.	8-May	8:40AM	Plaza A	43
		S		
S, K.	5-May	2:25PM	Pender	55
Saladino, M.	7-May	8:40AM	English Bay	35
Santala, M.K.	5-May	2:35PM	Oxford	11
Santala, M.K.	6-May	1:15PM	Georgia A	23
Sarafian, A.	8-May	11:40AM	Moresby	66
Saruhan-Brings, B.	8-May	2:55PM	Plaza C	48
Saruhan-Brings, B.	8-May	4:00PM	Plaza C	49
Sasaki, S.	6-May	10:40AM	Moresby	58
Sato, F.	8-May	11:10AM	Prince of Wales	42
Sato, Y.	5-May	4:00PM	Grouse	14
Scheffler, F.	7-May	8:00AM	Seymour	33
Scheffler, M.	5-May	1:45PM	Plaza C	9
Schruefer, S.	8-May	1:15PM	Oxford	43
Schwarz, C.	6-May	2:25PM	Dover/Tennyson	22
Schwieger, W.	8-May	8:00AM	Seymour	41
Sciti, D.	8-May	10:25AM	Plaza C	39
Sedlák, R.	8-May	10:40AM	Plaza B	40
Sekino, T.	8-May	8:30AM	Georgia A	42
Selopal, G.	8-May	9:00AM	Georgia B	39
Selopal, G.	9-May	8:30AM	Seymour	50
Sen, S.	5-May	2:25PM	Saltspring AB	56
Sen, S.	8-May	1:45PM	Cortes	67
Senani - de Monredon, S.	6-May	4:20PM	Plaza C	21
Seo, Y.	5-May	4:20PM	Georgia B	14
Setlur, A.	8-May	11:40AM	Oxford	37
Sgarlata, C.	7-May	9:50AM	Pender	63
Sglavo, V.M.	6-May	2:05PM	Saltspring AB	62
Sglavo, V.M.	6-May	4:30PM	Cypress	26
Sharifikolouei, E.	8-May	1:45PM	Pender	68
Sharma, R.	6-May	4:00PM	Dover/Tennyson	22
Sharma, R.	7-May	10:50AM	Saturna Island Ballroom	65
Shearer, A.	6-May	4:40PM	Cortes	61
Shen, L.	6-May	11:10AM	English Bay	19
Shepa, I.	9-May	10:40AM	Seymour	51
Shibata, N.	5-May	1:45PM	Oxford	11
Shih, Y.	6-May	9:50AM	Pender	57
Shimada, H.	8-May	1:15PM	English Bay	44
Shin, D.	7-May	10:00AM	Plaza C	31
Shinozaki, K.	8-May	10:20AM	Pender	66
Shrestha, P.	5-May	2:05PM	Pender	54
Shuseki, Y.	8-May	10:20AM	Moresby	66
Sidebottom, D.	8-May	2:15PM	Cortes	67
Skibsted, J.	5-May	4:20PM	Saltspring AB	56
Smeacetto, F.	6-May	4:00PM	Plaza B	23
Smedskjaer, M.M.	5-May	3:30PM	Pender	55
Smedskjaer, M.M.	7-May	9:10AM	Georgia B	35
Smith, N.J.	8-May	3:30PM	Saltspring C	69
So, J.	7-May	8:50AM	Plaza C	31
Sohn, Y.	9-May	8:00AM	Plaza A	52
Solarska, R.	8-May	10:20AM	Georgia A	42
Song, C.	8-May	8:00AM	Oxford	43
Sørensen, S.S.	8-May	1:15PM	Saturna Island Ballroom	69
Sørensen, S.S.	8-May	4:30PM	Cortes	68
Soudani, S.	8-May	5:10PM	Plaza B	47
Sousa, J.P.	9-May	10:40AM	Georgia A	51
Spreitzer, M.	6-May	11:30AM	Balmoral	17
St. George, V.	7-May	9:00AM	Balmoral	32
Stebbins, J.	5-May	1:15PM	Saltspring AB	56
Stone-Weiss, N.	8-May	1:35PM	Moresby	68
Stuer, M.	7-May	9:00AM	Cypress	36
Su, L.	6-May	9:00AM	Regency ABC	16
Su, Y.	8-May	2:35PM	Cypress	46
Suematsu, H.	6-May	3:30PM	Plaza B	23
Sugahara, Y.	8-May	9:50AM	Plaza C	39
Sugimoto, Y.	6-May	1:45PM	Balmoral	21
Sukenaga, S.	8-May	10:40AM	Saturna Island Ballroom	67
Suzuki, I.	8-May	2:45PM	Balmoral	44
Suzuki, S.	5-May	2:15PM	Grouse	13
Suzuki, T.	8-May	3:30PM	English Bay	44
		T		
Tachibana, Y.	8-May	2:45PM	Georgia A	46
Tada, S.	8-May	8:30AM	Plaza C	38
Tai, C.	8-May	4:00PM	Georgia A	47

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
Takahashi, T.	7-May	8:30AM	Plaza B	32
Takahashi, T.	7-May	11:20AM	Stanley	34
Takeda, W.	6-May	10:40AM	Georgia A	18
Takeda, W.	6-May	1:35PM	Pender	60
Takeuchi, I.	5-May	5:30PM	Georgia A	12
Takiishi, K.	7-May	9:40AM	Stanley	34
Tallan, J.M.	6-May	2:25PM	Moresby	61
Tallon, C.	7-May	10:50AM	Cypress	33
Tam, J.	5-May	3:50PM	Oxford	11
Tamayo, A.	5-May	4:00PM	Plaza C	9
Tan, L.	7-May	11:40AM	Cortes	64
Tanaka, S.	8-May	10:20AM	Stanley	41
Tang, Y.	8-May	10:50AM	Cypress	40
Tani, S.	6-May	4:30PM	Moresby	63
Taron, M.	6-May	10:00AM	Cortes	58
Tarutani, N.	9-May	9:00AM	Georgia B	50
Tatami, J.	5-May	4:30PM	Grouse	14
Tatami, J.	6-May	11:30AM	Prince of Wales	20
Tatami, J.	6-May	2:15PM	Cypress	26
Tatami, J.	7-May	8:30AM	Stanley	34
Tatami, J.	8-May	8:00AM	Plaza B	39
Thapa, R.	6-May	4:40PM	Pender	60
Thapa, R.	8-May	11:00AM	Pender	66
Thieme, C.	8-May	11:20AM	Pender	66
Thompson, G.	6-May	2:55PM	Oxford	22
Thompson, G.	6-May	4:30PM	Seymour	27
Tian, H.	6-May	1:45PM	Oxford	22
Tokunaga, H.	5-May	2:25PM	Saltspring C	53
Topfer, J.	6-May	2:15PM	Balmoral	21
Topper, B.	6-May	2:15PM	Cortes	61
Toury, B.	8-May	11:20AM	Oxford	37
Tran, L.	8-May	3:50PM	Cortes	67
Troles, J.	7-May	9:50AM	Cortes	64
Tsekrekas, A.	7-May	11:20AM	Saturna Island Ballroom	65
U				
Uchiyama, T.	7-May	9:50AM	Plaza B	32
Ueda, J.	6-May	11:40AM	Moresby	59
Uehara, E.	8-May	4:30PM	Georgia B	45
Uematsu, M.	8-May	9:30AM	Plaza B	40
Umemoto, K.	8-May	10:20AM	Saltspring AB	66
Urata, S.	7-May	10:40AM	Saltspring AB	64
V				
Valliant, E.	8-May	4:00PM	Prince of Wales	46
Varghese, O.K.	8-May	8:30AM	Georgia B	39
Varghese, O.K.	8-May	9:30AM	Georgia A	42
Vayssieres, L.	8-May	8:00AM	Georgia A	42
Vendra, S.	5-May	2:35PM	Plaza C	9
Verger, L.	6-May	1:45PM	Cypress	26
Vetrone, F.	7-May	10:20AM	Georgia A	35
Vinci, A.	8-May	1:45PM	Cypress	46
W				
Wakefield, A.G.	8-May	2:05PM	Saturna Island Ballroom	69
Wan, D.	6-May	10:40AM	Plaza B	18
Wang, C.	5-May	1:55PM	English Bay	13
Wang, H.	5-May	11:10AM	Regency ABC	9
Wang, J.	8-May	3:30PM	Oxford	44
Wang, K.	6-May	11:10AM	Plaza A	20
Wang, K.	6-May	1:45PM	Seymour	27
Wang, M.	5-May	2:45PM	Stanley	13
Wang, M.	6-May	2:15PM	Stanley	24
Wang, Q.	6-May	1:55PM	English Bay	25
Wang, X.	7-May	10:50AM	Georgia B	35
Watanabe, M.	8-May	4:10PM	Saltspring C	69
Watanabe, Y.	8-May	10:40AM	Georgia B	39
Weber, R.	6-May	10:20AM	Moresby	58
Weber, W.J.	8-May	1:15PM	Plaza B	47
Weber, W.J.	9-May	10:20AM	Plaza A	52
Wei, Q.	8-May	8:30AM	Prince of Wales	42
Wei, S.	5-May	2:35PM	English Bay	13
Wei, Y.	6-May	1:15PM	Moresby	61
Weinberger, C.R.	5-May	2:55PM	Oxford	11
Weinberger, C.R.	8-May	9:30AM	Cypress	40
Weitzel, K.	8-May	4:00PM	Saturna Island Ballroom	69
Welch, R.	6-May	5:10PM	Dover/Tennyson	22
Wen, Q.	6-May	1:15PM	Plaza C	20
Westin, G.	7-May	11:20AM	Georgia A	35
Westin, G.	8-May	1:45PM	Georgia B	45
White, M.	5-May	1:15PM	Dover/Tennyson	10
Widom, M.	7-May	9:40AM	Plaza A	36
Wilhelm, M.	5-May	1:15PM	Plaza C	9
Wilk, L.	9-May	8:50AM	Prince of Wales	50
Wilke, S.K.	6-May	9:20AM	Saltspring C	57
Wilke, S.K.	6-May	10:20AM	Saltspring C	57
Wilkinson, C.	6-May	1:15PM	Pender	60
Willinger, M.	8-May	3:30PM	Georgia A	47
Wolf, E.	7-May	9:30AM	Seymour	33
Wu, A.	6-May	10:10AM	English Bay	19
Wu, J.	5-May	4:00PM	Saltspring AB	56
Wu, W.	5-May	1:45PM	Stanley	12
Wu, Y.	7-May	8:30AM	Plaza C	31
Wuttig, M.	5-May	5:10PM	Georgia A	12
Wyatt, B.C.	8-May	4:00PM	Plaza A	48
X				
Xiao, P.	8-May	1:45PM	Oxford	43
Xu, H.	5-May	2:25PM	Plaza A	16
Xue, X.	6-May	10:30AM	Saltspring AB	59
Y				
Yadav, A.	6-May	3:30PM	Dover/Tennyson	22
Yamaguchi, Y.	8-May	8:20AM	Stanley	41
Yamazaki, R.	7-May	9:00AM	Stanley	34
Yan, H.	6-May	10:10AM	Cypress	20
Yang, J.	7-May	9:10AM	Seymour	33
Yang, S.	8-May	10:20AM	Seymour	42
Yazdani Sarvestani, H.	6-May	4:50PM	Plaza B	24
Ye, H.	9-May	8:00AM	Grouse	53
Yee, T.	6-May	4:50PM	Saltspring C	62
Yoo, K.	6-May	4:00PM	Oxford	23
Yoshida, H.	6-May	10:10AM	Georgia B	19
Yoshida, K.	5-May	2:15PM	Plaza B	12
Yu, X.	8-May	4:50PM	Plaza B	47
Yu, Z.	5-May	3:30PM	Plaza C	9
Z				
Zaengle, J.	5-May	2:05PM	Cortes	55
Zahedtalaban, M.	6-May	2:25PM	Plaza C	21
Zambotti, A.	6-May	4:20PM	Georgia A	24
Zarkadoula, E.	8-May	11:10AM	Balmoral	38
Zarrin, H.	9-May	10:20AM	Georgia B	50
Zhang, H.	7-May	8:40AM	Balmoral	32
Zhang, H.	8-May	2:15PM	Plaza A	48
Zhang, J.	6-May	10:10AM	Plaza B	18
Zhang, J.	7-May	10:50AM	Stanley	34
Zhang, J.	8-May	10:40AM	Pender	66
Zhang, J.	8-May	10:50AM	Oxford	37
Zhang, K.	6-May	4:20PM	Oxford	23
Zhang, L.	7-May	8:20AM	Balmoral	31
Zhang, M.	6-May	2:35PM	Plaza A	27
Zhang, R.	5-May	4:30PM	Prince of Wales	15
Zhang, W.	6-May	11:00AM	Georgia A	18
Zhang, W.	7-May	10:40AM	Cortes	64
Zhang, X.	7-May	8:50AM	Georgia A	35
Zhang, Y.	5-May	1:15PM	Plaza B	12
Zhang, Y.	8-May	8:00AM	Plaza A	43
Zhang, Z.	6-May	10:10AM	Prince of Wales	19
Zhang, Z.	6-May	2:35PM	Oxford	22
Zhao, J.	6-May	4:00PM	Pender	60
Zhao, S.	8-May	1:15PM	Plaza A	48
Zhong, Y.	7-May	9:10AM	Plaza A	36
Zhong, Y.	8-May	8:00AM	Balmoral	37

Oral Presenters

Name	Date	Time	Room	Page Number
Zhou, B.	7-May	9:40AM	Georgia B	35
Zhou, D.	6-May	1:15PM	Balmoral	21
Zhou, W.	5-May	3:30PM	Georgia A	11
Zhou, X.	6-May	2:15PM	English Bay	25
Zhukova, I.	6-May	3:30PM	Plaza A	27
Zhuo, Z.	6-May	4:50PM	Georgia A	25
Zou, J.	7-May	8:30AM	Cypress	36
Zou, Y.	5-May	2:15PM	Seymour	15
Zou, Y.	5-May	2:45PM	Plaza B	12
Zou, Y.	5-May	4:35PM	Plaza A	16
Zou, Y.	7-May	8:30AM	Georgia A	34
Zou, Y.	7-May	10:50AM	Grouse	33
Zwanziger, J.	6-May	9:50AM	Saltspring AB	59

Poster Presenters

Name	Date	Time	Room	Page Number
A				
Aichele, E.	6-May	5:30PM	Regency A- F	29
Amaral, S.C.	6-May	5:30PM	Regency A- F	30
B				
Bergman, R.	6-May	5:30PM	Regency A- F	28
Bernard, S.	6-May	5:30PM	Regency A- F	30
Bruns, S.	6-May	5:30PM	Regency A- F	28
Brytskyi, M.	6-May	5:30PM	Regency A- F	29
C				
Carr, A.R.	6-May	5:30PM	Regency A- F	28
Castro, I.F.	6-May	5:30PM	Regency A- F	30
Chang, S.	6-May	5:30PM	Regency A- F	28
Chen, A.	6-May	5:30PM	Regency A- F	30
Chou, J.	6-May	5:30PM	Regency A- F	29
Cochran, H.	6-May	5:30PM	Regency A- F	30
D				
DeSantis, E.I.	6-May	5:30PM	Regency A- F	29
F				
Fadavi Firooz, A.	6-May	5:30PM	Regency A- F	28
Farrant, A.	6-May	5:30PM	Regency A- F	29
G				
Gervasio, V.	6-May	5:30PM	Regency A- F	30
Gregorova, E.	6-May	5:30PM	Regency A- F	30
H				
Hauke, B.M.	6-May	5:30PM	Regency A- F	27, 29
I				
Idesaki, A.	6-May	5:30PM	Regency A- F	30
Ishida, E.	6-May	5:30PM	Regency A- F	28
J				
Jang, J.	6-May	5:30PM	Regency A- F	28
Jeong, S.	6-May	5:30PM	Regency A- F	29
Jin, W.	6-May	5:30PM	Regency A- F	30
K				
Kaur, H.	6-May	5:30PM	Regency A- F	28
Kayano, R.	6-May	5:30PM	Regency A- F	28
Kayton, A.	6-May	5:30PM	Regency A- F	28
Kim, J.	6-May	5:30PM	Regency A- F	29
Kim, S.	6-May	5:30PM	Regency A- F	28
Kim, T.	6-May	5:30PM	Regency A- F	30
Kim, Y.	6-May	5:30PM	Regency A- F	28, 30
Klouzkova, A.	6-May	5:30PM	Regency A- F	30
Kosan, C.	6-May	5:30PM	Regency A- F	27
Kuhn, W.	6-May	5:30PM	Regency A- F	28, 29
L				
Laszkiewicz-Lukasik, J.	6-May	5:30PM	Regency A- F	29
Lee, J.	6-May	5:30PM	Regency A- F	29, 30
Lee, S.	6-May	5:30PM	Regency A- F	29
Letocha, A.	6-May	5:30PM	Regency A- F	29
Lim, Y.	6-May	5:30PM	Regency A- F	29
Lin, C.	6-May	5:30PM	Regency A- F	28
M				
Ma, Z.	6-May	5:30PM	Regency A- F	29
Maier, K.M.	6-May	5:30PM	Regency A- F	28
Manqueros, E.	6-May	5:30PM	Regency A- F	27
Marchewka, J.	6-May	5:30PM	Regency A- F	29
Matthies, K.	6-May	5:30PM	Regency A- F	28
Molin, S.	6-May	5:30PM	Regency A- F	29
Mori, M.	6-May	5:30PM	Regency A- F	29
Mozgawa, W.	6-May	5:30PM	Regency A- F	29
N				
Naim, A.	6-May	5:30PM	Regency A- F	30
Niang, I.	6-May	5:30PM	Regency A- F	30
P				
Pedersen, E.J.	6-May	5:30PM	Regency A- F	28
Penner, K.	6-May	5:30PM	Regency A- F	29
Pitap, M.M.	6-May	5:30PM	Regency A- F	30
Poitras, L.	6-May	5:30PM	Regency A- F	28
Q				
Qazzazie-Hauser, A.	6-May	5:30PM	Regency A- F	29
R				
Rodman, K.	6-May	5:30PM	Regency A- F	28
S				
Saini, L.	6-May	5:30PM	Regency A- F	28
Schrooten, I.	6-May	5:30PM	Regency A- F	28
Shim, J.	6-May	5:30PM	Regency A- F	30
Shimada, M.	6-May	5:30PM	Regency A- F	29
Sitarz, M.T.	6-May	5:30PM	Regency A- F	29
Sørensen, S.S.	6-May	5:30PM	Regency A- F	28
T				
Tader, N.	6-May	5:30PM	Regency A- F	28
Tafu, M.	6-May	5:30PM	Regency A- F	29

Presenting Author List

Poster Presenters

Name	Date	Time	Room	Page Number
Taniashvili, E.	6-May	5:30PM	Regency A- F	28
Tobin, N.	6-May	5:30PM	Regency A- F	29
W				
Wang, B.N.	6-May	5:30PM	Regency A- F	28
Wang, J.	6-May	5:30PM	Regency A- F	30
Wang, M.	6-May	5:30PM	Regency A- F	30
Y				
Yatskiv, R.	6-May	5:30PM	Regency A- F	30
Ye, B.	6-May	5:30PM	Regency A- F	30
Ye, H.	6-May	5:30PM	Regency A- F	30
Yoon, Y.	6-May	5:30PM	Regency A- F	30
Yoshida, K.	6-May	5:30PM	Regency A- F	30
Z				
Zhang, H.	6-May	5:30PM	Regency A- F	29
Zhang, W.	6-May	5:30PM	Regency A- F	30

Monday, May 5, 2025

PACRIM Plenary Lectures

PACRIM Plenary Lectures

Room: Regency ABC

Session Chairs: Yiquan Wu, Alfred University; Bryan Huey, University of Connecticut

8:00 AM

Introduction and Awards

8:20 AM

(PACRIM-PLEN 01-001-2025) A Commentary on Complexions: Conception, Controversy and Adoption

M. Harmer*[1]

1. Lehigh University, USA

9:10 AM

(PACRIM-PLEN 01-002-2025) Grain Boundary Atomic Structures and Their Dynamics in Ceramics

Y. Ikuhara*[1]

1. University of Tokyo, Institute of Engineering Innovation, Japan

10:00 AM

Break

10:20 AM

(PACRIM-PLEN 01-003-2025) From Ultrafast Sintering to Controlling Microstructures with Electric Fields

J. Luo*[1]

1. University of California San Diego, USA

11:10 AM

(PACRIM-PLEN 01-004-2025) Complex Hybrid Metamaterials Designs based on Functional Ceramics and Beyond

H. Wang*[1]

1. Purdue University, School of Materials Engineering, USA

PacRim S4 - Polymer-Derived Ceramics/ Composites/Nanocomposites as Functional Inorganic Materials

PACRIM Symposium 4 - Environmental, energy, health and functional applications I

Room: Plaza C

Session Chairs: Diletta Sciti, CNR-ISSMC; Thomas Konegger, TU Wien

1:15 PM

(PACRIM-S04-001-2025) Synthesis and characterization of polymer-based CaO/SiOC based nanocomposites for CO_2 capture (Invited)

S. Kaur[1]; K. Rezwan[1]; M. Wilhelm*[1]

1. University of Bremen, Production Engineering, Germany

1:45 PM

(PACRIM-S04-002-2025) Oxidation protection coatings for Mo-based refractory alloys (Invited)

T. Loskutova[1]; R. Nizinkovskyi[2]; V. Taran[1]; G. Hasemann[2]; M. Krueger[2]; M. Scheffler*[1]

1. Otto-von-Guericke-Universitat Magdeburg, Non-Metallic Inorganic Materials, Germany
2. Otto-von-Guericke-Universitat Magdeburg, High-Temperature Materials group, Germany

2:15 PM

(PACRIM-S04-003-2025) In situ design of nanoscale transition metal-based particles in porous Polymer-Derived Ceramic supports for hydrogen evolution reaction

M. J. Potestas*[1]; M. Ben Miled[1]; S. Valette[1]; A. Habrioux[2]; S. Bernard[3]

1. Universite de Limoges, France
2. Universite de Poitiers, France
3. CNRS, IRCER, France

2:35 PM

(PACRIM-S04-004-2025) Nanoscale high-entropy alloy-based pre-catalysts stabilized in polymer-derived micro/macroporous ceramics for sustainable energy

S. Vendra*[1]; M. Ben Miled[1]; A. Bouzid[1]; O. Masson[1]; A. Habrioux[2]; S. Bernard[1]

1. Institut de Recherche sur les Ceramiques, Univ. Limoges, CNRS, IRCER, UMR 7315, France
2. Universite de Poitiers, CNRS, IC2MP, UMR 7285, France

2:55 PM

Break

3:30 PM

(PACRIM-S04-006-2025) Single-source-precursor synthesis of SiC-based Nanocomposites as Electrocatalysts for Water Splitting (Invited)

Z. Yu*[1]

1. Xiamen University, China

4:00 PM

(PACRIM-S04-007-2025) Electrochemical energy and conversion devices based on polymer derived ceramic carbon (Invited)

A. Tamayo*[1]; E. Chinarro[1]; A. Mazo[1]; J. Rubio[1]

1. Institute of Ceramics and Glass, CSIC, Spain

4:30 PM

(PACRIM-S04-009-2025) Amorphous SiOC Coatings: Polymer-Derived Ceramics for Nuclear Applications

M. Gaweda*[1]; P. Jelen[2]; D. Kalita[1]; F. J. Domínguez-Gutiérrez[1]; M. T. Sitarz[2]; I. Jozwik[1]

1. Narodowe Centrum Badan Jadrowych, NOMATEN, Poland
2. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Poland

4:50 PM

(PACRIM-S04-010-2025) Polymer derived SiOC/Sn nanocomposites as anode materials for lithium storage applications

G. Blugan*[1]; H. Ramlow[1]; M. Wilamowska-Zawlocka[2]; S. Paz[3]; M. Koebel[3]

1. Swiss Federal Laboratories for Materials Science and Technology, Laboratory for High Performance Ceramics, Switzerland
2. Politechnika Gdanska Wydzial Chemiczny, Poland
3. Siloxene AG, Switzerland

5:10 PM

(PACRIM-S04-031-2025) Low-temperature sintered MA@PDC-SiBCN ceramics: Mechanical properties and high-temperature oxidation behavior

D. Jia*[1]

1. Harbin Institute of Technology, School of Materials Science and Engineering, China

PacRim S6 - Dielectric Ceramics for Microwave and Submillimeter-Wave Applications

PACRIM Symposium 6 - Dielectric Measurements

Room: Balmoral

Session Chairs: Nate Orloff, NIST; Rick Ubic, Boise State University

1:15 PM

(PACRIM-S06-001-2025) A SI-traceable standard for complex permittivity (Invited)

B. Bosworth*[1]; L. Enright[1]; B. Jamroz[1]; N. Jungwirth[1]; N. Orloff[1]

1. NIST, USA

1:45 PM

(PACRIM-S06-002-2025) Split-cylinder resonator measurements of the complex permittivity of substrates and thin films

L. Enright*[1]; B. Jamroz[1]; B. Bosworth[1]; G. Brennecka[2]; N. Orloff[1]

1. National Institute of Standards & Technology, Communications Technology Laboratory, USA
2. Colorado School of Mines, USA

2:05 PM

(PACRIM-S06-003-2025) Understanding and predicting frequency-dependent dielectric permittivity and loss in ferroelectric ceramics (Invited)

S. Nakhmanson*[1]

1. University of Connecticut, Materials Science and Engineering, USA

2:35 PM

(PACRIM-S06-004-2025) Temperature Dependent Dielectric Properties at GHz frequency (Invited)

M. Lanagan*[1]; S. Perini[2]; A. Hossain[2]; S. Voyton[2]; M. Rahman[2]; M. E. Eltantawy[2]; C. Nieves[3]

1. Penn State University, Dept. of Engineering Science and Mechanics, USA
2. The Pennsylvania State University, Materials Research Institute, USA
3. Air Force Research Laboratory, USA

PACRIM Symposium 6 - Glass for Microwave and Submillimeter-Wave Applications

Room: Balmoral

Session Chairs: Nate Orloff, NIST; Martin Letz, Schott AG

3:30 PM

(PACRIM-S06-005-2025) Glasses and glass ceramics: Dielectric properties and Applications in Microwave and Submillimeter-wave ranges (Invited)

M. Letz*[1]

1. Schott AG, R&D, Germany

4:00 PM

(PACRIM-S06-006-2025) Glass Composition and Post Forming Process Impacts on mm-Wave Dielectric Properties

L. Lamberson*[1]; L. Cai[2]

1. Corning Incorporated, Glass Research, USA
2. Corning Incorporated, Characterization Science and Services, USA

4:20 PM

(PACRIM-S06-007-2025) Dielectric response of glass materials in the GHz-THz band and demonstration of filter devices using glass-ceramic substrates (Invited)

K. Kanehara*[1]; S. Urata[3]; K. Niwano[1]; S. Yasuhara[2]; T. Tsurumi[2]; T. Hoshina[2]

1. AGC Kabushiki Kaisha, Material Integration Laboratories, Japan
2. Tokyo Kagaku Daigaku, Japan
3. AGC Kabushiki Kaisha, Innovative Technology Research Center, Japan

4:50 PM

(PACRIM-S06-008-2025) Low loss and permittivity borosilicate glass for packaging applications (Invited)

R. Rodriguez Cano*[1]; M. Lanagan[2]

1. Aalborg Universitet, Electronic Systems, Denmark
2. Penn State University, Dept. of Engineering Science and Mechanics, USA

PacRim S7 - Direct Heat-to-Electricity Energy Conversion Mtls & Thermal Energy Harnessing Challenges

PACRIM Symposium 7 - Direct Heat-to-Electricity Energy Conv Materials & Thermal Energy Harnessing Challenges I

Room: Dover/Tennyson

Session Chairs: Michitaka Ohtaki, Kyushu Daigaku; Min Hong, University of Southern Queensland; Mary Anne White, Dalhousie University; Yuzuru Miyazaki, Tohoku Daigaku

1:15 PM

(PACRIM-S07-001-2025) Porous Ceramics Based Composite Phase Change Materials for Thermal Energy Storage (Invited)

M. White*[1]; J. Noel[1]

1. Dalhousie University, Chemistry, Canada

1:45 PM

(PACRIM-S07-002-2025) Data-driven approach to find potential Fe-based half-Heusler thermoelectric materials for the near-room-temperature applications (Invited)

Y. Miyazaki*[1]; X. Nan[1]; Z. Huang[1]; K. Hayashi[1]

1. Tohoku Daigaku, Department of Applied Physics, Japan

2:15 PM

(PACRIM-S07-003-2025) Exploration of the Effect of Nanoscale Transport on Thermoelectric Energy Conversion (Invited)

Q. Zhu[1]; J. Maassen*[1]

1. Dalhousie University, Canada

2:45 PM

(PACRIM-S07-004-2025) Development of novel thermoelectric materials by database approach and of miniaturized thermoelectric devices toward IoT (Invited)

I. Ohkubo*[1]

1. Busshitsu Zairyo Kenkyu Kiko Kokusai Nanoarchitectonics Kenkyu Kyoten, Japan

3:15 PM

Break

3:30 PM

(PACRIM-S07-005-2025) Advancing High-temperature Energy Conversion: Theory and Experiment (Invited)

A. Nojeh*[1]

1. University of British Columbia, Electrical and Computer Engineering, Canada

4:00 PM

(PACRIM-S07-006-2025) Various device architecture of thermoelectric devices (Invited)

W. Kim*[1]

1. Yonsei University, School of Mechanical Engineering, Republic of Korea

4:30 PM

(PACRIM-S07-007-2025) Interface Optimization for Low-Contact Resistance and High-Thermal Reliability between Bismuth Telluride and Barrier Metals in TEG Devices

A. Katsura*[1]; M. Tsurumoto[1]; Y. Hirose[1]; M. Daniele[3]; E. Iwase[2]; T. Sugahara[1]

1. Kyoto Kogei Sen'i Daigaku, Japan
2. Waseda Daigaku, Japan
3. Politecnico di Torino, Italy

4:50 PM

(PACRIM-S07-008-2025) Defect engineering towards high-performance thermoelectric germanium telluride

Y. Jiang*[1]; J. Li[1]

1. Tsinghua University, School of Materials Science and Engineering, China

5:10 PM

(PACRIM-S07-009-2025) Solid solution alloying strategy to enhance thermoelectric efficiency of metal chalcogenides; $(Bi,Sb)_2Te_3$, $Bi_2(Se,Te)_3$ and beyond

S. Kim*[1]

1. University of Seoul, Department of Materials Science and Engineering, Republic of Korea

PRS9 - Fndmtls of interfaces/grain boundaries/ surfaces - interatomic bonding to macroscopic prop

PACRIM Symposium 9 - Thermodynamic and kinetic stability of interfaces

Room: Oxford

Session Chair: Klaus van Benthem, University of California, Davis

1:15 PM

(PACRIM-S09-001-2025) Equilibrium, Phase Transitions, and Kinetics of Charged Interfaces in Ionic Ceramics (Invited)

R. Garcia*[1]; K. Vikrant[2]; C. M. Bishop[3]

1. Purdue University, Materials Engineering, USA
2. Indian Institute of Technology, India
3. University of Canterbury, New Zealand

1:45 PM

(PACRIM-S09-002-2025) Grain boundary studies by magnetic-field-free atomic resolution electron microscopy (Invited)

N. Shibata*[1]

1. The University of Tokyo, Japan

2:15 PM

(PACRIM-S09-003-2025) Using Interface Layer Quantities to Compute Thermodynamic Quantities from Atomic Probe Microscopy

W. Carter*[1]; C. M. Bishop[2]

1. Massachusetts Institute of Technology, Materials Science and Engineering, USA
2. University of Canterbury, Mechanical Engineering, New Zealand

2:35 PM

(PACRIM-S09-004-2025) Characterizing the atomic-level structure and stability of interfaces of Pt nanoparticles in contact with transition aluminas

A. L. Clauser[1]; K. Oware Sarfo[2]; R. Giulian[3]; J. Ciston[4]; C. Ophus[5]; L. Árnadóttir[2]; M. K. Santala*[1]

1. Oregon State University, Materials Science Program, USA
2. Oregon State University, Chemical, Biological, and Environmental Engineering, USA
3. Universidade Federal do Rio Grande do Sul, Institute of Physics, Brazil
4. Molecular Foundry, Lawrence Berkeley National Laboratory, The National Center for Electron Microscopy, USA
5. Stanford University, Materials Science and Engineering, USA

2:55 PM

(PACRIM-S09-005-2025) The interplay between surface chemistry and energetics on controlling the shapes of transition metal carbide ceramics

Y. Huang[1]; A. Stubbers[2]; G. Thompson[2]; O. A. Graeve[3]; C. R. Weinberger*[1]

1. Colorado State University, Department of Mechanical Engineering, USA
2. University of Alabama, Metallurgical & Materials Engineering, USA
3. University of California, San Diego, Mechanical and Aerospace Engineering, USA

3:15 PM

Break

3:30 PM

(PACRIM-S09-006-2025) Diffusion bonding of iron doped 45 degree (100) twist grain boundaries in $SrTiO_3$

W. Hahn*[1]; K. Kawahara[2]; S. Sasano[3]; B. Feng[3]; Y. Ikuhara[4]; K. van Benthem[5]

1. University of California Davis, Materials Science and Engineering, USA
2. Tokyo Daigaku, Japan
3. The University of Tokyo, Japan
4. University of Tokyo, Institute of Engineering Innovation, Japan
5. University of California, Davis, Dept. of Chemical Engineering and Materials Science, USA

3:50 PM

(PACRIM-S09-007-2025) Solute segregation process and kinetics in yttria stabilized zirconia grain boundary

J. Tam*[1]; B. Feng[1]; A. Nakamura[2]; S. Kondo[1]; N. Shibata[1]; Y. Ikuhara[3]

1. The University of Tokyo, Japan
2. Osaka Daigaku, Department of Mechanical Science and Bioengineering, Japan
3. University of Tokyo, Institute of Engineering Innovation, Japan

PacRim S11 - Optical and Electronic Phase Change Materials - Science and Application

PACRIM Symposium 11 - Optical and Electronic Phase Change Materials: Science and Application I

Room: Georgia A

Session Chair: Matthias Wuttig, RWTH Aachen University

1:15 PM

(PACRIM-S11-001-2025) Tunable Free-space Optics via Phase Change Materials (Invited)

A. Majumdar*[1]

1. University of Washington, USA

1:45 PM

(PACRIM-S11-002-2025) Back-end integration of phase change materials in foundry-fabricated silicon photonics and its performance bounds (Invited)

J. Li*[1]; H. Lin[2]; L. Li[3]; J. Hu[4]

1. Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences, China
2. Zhejiang University, China
3. Westlake University, China
4. Massachusetts Institute of Technology, USA

2:15 PM

(PACRIM-S11-003-2025) Photonic computing using phase-change materials (Invited)

Z. Cheng*[1]

1. Fudan University, China

2:45 PM

(PACRIM-S11-004-2025) Reconfigurable metasurfaces using optical phase change materials (Invited)

C. Constantin Popescu[1]; K. Dao[1]; B. Mills[3]; H. Kim[2]; C. A. Rios Ocampo[4]; J. Hu[1]; T. Gu*[1]

1. Massachusetts Institute of Technology, USA
2. Korea Advanced Institute of Science and Technology, Republic of Korea
3. Massachusetts Institute of Technology, Materials Science and Engineering, USA
4. University of Maryland, USA

PACRIM Symposium 11 - Optical and Electronic Phase Change Materials: Science and Application II

Room: Georgia A

Session Chair: Tian Gu, Massachusetts Institute of Technology

3:30 PM

(PACRIM-S11-005-2025) Neuromorphic Photonic Computing Devices Based on Electrically Controlled Phase-Change Memory

W. Zhou*[1]

1. Xi'an Jiaotong University, China

3:50 PM

(PACRIM-S11-006-2025) AI-assisted Discovery of Phase Change Materials for Electronic Devices

C. Lee*[1]; H. Sun[1]; C. A. Rios Ocampo[1]; I. Takeuchi[1]

1. University of Maryland, Materials Science and Engineering, USA

4:10 PM

(PACRIM-S11-007-2025) Harnessing Losses in Phase-Change Materials for Novel Nanophotonic Devices*WITHDRAWN*

C. Lian*[1]; Y. Huang[1]; H. Sun[1]; N. Acharjee[2]; A. Dewland[3]; S. Wang[1]; I. Takeuchi[3]; C. A. Rios Ocampo[1]

1. University of Maryland, Materials Science & Engineering, USA
2. University of Maryland, Electrical & Computer Engineering, USA
3. University of Maryland, Institute for Research in Electronics and Applied Physics, USA

4:10 PM

(PACRIM-S11-008-2025) Tellurium: A phase-change selector material

S. Elliott*[1]

1. University of Oxford, United Kingdom

4:30 PM

(PACRIM-S11-009-2025) In Situ TEM and Nanocalorimetry Study of the Thermodynamics and Kinetics of Crystallization of Sb-rich Phase Change Materials

T. D. Koledin*[1]; I. McGieson[2]; K. Bustillo[3]; J. Pettibone[4]; W. A. Osborn[4]; F. Yi[4]; D. A. LaVan[4]; M. K. Santala[5]

1. Oregon State University, Materials Science Program, USA
2. Oregon State University, Department of Physics, USA
3. E O Lawrence Berkeley National Laboratory, NCEM, USA
4. National Institute of Standards and Technology Material Measurement Laboratory, MML, USA
5. Oregon State University, School of Mechanical, Industrial and Manufacturing Engineering, USA

4:50 PM

(PACRIM-S11-010-2025) Tailoring the Switching in Phase Change Materials: The Role of Chemical Bonding

M. Wuttig*[1]

1. RWTH Aachen University, Germany

5:10 PM

(PACRIM-S11-011-2025) Autonomous high-throughput exploration of phase change memory materials (Invited)

I. Takeuchi*[1]

1. University of Maryland, USA

PacRim S12 - Eng Ceramics and Ceramic Matrix Composites - Processing/Design/Applications

PACRIM Symposium 12 - Advanced design, processing, and manufacturing of CMC I

Room: Plaza B

Session Chairs: Hua-Tay Lin, Guangdong University of Technology; Yanwen Zhang, Queen's University

1:15 PM

(PACRIM-S12-001-2025) From Materials Response at Extremes to Materials Design and Discovery (Invited)

Y. Zhang*[1]; A. Datye[2]; A. R. Khanolkar[3]; W. J. Weber[4]; H. Lin[5]

1. Queen's University, Mechanical and Materials Engineering, Canada
2. Yale University, Material Science and Engineering, USA
3. Idaho National Laboratory, USA
4. University of Tennessee, Materials Science & Engineering, USA
5. Guangdong University of Technology, School of Electronic and Mechanical Engineering, China

1:45 PM

(PACRIM-S12-002-2025) Preparation, Densification, and Strengthening-Toughening Studies of High-Entropy Nitride Ceramics (Invited)

Y. Lu[1]; W. Song[1]; C. Wang[1]; M. Li[1]; J. Li[1]; Y. Li[1]; B. Ma*[1]

1. North Minzu University, China

2:15 PM

(PACRIM-S12-003-2025) Application of Electrophoretic Phenomenon for h-BN, Al_4SiC_4 and Ti_3SiC_2 Interphase Formation of SiC_f/SiC Composites (Invited)

K. Yoshida*[2]; A. Gubarevich[2]; M. Kotani[1]

1. Japan Aerospace Exploration Agency (JAXA), Japan
2. Institute of Science Tokyo, Japan

2:45 PM

(PACRIM-S12-004-2025) Fabrication and property analysis of C_f/ZrB_2-SiC composites prepared via slurry infiltration and precursor impregnation and pyrolysis (Invited)

Y. Zou*[1]; S. Lee[1]

1. Korea Institute of Materials Science, Republic of Korea

3:15 PM

Break

PACRIM Symposium 12 - Advanced design, processing, and manufacturing of CMC II

Room: Plaza B

Session Chairs: Hua-Tay Lin, Guangdong University of Technology; Yanwen Zhang, Queen's University

3:30 PM

(PACRIM-S12-005-2025) Fracture Strength Recovery in Polycrystalline Zirconia by Crack Healing under Electric Field (Invited)

K. Morita*[1]

1. National Institute for Materials Science (NIMS), Japan

4:00 PM

(PACRIM-S12-006-2025) Recent Progress in Environmental Barrier Coatings for 2700 °F (1482 °C) SiC/SiC Ceramic Matrix Composites (Invited)*WITHDRAWN*

K. Lee*[1]; R. I. Webster[1]; B. Puleo[1]; B. J. Harder[1]; M. J. Presby[1]; J. Stuckner[1]; J. Setlock[2]; L. C. Hoffman[1]

1. NASA Glenn Research Center, USA
2. University of Toledo, USA

4:30 PM

(PACRIM-S12-007-2025) Chemical vapor deposition of rare-earth aluminum garnet-alumina nanocomposite coatings (Invited)

A. Ito*[1]

1. Yokohama National University, Graduate School of Environment and Information Sciences, Japan

5:00 PM

(PACRIM-S12-008-2025) Rapid pressureless densification of boron carbide with electromagnetic induction assistance

A. Gubarevich*[1]; G. Homma[1]; K. Yoshida[1]

1. Tokyo Kagaku Daigaku, Japan

PacRim S19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications

PACRIM Symposium 19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications I

Room: Stanley

Session Chairs: Leena Hupa, Åbo Akademi University; Pelagia-Irene Gouma, The Ohio State University

1:15 PM

(PACRIM-S19-001-2025) Bioconjugated Nanocarriers for Precision Drug Delivery (Invited)

S. Mathur*[1]

1. University of Cologne, Institute of Inorganic Chemistry, Germany

1:45 PM

(PACRIM-S19-002-2025) Biomass based skin-interfaced triboelectric sensors (Invited)

W. Wu*[1]

1. Purdue University, USA

2:15 PM

(PACRIM-S19-003-2025) Bioactive Calcium Silicate and Aluminate Cements for Dentistry (Invited)

C. Primus*[1]

1. Augusta University, Adjunct Assoc. Prof. Endodontics, USA

2:45 PM

(PACRIM-S19-004-2025) Developing Advanced Bioceramic Scaffolds for Bone Regeneration through Computer-aided Design, Computational Simulations and Additive Manufacturing (Invited)

M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

3:15 PM

Break

PACRIM Symposium 19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications II

Room: Stanley

Session Chairs: C. Primus, Avalon Biomed Inc.; Min Wang, The University of Hong Kong

3:30 PM

(PACRIM-S19-005-2025) Electrospun Photocatalytic Nanogrids (Invited)

P. Gouma*[1]

1. The Ohio State University, MSE, USA

4:00 PM

(PACRIM-S19-006-2025) Bioactive Glasses React in Nanoscale (Invited)

L. Hupa*[1]

1. Åbo Akademi University, Johan Gadolin Process Chemistry Centre, Finland

PacRim S21 - Cultural Heritage of the Pacific Rim

PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim I

Room: English Bay

Session Chair: Fumie Iizuka, University of Wisconsin System

1:15 PM

(PACRIM-S21-002-2025) Green strategy for temporary reinforcement and conservation of ancient ivory relics: Calcium-based mineralized hydrogels

C. Shi[1]; L. He*[1]; A. Pan[1]

1. Xi'an Jiaotong University, China

1:35 PM

(PACRIM-S21-003-2025) Analytical investigation of the glass artifacts and glaze of the blue and white of the mid-14th century Temasek shipwreck near Singapore

C. S. Lau*[3]; J. Van Kan[1]; A. Chi[2]; M. Ren[1]; T. Osipowicz[1]; Y. Taniguchi[3]; Y. Abe[4]; Z. Minrui[1]

1. National University of Singapore, Physic, Singapore
2. Nanyang Technological University, Singapore
3. Tsukuba Daigaku, Japan
4. Tokyo Denki Daigaku, Japan

1:55 PM

(PACRIM-S21-004-2025) An experimental study on decoration manufacturing technique of ceramic bronze-casting molds from the Houma foundry, China

C. Wang*[1]; Q. Wang[1]

1. Shandong University, Institute of Cultural Heritage, China

2:15 PM

(PACRIM-S21-005-2025) Understanding manufacturing processes of glazed architectural bricks from Middle Eastern Antiquity coupling archaeometric and experimental approaches

D. Caurant*[1]; E. Beauvoit[2]; A. Bouquillon[2]; O. Majérus[1]; Y. Coquinot[2]; G. Wallez[1]; J. Cuny[3]; A. Thomas[3]

1. Chimie Paristech CNRS, IRCP, France
2. Centre de Recherche et de Restauration des Musées de France (C2RMF), France
3. Musée du Louvre, Département des Antiquités Orientales, France

2:35 PM

(PACRIM-S21-007-2025) Study the materials and techniques of the lacquer-painted pottery in China

S. Wei*[1]; S. Shi[1]

1. University of Science and Technology Beijing, China

2:55 PM

(PACRIM-S21-009-2025) In search of the manufacturing process of tin oxide opacified glazes on terracotta sculptures from the Italian Renaissance

D. Caurant*[1]; L. Boutenègre[1]; L. Cutard[1]; A. Bouquillon[2]; G. Wallez[1]

1. Chimie Paristech CNRS, IRCP, France
2. Centre de Recherche et de Restauration des Musées de France (C2RMF), France

3:15 PM

Break

3:30 PM

(PACRIM-S21-011-2025) Non-invasive analysis of the production technology of Yayoi- and Kofun-period iron and bronze weapons from Japan using neutron imaging and diffraction

J. Ryan*[1]; F. Grazzi[2]; F. Cantini[2]; A. Lo Giudice[3]; A. Re[3]; T. Shinohara[4]; S. Harjo[4]; G. Wu[4]

1. Okayama Daigaku, Japan
2. Consiglio Nazionale delle Ricerche Istituto di Fisica Applicata "N. Carrara" CNR-IFAC, Italy
3. University of Torino, Department of Physics, Italy
4. J-Parc Center Busshitsu Seimei Kagaku Kenkyu Shisetsu, Japan

PacRim S22 - 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics

PACRIM Symposium 22 - 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics I

Room: Grouse

Session Chairs: Bryan Huey, University of Connecticut; Hirokazu Sasaki, Shoei Chemical Inc

1:15 PM

(PACRIM-S22-001-2025) Fascinated by amorphous materials for next generation battery application (Invited)

F. Mizuno*[1]

1. Toyota Motor Corporation, Advanced Battery Development Division, Japan

1:45 PM

(PACRIM-S22-002-2025) Development of Na-ion conducting glass electrolytes for all-solid-state batteries (Invited)

A. Hayashi*[1]; K. Motohashi[1]; A. Sakuda[1]

1. Osaka Koritsu Daigaku, Japan

2:15 PM

(PACRIM-S22-003-2025) Mechanism of Suppressing Insulation Resistance Degradation in Sn-Doped Ni Internal Electrode Multi-Layer Ceramic Capacitors (Invited)

S. Suzuki*[1]; T. Nakamura[1]

1. Murata Seisakusho Kabushiki Kaisha Yasu Jigyosho, Japan

2:45 PM

(PACRIM-S22-004-2025) Reliability of Multilayer Ceramic Capacitors (MLCC) in M2M Environments (Invited)

K. Morita*[1]

1. Taiyo Yuden Kabushiki Kaisha, Japan

3:15 PM

Break

3:30 PM

(PACRIM-S22-005-2025) Application of Pulsed Electric Fields in Ceramics Processing (Invited)

T. Nakayama*[1]

1. Nagaoka University of Technology, Japan

4:00 PM

(PACRIM-S22-006-2025) Response of ferroelectric nanodomains to external direct-current and alternative-current electric fields (Invited)

Y. Sato*[1]

1. Kumamoto Daigaku, Research and Education Institute for Semiconductors and Informatics, Japan

4:30 PM

(PACRIM-S22-007-2025) Mechanical properties of single crystal $BaTiO_3$ at the microscopic scale measured by bending test of microcantilever beam specimens (Invited)

J. Tatami*[1]; H. Yamaguchi[1]; M. Iijima[1]; T. Takahashi[2]

1. Yokohama National University, Japan
2. Kanagawa Institute of Industrial Science and Technology, Japan

5:00 PM

(PACRIM-S22-008-2025) Nanovolumetric Surface Milling and Tomographic Property Mapping of Functional Materials

K. Lizu[1]; K. Del Cid-Ledezma[1]; A. Chen[2]; B. Huey*[1]

1. University of Connecticut, MSE, USA
2. Los Alamos National Lab, USA

5:20 PM

(PACRIM-S22-009-2025) Echoes of the past and new beginnings: Musings of a global scholar at a half century

J. McCloy*[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA

PacRim S23 - Advanced Processing and Manufacturing Technologies for Ceramics

PACRIM Symposium 23 - Ultra-fast high-temperature sintering

Room: Georgia B

Session Chair: Raul Bermejo, Montanuniversitaet Leoben

1:15 PM

(PACRIM-S23-001-2025) Ultrafast Sintering: A Review of Prior Mechanistic Studies and New Perspective (Invited)

J. Luo*[1]

1. University of California San Diego, USA

1:55 PM

(PACRIM-S23-002-2025) Fabrication of single tetragonal phase 3YSZ using UHS sintering (Invited)

B. Feng*[1]; R. Murakami[1]; N. Shibata[1]; Y. Ikuhara[1]

1. The University of Tokyo, Japan

2:25 PM

(PACRIM-S23-003-2025) Rapid sintering of telluride compounds for thermoelectric conversion applications (Invited)

M. Mikami*[1]; H. Miyazaki[2]; Y. Nishino[2]

1. National Institute of Advanced Industrial Science and Technology, Japan
2. Nagoya Kogyo Daigaku, Japan

PACRIM Symposium 23 - Cold sintering and energy-efficient densification techniques

Room: Georgia B

Session Chair: Bin Feng, The University of Tokyo

3:30 PM

(PACRIM-S23-004-2025) Understanding the mechanical behavior of cold sintered ceramics (Invited)

R. Bermejo*[1]; A. Jabr[1]; D. Salamon[1]

1. Montanuniversitat Leoben, Materials Science, Austria

4:00 PM

(PACRIM-S23-005-2025) Structural and Mechanical Characteristics of Whitlockite Fabricated via Mineralization-Assisted Cold Sintering Process

S. Nawa*[1]; Y. Seo[1]; Y. Kondo[1]; S. Chou[1]; J. Stadulis[2]; A. Zarkov[2]; T. Goto[1]; T. Sekino[1]

1. Osaka University, SANKEN, Japan
2. Vilnius University, Lithuania

4:20 PM

(PACRIM-S23-006-2025) Transparent Hydroxyapatite Densified by Cold Sintering Process Combined with Biomineralization

Y. Seo*[1]; T. Goto[2]; S. Chou[1]; T. Sekino[1]

1. Osaka University, SANKEN, Japan
2. Osaka University, Institute for Advanced Co-Creation Studies, Japan

4:40 PM

(PACRIM-S23-007-2025) Designing low temperature sintered ultra-uniform nanocrystalline ceramics (Invited)

Y. Dong*[1]

1. Tsinghua University, School of Materials Science and Engineering, China

PacRim S24 - Solid-State Optical Materials and Luminescence Properties

PACRIM Symposium 24 - Advanced processing of optical materials and devices

Room: Prince of Wales

Session Chair: Ivar Reimanis, Colorado School of Mines

1:15 PM

(PACRIM-S24-001-2025) Advanced Alumina Ceramics with Pseudo-Isotropic Optical Properties for IR Windows (Invited)

A. Ikesue*[1]

1. World Lab. Co., Japan

1:45 PM

(PACRIM-S24-002-2025) Fabrication of highly transparent Y_2O_3 ceramics via air pre-sintering by deionization treatment of suspension (Invited)

X. LI*[1]

1. Northeastern University, China

2:15 PM

(PACRIM-S24-003-2025) Strengthening of transparent AlON ceramics utilizing intermediate oxide layer (Invited)

X. Mao*[1]

1. Shanghai Institute of Ceramics Chinese Academy of Sciences, China

2:45 PM

(PACRIM-S24-022-2025) Transparent Ceramics: Challenges, Successes and Opportunities

M. Rubat du Merac*[1]; S. Begand[2]

1. Consultant Technical Ceramics, Canada
2. Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Germany

PACRIM Symposium 24 - Optical spectroscopy of crystalline and amorphous materials

Room: Prince of Wales

Session Chair: Dariusz Hreniak, Institute of Low Temperature Structure Research

3:30 PM

(PACRIM-S24-004-2025) Residual Stresses in Transparent Ceramics and Glass: Control and Measurement with Raman Spectroscopy (Invited)

I. Reimanis*[1]; A. J. Bellafatto[1]

1. Colorado School of Mines, USA

4:00 PM

(PACRIM-S24-005-2025) Laser Drilling and Cutting Machines for Glasses and Ceramics (Invited)

S. Jiang*[1]

1. AdValue Photonics Inc, USA

4:30 PM

(PACRIM-S24-006-2025) Network Structure of Bi_2O_3–Al_2O_3–$NaPO_3$ Glasses Investigated via Solid-State Nuclear Magnetic Resonance Spectroscopy

R. Zhang*[1]

1. University of Jinan, Material Science and Engineering, China

4:50 PM

(PACRIM-S24-007-2025) Unveiling the Crystallization Mechanism of Rare Earth Doped Oxyfluoride Glass ceramics through Solid-State Nuclear Magnetic Resonance Spectroscopy (Invited)

J. Ren*[1]

1. Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, Shanghai 201800, China, China

PacRim S25 - Syn/Prcsng/Micro-structural Control of Mtls using Elec Currents/Magn fields/Press

PACRIM Symposium 25 - Processing & Micro-structural Control using Electric Currents, Magnetic fields and/or Pressures

Room: Seymour

Session Chairs: Alexander Dupuy, University of California, Irvine; Javier Garay, University of California, San Diego

1:15 PM

(PACRIM-S25-001-2025) Multiscale control strategies for sintering of advanced ceramics (Invited)

D. Giuntini*[1]

1. Eindhoven University of Technology, Mechanical Engineering, Netherlands

1:45 PM

(PACRIM-S25-002-2025) Enhanced Sintering Behavior of Yttria during Spark-Plasma-Sintering (SPS) (Invited)

K. Morita*[1]

1. National Institute for Materials Science (NIMS), Japan

2:15 PM

(PACRIM-S25-003-2025) Controlling dislocation motion using an electric field

Y. Zou*[1]

1. University of Toronto, Canada

2:35 PM

(PACRIM-S25-004-2025) Electric Fields Effects on Microstructural Evolution: The Role of Electrochemical Coupling and Electrochemically Induced Grain Boundary Transitions (Invited)

J. Luo*[1]

1. University of California San Diego, USA

3:05 PM

Break

3:20 PM

(PACRIM-S25-005-2025) Leveraging Electric Fields in Large Format Field Assisted Sintering for Materials in Harsh Environments (Invited)

J. Rufner*[1]; A. Preston[1]; X. Zhang[1]; A. Gorman[1]

1. Idaho National Lab, Materials Science and Manufacturing, USA

3:50 PM

(PACRIM-S25-006-2025) Multiple Densification Mechanisms in $Na_2Mo_2O_7$ Dielectric Composites under the Cold Sintering Process (Invited)

C. Randall*[1]

1. Penn State University, Materials Science and Engineering, USA

4:20 PM

(PACRIM-S25-007-2025) Modeling Flash Sintering of Ionic Ceramics: From Individual Defects to Engineering Level (Invited)

R. Garcia*[1]

1. Purdue University, Materials Engineering, USA

4:50 PM

(PACRIM-S25-008-2025) Microstructure control of polycrystalline aluminum oxide densified body with high transparency

Y. Kodera*[1]; K. Ikeda[1]; D. Shikata[1]; J. E. Garay[2]

1. Ryukoku Daigaku - Seta Campus, Materials Chemistry, Japan
2. University of California, San Diego, Dept. of Mechanical and Aerospace Engrg., USA

PacRim S27 - International Symposium of Fundamental and Frontier Sciences of Ceramics

PACRIM Symposium 27 - International Symposium of Fundamental and Frontier Sciences of Ceramics I

Room: Cypress

Session Chairs: Gregory Rohrer, Carnegie Mellon University; William Fahrenholtz, Missouri University of Science & Technology

1:15 PM

(PACRIM-S27-001-2025) Leveraging Machine-learning and High Throughput Powder Processing for Efficient Design of Ceramics – Challenges and Opportunities (Invited)

R. Bordia*[1]; F. Peng[1]; K. G. Webber[2]; H. Xiao[3]; X. Geng[1]; U. Eckstein[2]

1. Clemson University, Materials Science and Engineering, USA
2. Friedrich-Alexander-Universität Erlangen-Nürnberg, Materials Science and Engineering, Germany
3. Clemson University, Electrical and Computer Engineering, USA

1:45 PM

(PACRIM-S27-002-2025) A Combined Computational and Experimental Approach For Discovery of Novel Hard Ceramics (Invited)

W. Fahrenholtz*[1]; S. Filipovic[2]; N. Obradovic[2]; G. Hilmas[1]; S. Curtarolo[3]

1. Missouri University of Science & Technology, Dept. of Materials Science and Engineering, USA
2. Institute of Technical Sciences of SASA, Materials, Serbia
3. Duke University, Materials Science, Electrical Engineering and Physics, USA

2:15 PM

(PACRIM-S27-003-2025) Solute Adsorption, Diffusion, and Disconnection Motion for Microstructure Control of Monolithic and Particle Reinforced Alumina (Invited)

W. D. Kaplan*[1]

1. Technion - Israel Institute of Technology, Dept. of Materials Science and Engineering, Israel

2:45 PM

(PACRIM-S27-004-2025) The local driving force for grain growth in textured alumina (Invited)

A. Krause*[1]

1. Carnegie Mellon University, Materials Science and Engineering, USA

3:15 PM

Break

3:30 PM

(PACRIM-S27-005-2025) Processing and Microstructural Evolution of Entropy Stabilized Materials: New Insights (Invited)

H. M. Chan*[1]; J. Zhang[1]; J. Rickman[1]

1. Lehigh University P C Rossin College of Engineering and Applied Science, Materials Science & Engineering, USA

4:00 PM

(PACRIM-S27-006-2025) Accelerated DEED discovery of high-entropy ceramics with multi-component interatomic Hamiltonians (Invited)

S. Curtarolo*[1]; H. Eckert[1]; S. Divilov[1]

1. Duke University, Materials Science, Electrical Engineering and Physics, USA

4:30 PM

(PACRIM-S27-007-2025) Room-temperature dislocations in ceramics: from understanding to active engineering (Invited)

X. Fang*[1]; A. Frisch[1]; C. Okafor[1]; O. Preuß[2]; K. Durst[2]; J. Rödel[2]

1. Karlsruhe Institute of Technology, Institute for Applied Materials, Germany
2. Technical University of Darmstadt, Department of Materials and Earth Sciences, Germany

5:00 PM

(PACRIM-S27-008-2025) Understanding the fracture behaviour of tough ceramic inspired by nacre (Invited)

V. Vilchez[1]; S. Zhou[1]; S. Rawson[2]; P. J. Withers[2]; F. Bouville*[1]

1. Imperial College London, Department of Materials, United Kingdom
2. The Henry Royce Institute, United Kingdom

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - AI/ML- AI/ML- Model development and applications I

Room: Plaza A

Session Chairs: Raymundo Arroyave, Texas A&M University; Liang Qi, University of Michigan

1:15 PM

(PACRIM-S29-001-2025) Multi-scale Studies of High-Entropy Materials with Machine Learning (Invited)

S. Ong*[1]; J. Qi[1]; I. Beyerlein[2]; L. Fey[2]

1. University of California San Diego, USA
2. University of California System, Santa Barbara, USA

1:55 PM

(PACRIM-S29-002-2025) Accelerated Discovery and Optimization of High Entropy Alloys through Bayesian Optimization (Invited)

R. Arroyave*[1]

1. Texas A&M University, Materials Science and Engineering, USA

2:25 PM

(PACRIM-S29-003-2025) Compositional Design of Refractory High-Entropy Alloys Using Machine Learning Models (Invited)

H. Xu*[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science and Engineering, USA

2:55 PM

(PACRIM-S29-004-2025) Physics-informed Machine Learning Design of Refractory Complex Concentrated Alloys for Advanced Manufacturing (Invited)

Y. Hu[2]; A. Sundar[1]; D. Jobes[1]; J. Gordon[1]; A. Misra[1]; L. Qi*[1]

1. University of Michigan, USA
2. Drexel University, USA

3:25 PM

Break

3:45 PM

(PACRIM-S29-005-2025) Compositional Space Graphs as a Novel Tool for Efficient Exploration of High-Dimensional Design Spaces (Invited)

A. M. Krajewski*[1]; Z. Liu[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA

4:15 PM

(PACRIM-S29-006-2025) Physics Inspired Graph Neural Network Model for Inverse Design and Synthesizability Prediction of TiZrNb Based High Entropy Alloys

A. Malik*[1]; H. Malik[2]; H. Ryu[3]

1. Korea Advanced Institute of Science and Technology, Department of Materials Science and Engineering, Republic of Korea
2. University of Toronto, Department of Computer and Mathematical Sciences, Canada
3. Korea Advanced Institute of Science and Technology, Department of Nuclear and Quantum Engineering, Republic of Korea

4:35 PM

(PACRIM-S29-007-2025) Nanocrystalline High-Entropy Alloys (Invited)

Y. Zou*[1]

1. University of Toronto, Canada

Tuesday, May 6, 2025

PACRIM Plenary Lectures

PACRIM Plenary Lectures

Room: Regency ABC

Session Chairs: Yiquan Wu, Alfred University; Bryan Huey, University of Connecticut

8:00 AM

Introductions

8:10 AM

(PACRIM-PLEN 01-005-2025) Imaging Polarization and Ion Distribution in Functional Materials

S. Hong*[1]

1. Korea Advanced Institute of Science and Technology, Materials Science Division, Republic of Korea

9:00 AM

(PACRIM-PLEN 01-006-2025) Local structure tailoring of rare-earth doped fluoride materials for optical applications

L. Su*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

PacRim S4 - Polymer-Derived Ceramics/ Composites/Nanocomposites as Functional Inorganic Materials

PACRIM Symposium 4 - Environmental, energy, health and functional applications II

Room: Plaza C

Session Chair: Michaela Wilhelm, University of Bremen

10:10 AM

(PACRIM-S04-011-2025) Polymer Derived Ceramic Graded Environmental Barrier Coatings for Ceramic Matrix Composites

R. Bordia*[1]; S. Maiti[1]; Z. Zhang[1]; F. Peng[1]; J. Delvaux[2]; M. Hafner[2]

1. Clemson University, Materials Science and Engineering, USA
2. GE Vernova, USA

10:30 AM

(PACRIM-S04-012-2025) Polymer-derived Ni nanoparticle-dispersed amorphous silicon nitrides for catalytic application to RWGS reaction

N. Asakuma[3]; M. Iijima[1]; T. Tamura[1]; S. Honda[1]; A. Bouzid[2]; S. Bernard[2]; Y. Iwamoto*[1]

1. Nagoya Institute of Technology, Japan
2. CNRS, IRCER, France
3. Graduate School of Engineering, Nagoya Institute of Technology, Life Science and Applied Chemistry, Japan

10:50 AM

(PACRIM-S04-013-2025) Synthesis of nitride and carbide antiperovskite composite materials as electrocatalyst for the water splitting reaction

M. Cheype*[1]; Y. Iwamoto[1]; M. Ben Miled[2]; S. Bernard[2]

1. Nagoya Institute of Technology, Japan
2. CNRS, IRCER, France

PacRim S6 - Dielectric Ceramics for Microwave and Submillimeter-Wave Applications

PACRIM Symposium 6 - Low-Temperature & Additive Fabrication I

Room: Balmoral

Session Chairs: Jorg Topfer, Ernst-Abbe-Hochschule Jena; Di Zhou, Xi'an Jiaotong University

10:10 AM

(PACRIM-S06-009-2025) Energy Efficient Fabrication of Microwave Materials and Devices (Invited)

I. M. Reaney*[1]

1. The University of Sheffield, School of Chemical, Materials and Biological Engineering, United Kingdom

10:40 AM

(PACRIM-S06-010-2025) Cold sintering of microwave dielectric ceramics and devices (Invited)

J. Guo*[1]; X. Li[1]

1. Xi'an Jiaotong University, China

11:10 AM

(PACRIM-S06-011-2025) Cold Sintering of Boron Nitride Ceramics

H. Nishiyama*[1]; J. Mena-Garcia[1]; H. Shimizu[3]; C. Randall[2]

1. The Pennsylvania State University, USA
2. Penn State University, Materials Science and Engineering, USA
3. Taiyo Yuden Kabushiki Kaisha R and D Center, Japan

11:30 AM

(PACRIM-S06-012-2025) New Inorganic Binders for Room Temperature Fabrication of Upside-down $SrTiO_3$-based Ceramic Composites (Invited)

M. Spreitzer*[1]; N. Kuzmic[1]; S. Skapin[1]; M. Nelo[2]; H. Jantunen[2]

1. Jozef Stefan Institute, Advanced Materials Department, Slovenia
2. University of Oulu, Finland

PacRim S7 - Direct Heat-to-Electricity Energy Conversion Mtls & Thermal Energy Harnessing Challenges

PACRIM Symposium 7 - Direct Heat-to-Electricity Energy Conv Mtls & Thermal Energy Harnessing Challenges II

Room: Dover/Tennyson

Session Chairs: Alireza Nojeh, University of British Columbia; Woochul Kim, Yonsei University

10:10 AM

(PACRIM-S07-010-2025) Reinforcing Phonon Scatterings to Enhance zT (Invited)

M. Hong*[1]

1. University of Southern Queensland, Australia

10:40 AM

(PACRIM-S07-011-2025) Multiscale modeling of thermoelectric properties in complex materials

M. Morshed[1]; A. Gautam[2]; K. Nepal[2]; C. Ugwumadu[2]; B. Feygelson[3]; D. Drabold[2]; S. Nakhmanson*[1]

1. University of Connecticut, Materials Science and Engineering, USA
2. Ohio University, Dept. of Physics and Astronomy, USA
3. U.S. Naval Research Laboratory, Electronics Science and Technology Division, USA

11:00 AM

(PACRIM-S07-012-2025) Decoupling the Electrical Conductivity and the Thermopower by Consolidating $SrTiO_3$ and Metallic Phases

M. Ohtaki*[1]; L. Aoki[1]; K. Suekuni[1]

1. Kyushu Daigaku, Interdisciplinary Graduate School of Engineering Sciences, Japan

PRS9 - Fndmtls of interfaces/grain boundaries/ surfaces - interatomic bonding to macroscopic prop

PACRIM Symposium 9 - Novel Characterizations Techniques

Room: Oxford

Session Chair: Naoya Shibata, The University of Tokyo

10:10 AM

(PACRIM-S09-008-2025) Accurate determination of atomic structures and segregation at grain boundaries in Al_2O_3 (Invited)

K. Matsunaga*[1]

1. Nagoya University, Materials Physics, Japan

10:40 AM

(PACRIM-S09-009-2025) What happens when grain boundary energies approach zero in nanoceramics? (Invited)

R. Castro*[1]; I. Loureiro Muller Costa[2]; D. Fonseca[1]

1. Lehigh University, Material Science & Engineering, USA
2. UC Davis, Materials Science and Engineering, USA

11:10 AM

(PACRIM-S09-010-2025) The Influence of Solutes and Fields on Anisotropic Grain Growth of Alumina (Invited)

I. Naamne[1]; R. Marder[1]; W. D. Kaplan*[1]

1. Technion - Israel Institute of Technology, Dept. of Materials Science and Engineering, Israel

11:40 AM

(PACRIM-S09-011-2025) Electric field-induced defect redistribution along a near 23 degree (100) tilt grain boundary in $SrTiO_3$

W. Hahn*[1]; A. R. Lupini[3]; K. van Benthem[2]

1. University of California Davis, Materials Science and Engineering, USA
2. University of California, Davis, Dept. of Chemical Engineering and Materials Science, USA
3. Oak Ridge National Laboratory, USA

PacRim S11 - Optical and Electronic Phase Change Materials - Science and Application

PACRIM Symposium 11 - Optical and Electronic Phase Change Materials: Science and Application III

Room: Georgia A

Session Chair: Zengguang Cheng, Fudan University

10:10 AM

(PACRIM-S11-012-2025) Crystallization kinetics of phase change materials for non-volatile photonic and electronic applications (Invited)

P. Lucas*[1]; M. Muller[2]; F. Hoff[2]; J. Pries[2]; M. Wuttig[3]

1. Univ of Arizona, USA
2. Rheinisch-Westfalische Technische Hochschule Aachen, Germany
3. RWTH Aachen University, Germany

10:40 AM

(PACRIM-S11-013-2025) Multiphysics Modeling of Large-Volume Switching in Phase-Change Materials Using Nanosecond Laser Pulses

W. Takeda*[1]; P. Lucas[1]

1. The University of Arizona, Department of Materials Science and Engineering, USA

11:00 AM

(PACRIM-S11-014-2025) Multiscale simulations of chalcogenide phase-change materials for non-volatile optical devices (Invited)

W. Zhang*[1]

1. Xi'an Jiaotong University, China

11:30 AM

(PACRIM-S11-015-2025) Machine-learning-driven advances in modelling phase-change memory materials (Invited)

V. L. Deringer*[1]

1. University of Oxford, Department of Chemistry, United Kingdom

PacRim S12 - Eng Ceramics and Ceramic Matrix Composites - Processing/Design/ Applications

PACRIM Symposium 12 - Innovative processing and synthesis methods

Room: Plaza B

Session Chairs: Detian Wan, China Building Materials Academy State Key Laboratory of Green Building Materials; Jingxian Zhang, Shanghai Institute of Ceramics Chinese Academy of Sciences

10:10 AM

(PACRIM-S12-009-2025) Research and Industrialization of Si_3N_4 substrate from tape casting and gas pressure sintering (Invited)

J. Zhang*[1]

1. Shanghai Institute of Ceramics Chinese Academy of Sciences, China

10:40 AM

(PACRIM-S12-010-2025) Application and challenge of high throughput mechanical property testing technology for ceramic coatings (Invited)

D. Wan*[1]

1. China Building Materials Academy State Key Laboratory of Green Building Materials, China

11:10 AM

(PACRIM-S12-011-2025) Recycled Wind Turbine Blades in Clay Bricks: A Sustainable Solution or a Structural Risk?

M. B. Østergaard*[1]; T. Ulrich[2]; H. Johra[3]; U. Hribar[4]; M. R. Fischer[1]; J. König[4]; Y. Yue[5]

1. Aalborg University, Chemistry and Bioscience, Denmark
2. Aarhus Universitet, Department of Geoscience, Denmark
3. SINTEF Community, Architectural Engineering, Norway
4. Jozef Stefan Institute, Advanced Materials, Slovenia
5. Aalborg University, Denmark

11:30 AM

(PACRIM-S12-012-2025) Research on the preparation methods and influencing mechanisms of prestressed ceramics

S. Fu*[1]; D. Wan[1]

1. China Building Materials Academy State Key Laboratory of Green Building Materials, China

PacRim S19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications

PACRIM Symposium 19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications III

Room: Stanley

Session Chairs: Monica Ferraris, Politecnico di Torino; Junghyun Cho, Binghamton University

10:10 AM

(PACRIM-S19-008-2025) Lanthanide-Doped Nanomaterials for Biomedical Applications – Impact of Surface Chemistry (Invited)

E. Hemmer*[1]

1. University of Ottawa, Chemistry and Biomolecular Sciences, Canada

10:40 AM

(PACRIM-S19-009-2025) Effects of Calcium Precursors on Bioactive Glass Nanoparticles: Properties and Applications in Bone Tissue Repair

U. Pantulap[1]; P. Jampeerung[1]; N. Sawangboon[1]; E. Meechoowas*[1]

1. Department of Science Service, Thailand

11:00 AM

(PACRIM-S19-010-2025) Mixing Energized Fields with Freeze Casting for Future Biomaterials (Invited)

S. E. Naleway*[1]

1. University of Utah, Department of Mechanical Engineering, USA

11:30 AM

(PACRIM-S19-015-2025) Can nanostructured material, hydroxyapatite/collagen bone-like nanocomposite, make available selective cell recruitment? (Invited)

M. Kikuchi*[1]; T. Hasegawa[2]; N. Amizuka[2]

1. National Institute for Materials Science (NIMS), Bioceramics Group, Japan
2. Hokkaido Daigaku, Japan

PacRim S21 - Cultural Heritage of the Pacific Rim

PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim II

Room: English Bay

Session Chair: Fumie Iizuka, University of Wisconsin System

10:10 AM

(PACRIM-S21-012-2025) Study on the Influence of Calcination Temperature of Iron Vitriol on the Coloration of Ancient Chinese Traditional Iron Red Overglaze Color

A. Wu*[1]; D. Yi[1]

1. Donghua University, China

10:30 AM

(PACRIM-S21-013-2025) New insights behind the polychrome of Philippine ivories – Archangel Saint Michael leading the way

A. S. Ortiz Miranda*[1]; J. Lauffenburger[1]; A. Proser[2]; D. Chan[2]

1. The Walters Art Museum, Conservation, USA
2. The Walters Art Museum, Curatorial, USA

10:50 AM

(PACRIM-S21-014-2025) Basic copper chloride pigments and silk deterioration in Korean Buddhist painting

C. Bisulca*[1]

1. Detroit Institute of Arts, USA

11:10 AM

(PACRIM-S21-015-2025) Pigments or degradation products? The arsenate pigments in ancient Chinese grotto murals

L. Shen*[1]

1. Hangzhou City University, China

11:30 AM

(PACRIM-S21-016-2025) A study on Japanese folk art of the 18th - 19th centuries: crêpe print, doro-e painting, and glass painting

Y. Ichimiya*[1]

1. Tokyo Geijutsu Daigaku, Japan

PacRim S22 - 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics

PACRIM Symposium 22 - 7th International PacRim Richard M. Fulrath Memorial Symposium on Advanced Ceramics II

Room: Grouse

Session Chair: Tomoyuki Nakamura, Murata Mfg. Co. LTD

10:10 AM

(PACRIM-S22-010-2025) Scientific Suprises in Electroceramic Materials when Undergoing New Non-Equilibrium Processes (Invited)

C. Randall*[1]

1. Penn State University, Materials Science and Engineering, USA

10:40 AM

(PACRIM-S22-011-2025) Failure Modes in Oxide Solid State Electrolytes: Direct Observations of the Stress Accompanying Dendrite Growth (Invited)

C. D. Fincher[1]; Y. Chiang[1]; B. Sheldon[2]; M. D. Thouless[3]; W. Carter*[1]

1. Massachusetts Institute of Technology, Materials Science and Engineering, USA
2. Brown University, Mechanical Engineering, USA
3. University of Michigan, Mechanical Engineering, USA

11:10 AM

(PACRIM-S22-012-2025) Charge separation mechanisms in transition metal oxide photocatalysts (Invited)

G. Rohrer*[1]

1. Carnegie Mellon University, USA

11:40 AM

(PACRIM-S22-013-2025) From Studying Metal Oxide Polymorphism to Developing "The RISE Breath Test" (Invited)

P. Gouma*[1]

1. The Ohio State University, MSE, USA

PacRim S23 - Advanced Processing and Manufacturing Technologies for Ceramics

PACRIM Symposium 23 - Flash sintering

Room: Georgia B

Session Chairs: Wilhelm Meulenberg, Forschungszentrum Julich Institut fur Energie- und Klimaforschung; Hiroshi Masuda, The University of Tokyo

10:10 AM

(PACRIM-S23-008-2025) Toward High-Speed Forming and Joining of Structural Ceramics Assisted by Flash Events (Invited)

H. Yoshida*[1]; K. A. Shariffuddin[1]; Y. Yang[1]; H. Masuda[2]; K. Morita[3]; T. Yamamoto[4]

1. Tokyo Daigaku Daigakuin Kogakukei Kenkyuka Kogakubu, Materials Science and Engineering, Japan
2. The University of Tokyo, Department of Materials Engineering, Japan
3. National Institute for Materials Science (NIMS), Japan
4. Nagoya Daigaku, Materials Design Innovation Engineering, Japan

10:50 AM

(PACRIM-S23-010-2025) Effect of Electric Field/Current on Grain Growth of Zirconia (8Y-CSZ)

K. Morita*[1]

1. National Institute for Materials Science (NIMS), Japan

PacRim S24 - Solid-State Optical Materials and Luminescence Properties

PACRIM Symposium 24 - Novel optical materials design and their properties I

Room: Prince of Wales

Session Chair: Dariusz Hreniak, Institute of Low Temperature and Structure Research

10:10 AM

(PACRIM-S24-008-2025) Structure Evolution of the Clusters in Er Doped Fluorite Crystals and Their High Power Mid-infrared Laser (Invited)

Z. Zhang*[1]; Z. Zhang[1]; F. Ma[2]; D. Jiang[1]; L. Su[1]

1. Shanghai Institute of Ceramics Chinese Academy of Sciences, Synthetic Single Crystal Research Center, China
2. Jinan University, Department of Optoelectronic Engineering, China

10:40 AM

(PACRIM-S24-009-2025) An innovative method for synthesizing luminescent and magnetic garnets from glass melts (Invited)

M. Nalin*[1]

1. Universidade Estadual Paulista Julio de Mesquita Filho, Inorganic Chemistry, Brazil

11:10 AM

(PACRIM-S24-010-2025) Photonic–Plasmonic Coupling Color Materials Using SiO_2-Metal Nitride Patchy Particles

S. Noguchi*[1]; M. Lama[3]; Y. Fujii[2]; A. Miura[2]; K. Tadanaga[2]

1. Hokkaido University, Graduate School of Chemical Sciences and Engineering, Japan
2. Hokkaido University, Faculty of Engineering, Japan
3. Hokkaido University, Institute for Chemical Reaction Design and Discovery, Japan

11:30 AM

(PACRIM-S24-011-2025) Development of transparent and fluorescent α-SiAlON ceramic by co-doping of Ce^{3+} and Lu^{3+}

J. Tatami*[1]; K. Amianka[1]; M. Iijima[1]; A. Ito[1]; S. Matsumoto[1]; T. Takahashi[2]; T. Ohji[1]

1. Yokohama National University, Japan
2. Kanagawa Institute of Industrial Science and Technology, Japan

PacRim S27 - International Symposium of Fundamental and Frontier Sciences of Ceramics

PACRIM Symposium 27 - International Symposium of Fundamental and Frontier Sciences of Ceramics II

Room: Cypress

Session Chairs: Michael Stuer, Swiss Federal Laboratories for Materials Science and Technology, Empa; Florian Bouville, ETH Zürich

10:10 AM

(PACRIM-S27-009-2025) Dielectric behavior of high entropy ferroelectric ceramics (Invited)

H. Yan*[1]

1. Queen Mary University of London, School of Engineering and Materials Science, United Kingdom

10:40 AM

(PACRIM-S27-010-2025) Montmorillonite Nanosheets for Polymer-Derived MMT-SiOC Nanocomposites (Invited)

K. Lu*[1]; A. Rau[2]

1. University of Alabama at Birmingham, USA
2. Virginia Polytechnic Institute and State University, USA

11:10 AM

(PACRIM-S27-011-2025) New Metastable Oxides via Crystallisation of Glasses and Undercooled Melts (Invited)

M. Pitcher*[1]

1. Centre National de la Recherche Scientifique, France

11:40 AM

(PACRIM-S27-012-2025) Scale-bridging processing of advanced ceramics

D. Giuntini*[1]

1. Eindhoven University of Technology, Mechanical Engineering, Netherlands

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - AI/ML- Model development and applications II

Room: Plaza A

Session Chair: Adam Krajewski, The Pennsylvania State University; Kun Wang, Alfred University

10:10 AM

(PACRIM-S29-008-2025) High Entropy Materials for Clean Energy: Unique Electrochemical Application, Specialized Database and Universal Predictor (Invited)

B. Ouyang*[1]

1. Florida State University, Chemistry and Biochemistry, USA

10:40 AM

(PACRIM-S29-009-2025) Integrated Data Driven Methodology Development for the Design of Multicomponent Alloy Chemistries Given Property Trade-offs (Invited)

S. Broderick*[1]

1. University at Buffalo, USA

11:10 AM

(PACRIM-S29-010-2025) Accelerated discovery of high entropy ultra-high temperature ceramics by machine learning and high throughput experiments (Invited)

K. Wang*[1]

1. Alfred University, USA

11:40 AM

(PACRIM-S29-011-2025) Active Learning Driven Materials Discovery for Low Thermal Conductivity Rare-Earth Pyrochlore-Oxide

A. Chowdhury*[1]; A. R. Romero[2]; G. Figueredo[3]

1. University of Nottingham, M3, United Kingdom
2. Fundacion Tecnalia Research & Innovation, Spain
3. University of Nottingham, Health Science, United Kingdom

PacRim S32 - Advanced Characterization, Testing, and Analysis of Materials

PACRIM Symposium 32 - Advanced Characterization, Testing, and Analysis of Materials I

Room: Seymour

Session Chairs: Amanda Krause, Carnegie Mellon University; Scott Misture, Alfred University

10:10 AM

(PACRIM-S32-001-2025) Direct Nanovolumetric Investigation of Domain Walls and Grain Boundaries in Functional Oxides (Invited)

A. Akoma[1]; K. Del Cid-Ledezma[1]; K. Lizu[1]; J. Schultheiss[2]; D. Meier[2]; B. Huey*[1]

1. University of Connecticut, MSE, USA
2. Norges teknisk-naturvitenskapelige universitet, Norway

10:40 AM

(PACRIM-S32-003-2025) Advancing Electron Microscopy for uncovering Oxide and Sulfide Catalysts at the Atomic-Scale

M. Ek[2]; L. Hansen[3]; F. Chen[4]; D. van Dyck[5]; C. Kisielowski[6]; P. Specht[6]; C. Damsgaard[1]; J. Jinschek*[1]; S. Helveg[1]

1. Danmarks Tekniske Universitet, Denmark
2. Lunds Universitet, Centre for Analysis and Synthesis & NanoLund, Sweden
3. Topsoe A/S, Denmark
4. City University of Hong Kong, Hong Kong
5. Universiteit Antwerpen, Belgium
6. Electron Scattering Solutions, USA

PacRim S4 - Polymer-Derived Ceramics/ Composites/Nanocomposites as Functional Inorganic Materials

PACRIM Symposium 4 - Design-oriented manufacturing and processing of composites

Room: Plaza C

Session Chair: Yuichiro Hirota, Nagoya Institute of Technology

1:15 PM

(PACRIM-S04-015-2025) Synthesis and water-vapor corrosion resistance of $(5RE_{0.2})_2Si_xO_{2x+3}$/SiOC nanocomposites at 1200-1500°C (RE= Yb, Ho, Er, Lu, Tb, Tm, Gd) (Invited)

Q. Wen*[1]; X. Huang[1]

1. Central South University, Powder Metallurgy Research Institute, China

1:45 PM

(PACRIM-S04-016-2025) Preparation of high temperature resistant ceramic coatings based on preceramic polymer-derived ultrahigh-temperature ceramic nanocomposites (UHTC-NCs)

A. D. Camacho Ramirez*[1]; S. Kredel[1]; J. Bernauer[1]; E. Ionescu[2]; R. Riedel[1]

1. Technische Universitat Darmstadt Fachbereich Material- und Geowissenschaften, Germany
2. Fraunhofer-Einrichtung fur Wertstoffkreislaufe und Ressourcenstrategie IWKS, Germany

2:05 PM

(PACRIM-S04-017-2025) Straightforward design of 3D polymer-derived SiC architectures via a granule-derived FDM technology

D. Sazarin[1]; M. Cheype[1]; V. Pateloup[1]; S. Bernard*[1]

1. CNRS, IRCER, France

PACRIM Symposium 4 - Organic-inorganic hybrid materials: from synthesis to application

Room: Plaza C

Session Chairs: Christel Gervais, UPMC; Timothy Pruyn, Air Force Research Laboratory

2:25 PM

(PACRIM-S04-019-2025) Hybrid Cu(II)acrylate/Silazane thin coatings with hydrophobic and antibacterial properties

M. Zahedtalaban*[1]; S. Schafföner[1]; G. Motz[1]

1. Universitat Bayreuth Fakultat fur Ingenieurwissenschaften, Ceramic Materials Engineering, Germany

3:15 PM

Break

3:30 PM

(PACRIM-S04-020-2025) Development of ionic liquid-siloxane hybrid membranes and their application to vapor and liquid separation (Invited)

Y. Hirota*[1]

1. Nagoya Institute of Technology, Department of Life Science and Applied Chemistry, Japan

4:00 PM

(PACRIM-S04-021-2025) Aligned Carbon/Ceramic Hybrid Fibers with improved Oxidation Resistance

G. Motz*[1]; J. Denk[1]; X. Liao[2]; S. Agarwal[3]; S. Schafföner[1]

1. University of Bayreuth, Ceramic Materials Engineering, Germany
2. Tianjin University, China
3. Universitat Bayreuth Fakultat fur Biologie Chemie Geowissenschaften, Macromolecular Chemistry II, Germany

4:20 PM

(PACRIM-S04-022-2025) Design at Nanoscale of Thermostable Hybrid Sol-Gel Bondlayer to Functionalize Aeronautical CFRP by Thermal Spray

S. Senani - de Monredon*[1]; L. Rozes[2]; G. Penvern[1]; A. Joulia[1]; S. Bonebeau[3]

1. Safran SA, France
2. Sorbonne Universite, LCMCP, France
3. SAFIR, France

4:40 PM

(PACRIM-S04-023-2025) Novel BCN and HfBCN nanocomposites for energy conversion application

K. Lu*[1]; W. Li[1]; J. Ding[2]

1. University of Alabama at Birmingham, USA
2. Technische Universitat Darmstadt, Germany

PacRim S6 - Dielectric Ceramics for Microwave and Submillimeter-Wave Applications

PACRIM Symposium 6 - Low-Temperature & Additive Fabrication II

Room: Balmoral

Session Chairs: Matjaz Spreitzer, Jozef Stefan Institute; Ian Reaney, University of Sheffield

1:15 PM

(PACRIM-S06-013-2025) Low temperature sintering of the BaO-CuO-SiO_2 ternary microwave dielectric ceramics with low permittivity values (Invited)

D. Zhou*[1]; W. Wang[1]; Y. Lou[1]

1. Xi'an Jiaotong University, School of Electronic Science and Engineering, China

1:45 PM

(PACRIM-S06-014-2025) Development of LTCC Materials and Processes for Microwave and Mili-meter Wave Devices (Invited)

Y. Sugimoto*[1]

1. Murata Seisakusho Kabushiki Kaisha, Inorganic materials development Dept., Japan

2:15 PM

(PACRIM-S06-015-2025) Integration of functional materials in LTCC layers of SiCer composite substrate modules (Invited)

M. Heidenreich[1]; T. Schulz[1]; B. Capraro[2]; J. Topfer*[1]

1. Ernst-Abbe-Hochschule Jena, Germany
2. Fraunhofer IKTS, Germany

2:45 PM

(PACRIM-S06-016-2025) Alkali Modified Borosilicate Glass-SiO_2 Composites for Electronic Packaging and High Frequency Applications

M. E. Eltantawy*[1]; A. Shearer[1]; U. Sanjeewani[2]; Y. Liao[2]; J. C. Mauro[1]; S. Wang[2]; M. Lanagan[1]

1. The Pennsylvania State University, Materials Research Institute, USA
2. National Taipei University of Technology, Taiwan

3:05 PM

Break

3:20 PM

(PACRIM-S06-017-2025) Contribution of additive manufacturing to the production of ceramic dielectric resonators with adapted permittivity (Invited)

C. Le Paven*[1]; T. Lavie[1]; M. Julian[1]; L. Le Gendre[1]; R. Benzerga[1]; A. Sharaiha[1]; F. Cheviré[2]

1. University of Rennes 1, Institute of Electronics and Telecommunications of Rennes (IETR), France
2. Institut des Sciences Chimiques de Rennes, Equipe Verres et Céramiques, France

3:50 PM

(PACRIM-S06-018-2025) Structured dielectric composite deflector fabricated by 3D printing (Invited)

J. Heintz*[1]; C. Elissalde[2]; N. Penin[4]; T. Fournier[3]; V. Hoang[5]; E. Vandelle[5]; B. Loiseaux[5]; P. Pouliguen[6]

1. ENSMAC-Bordeaux INP, ICMCB, France
2. ICMCB-CNRS, France
3. CANOE, France
4. ICMCB-University of Bordeaux, France
5. Thales Research and Technology France, France
6. DGA, France

4:20 PM

(PACRIM-S06-019-2025) The effects of Zn substitution on the Phase, Microstructure, Dielectric and Electrical properties of $Y_{2.95}Dy_{0.05}MgAl_3SiO_{12}$ Garnet Structured ceramics

A. Manan*[1]; O. Ullah[1]; M. Lanagan[2]; A. Hossain[2]

1. University of Science & Technology Bannu, Department of Physics, Pakistan
2. Penn State University, Dept. of Engineering Science and Mechanics, USA

PacRim S8 - STE(A)M Outreach/Education/ Engagement/Retention (Joint with GOMD)

PACRIM Symposium 8 & GOMD Symposium 4 - STEAM Outreach, Education, Engagement and Retention

Room: Dover/Tennyson

Session Chairs: Charmayne Lonergan, Missouri University of Science & Technology; Casey Schwarz, Ursinus College

1:15 PM

(PACRIM-S08-001-2025) Making Glass with High, Middle and Elementary Schoolers (Invited)

S. Feller*[1]; M. Affatigato[1]; C. B. Bragatto[1]

1. Coe College, Physics Department, USA

1:45 PM

(PACRIM-S08-002-2025) Science for Society: Expanding access to materials science education in both formal and informal learning settings

L. McDonald*[1]

1. The American Ceramic Society, USA

2:05 PM

(PACRIM-S08-003-2025) Asynchronous Education for an Intro to Materials Science Course: When and How to Do It Well

M. D. Losego*[1]

1. Georgia Institute of Technology, School of Materials Science and Engineering, USA

2:25 PM

(PACRIM-S08-004-2025) Empowering the Next Generation of STE(A)M Innovators Through Real-World Simulations, Mentorship, and Outreach in Glass and Ceramics

C. Schwarz*[1]; R. Sharma[2]; J. Donnelly[3]; M. Lam[3]; K. Richardson[2]

1. Ursinus College, Physics & Astronomy, USA
2. University of Central Florida, CREOL, USA
3. University of Central Florida, Chemistry, USA

2:45 PM

Break

3:30 PM

(PACRIM-S08-005-2025) Design and Implementation of STEAM Outreach Initiatives in Educational Settings: Insights, Challenges, and Key Takeaways (Invited)

A. Yadav*[1]; S. Gupta[2]; R. Sharma[2]; K. Sonowal[3]

1. Sri Aurobindo College, University of Delhi, Department of Physics, India
2. Sri Aurobindo College, University of Delhi, Department of Electronics, India
3. Sri Aurobindo College, University of Delhi, Department of Environmental Science, India

4:00 PM

(PACRIM-S08-006-2025) Training opportunities as a tool to guide student outcomes (Invited)

R. Sharma*[1]; K. Richardson[2]

1. University of Central Florida, College of Optics and Photonics, USA
2. University of Central Florida, CREOL, USA

4:30 PM

(PACRIM-S08-007-2025) Needs, potential solutions and challenges for making US STEM doctoral training that is aligned with student career paths

H. Jain*[1]; V. Dierolf[2]; A. Jagota[3]; Z. Pan[3]

1. Lehigh University, International Materials Institute for New Functionality in Glass, USA
2. Lehigh University, Physics, USA
3. Lehigh University, USA

4:50 PM

(PACRIM-S08-008-2025) Building Bridges: The Evolution and Impact of the PRE-CCAP Consortium

R. Grodsky*[1]; A. Moser[2]

1. National Nuclear Security Administration Kansas City National Security Campus, Inorganic Materials, USA
2. National Nuclear Security Administration Kansas City National Security Campus, Center of Excellence Lead, USA

5:10 PM

(PACRIM-S08-009-2025) Challenges of organizing a multi-departmental STEAM night in a rural community: Alfred University's Night of Science and Arts

R. Welch*[1]

1. Alfred University, Materials Science and Engineering, USA

PRS9 - Fndmtls of interfaces/grain boundaries/ surfaces - interatomic bonding to macroscopic prop

PACRIM Symposium 9 - Microstructure evolution through sintering and grain growth

Room: Oxford

Session Chair: Katsuyuki Matsunaga, Nagoya University

1:15 PM

(PACRIM-S09-012-2025) Direct Observation of Atomic-Scale Surface Evolution in Oxide Catalysts during OER (Invited)

S. Chung*[1]

1. Korea Advanced Institute of Science and Technology, Republic of Korea

1:45 PM

(PACRIM-S09-013-2025) In-situ Manipulation of the Ferroelectric Domain and Domain Walls (Invited)

H. Tian*[1]

1. Zhejiang University, China

2:15 PM

(PACRIM-S09-014-2025) The Effects of Domain Walls on Plastic Deformation Behavior of Bulk Barium Titanate Single Crystals

T. Shibamoto*[1]; K. Kasai[2]; Y. Li[1]; F. Zhuo[3]; T. Shimada[2]; A. Nakamura[1]

1. Osaka Daigaku, Department of Mechanical Science and Bioengineering, Japan
2. Kyoto Daigaku, Department of Mechanical Engineering and Science, Japan
3. Technische Universitat Darmstadt, Department of Materials and Earth Sciences, Germany

2:35 PM

(PACRIM-S09-015-2025) In situ visualization of crystallization interface in vertical Bridgman growth of fluoride crystals

Z. Zhang*[1]; L. Su[1]

1. Shanghai Institute of Ceramics Chinese Academy of Sciences, China

PACRIM Symposium 9 - Fundamentals of Space Charge

Room: Oxford

Session Chair: Sung-Yoon Chung, Korea Advanced Institute of Science and Technology

2:55 PM

(PACRIM-S09-016-2025) The role of grain boundary interfaces on the increased fracture toughness in transition metal carbides (Invited)

A. Stubbers[4]; S. Hossain[2]; E. Schwind[1]; O. A. Graeve[3]; C. R. Weinberger[2]; G. Thompson*[1]

1. University of Alabama, Metallurgical & Materials Engineering, USA
2. Colorado State University, Department of Mechanical Engineering, USA
3. University of California, San Diego, Mechanical and Aerospace Engineering, USA
4. Alabama Materials Institute, USA

3:25 PM

Break

3:40 PM

(PACRIM-S09-017-2025) Microstructure and chemical analysis of layer samples with Si-based polymer-derived ceramic nanocomposites (PDC-NCs) coatings

I. S. Nurak*[1]

1. Karlsruher Institut fur Technologie, IAM-WK, Germany

4:00 PM

(PACRIM-S09-018-2025) Microstructure analysis of Polycrystalline Monoclinic Zirconia

K. Yoo*[1]; J. Tam[2]; B. Feng[1]; S. Kondo[1]; K. Matsui[1]; N. Shibata[1]; Y. Ikuhara[1]

1. The University of Tokyo, Japan
2. University of Alberta, Canada

4:20 PM

(PACRIM-S09-019-2025) Strengthening and Toughening of Thin Film Materials Based on Micro/Nano-Structured Design (Invited)

K. Zhang*[1]

1. Jilin University, China

PacRim S11 - Optical and Electronic Phase Change Materials - Science and Application

PACRIM Symposium 11 - Optical and Electronic Phase Change Materials: Science and Application IV

Room: Georgia A

Session Chair: Wei Zhang, Xi'an Jiaotong University

1:15 PM

(PACRIM-S11-016-2025) Re-evaluation of calorimetry-based PCM fragility and crystal growth rate using measurements from synchronous in situ TEM and nanocalorimetry

I. McGieson[2]; T. Koledin[1]; K. Bustillo[4]; J. Ciston[4]; L. Ravi Narayan[3]; W. A. Osborn[3]; J. Pettibone[3]; F. Yi[3]; D. A. LaVan[3]; M. K. Santala*[1]

1. Oregon State University, Materials Science Program, USA
2. Oregon State University, Department of Physics, USA
3. National Institute of Standards and Technology, Materials Measurement Science Division, Materials Measurement Laboratory, USA
4. Molecular Foundry, Lawrence Berkeley National Laboratory, The National Center for Electron Microscopy, USA

1:35 PM

(PACRIM-S11-017-2025) Mapping Local Dielectric Behavior of Phase Change Material Sb_2S_3 by Scanning Probe Techniques

J. W. Kaman*[1]; E. J. Musterman[3]; H. Jain[2]; V. Dierolf[4]; N. Domingo-Marimon[5]; K. P. Kelley[5]

1. Iowa State University, Materials Science and Engineering, USA
2. Lehigh University, International Materials Institute for New Functionality in Glass, USA
3. Brookhaven National Laboratory, USA
4. Lehigh University, Physics, USA
5. Oak Ridge National Laboratory, USA

1:55 PM

(PACRIM-S11-018-2025) Prospect and Challenges of Solution-Derived Ge-Sb-Se-Te Phase-Change Chalcogenide Films (Invited)

M. Kang*[2]; R. Sharma[5]; D. Wiedeman[5]; Q. Altemose[1]; P. Lynch[2]; G. Sop Tagne[2]; Y. Zhang[3]; M. Shalaginov[3]; C. Constantin Popescu[3]; B. Triplett[4]; C. R. Baleine[4]; C. Schwarz[1]; A. M. Agarwal[3]; T. Gu[3]; J. Hu[3]; K. Richardson[5]

1. Ursinus College, USA
2. Alfred University, USA
3. Massachusetts Institute of Technology, USA
4. Lockheed Martin Corporation, USA
5. University of Central Florida, USA

PacRim S12 - Eng Ceramics and Ceramic Matrix Composites - Processing/Design/Applications

PACRIM Symposium 12 - Novel sintering and microstructure control I

Room: Plaza B

Session Chairs: Federico Smeacetto, Politecnico di Torino; Kexin Chen, University of Science and Technology Beijing

1:15 PM

(PACRIM-S12-013-2025) Ductile Ceramics from Dream to Reality (Invited)

K. Chen*[1]

1. University of Science and Technology Beijing, China

1:45 PM

(PACRIM-S12-014-2025) Large internal stress induced nonlinear current-voltage behavior in nanodiamond strengthened ZnO ceramics (Invited) *WITHDRAWN*

Y. Fan*[1]

1. Donghua University, China

2:15 PM

(PACRIM-S12-015-2025) In-situ liquid phase sintering of $MgAl_2O_4$ spinel ceramics by inhomogeneous addition of sintering additives (Invited)

H. Kim*[1]; Y. Park[1]; J. Ko[1]; H. Ma[1]; J. Lee[1]

1. Korea Institute of Materials Science, Republic of Korea

2:45 PM

(PACRIM-S12-016-2025) Double-tough ceramics

D. Giuntini*[1]

1. Eindhoven University of Technology, Mechanical Engineering, Netherlands

PACRIM Symposium 12 - Novel sintering and microstructure control II

Room: Plaza B

Session Chairs: Kexin Chen, University of Science and Technology Beijing; Federico Smeacetto, Politecnico di Torino

3:30 PM

(PACRIM-S12-017-2025) β-MoO_3 powder/whisker for medical radioactive isotope production (Invited)

H. Suematsu*[1]; Y. Yang[1]; M. Ngo[2]; T. Kitagawa[1]; Y. Fujita[3]; Y. Takahashi[4]; T. Nakayama[1]; T. Suzuki[5]; T. Do[1]; K. Niihara[6]

1. Nagaoka University of Technology, Extreme Energy-Density Research Institute, Japan
2. National Institute of Advanced Industrial Science and Technology (AIST), Multi-material Research Institute, Japan
3. Japan Atomic Energy Agency, Japan
4. Nagaoka University of Technology, Department of Materials Science and Engineering/ Bioengineering, Japan
5. Nagaoka University of Technology, Department of Nuclear Technology, Japan
6. Nagaoka Sutoku Daigaku, Japan

4:00 PM

(PACRIM-S12-018-2025) Integration of engineering ceramics for energy conversion and hydrogen technologies (Invited)

F. Smeacetto*[1]

1. Politecnico di Torino, Applied Science and Technology, Italy

PACRIM Symposium 12 - Novel sintering and microstructure control III

Room: Plaza B

Session Chairs: Federico Smeacetto, Politecnico di Torino; Kexin Chen, University of Science and Technology Beijing

4:30 PM

(PACRIM-S12-019-2025) Physics-based Machine Learning-Aided Design of Freeze-cast Si_3N_4-Si_2N_2O Scaffolds and its Enhancement on Properties of BAS-based Glass Ceramic

X. Liao*[1]; Z. Yang[1]; D. Jia[1]; Y. Zhou[1]

1. Harbin Institute of Technology, China

4:50 PM

(PACRIM-S12-020-2025) Engineering Flexible Ceramics: A Multilayered Approach

H. Yazdani Sarvestani*[1]; J. Patel[1]; E. Azad[1]; B. Ashrafi[1]

1. National Research Council Canada, Canada

5:10 PM

(PACRIM-S12-021-2025) Influence of the glass phase on the elastic properties and thermal conductivity of fireclay and high-alumina refractories

W. Pabst*[1]; E. Gregorova[2]

1. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czechia
2. UCT Prague, Department of Glass and Ceramics, Czechia

PacRim S13 - Functional Defects in Ceramic Materials

PACRIM Symposium 13 - Defects for energy, thermal, mechanical, and electronic applications I

Room: Grouse

Session Chair: Eric Gabriel, Boise State University

3:30 PM

(PACRIM-S13-001-2025) Electrochemical Modification of Anion Defects in Energy Functional Materials (Invited)

T. Nakamura*[1]; T. Katsumata[2]; Y. Kimura[2]; K. Amezawa[2]

1. Nagoya University, Institute of Materials and Systems for Sustainability, Japan
2. Tohoku University, Japan

4:00 PM

(PACRIM-S13-002-2025) Mechanochemical coupling in strained $SrFeO_x$ thin films (Invited)

Y. Du*[1]

1. Pacific Northwest National Laboratory, USA

4:30 PM

(PACRIM-S13-003-2025) Radiation-induced disorder and defects in epitaxial oxide thin films and heterostructures (Invited)

T. Kaspar*[1]

1. Pacific Northwest National Laboratory, Physical and Computational Sciences Directorate, USA

5:00 PM

(PACRIM-S13-004-2025) The role of chemical, polar and octahedral tilt disorder in high voltage/energy density ceramic ceramics (Invited)

I. M. Reaney*[1]

1. The University of Sheffield, School of Chemical, Materials and Biological Engineering, United Kingdom

PacRim S19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications

PACRIM Symposium 19 - Nanostructured Bioceramics and Ceramics for Biomedical Applications IV

Room: Stanley

Session Chairs: Eva Hemmer, University of Ottawa; Steven Naleway, University of Utah

1:15 PM

(PACRIM-S19-011-2025) Colorimetric Dye-Grafted Hydrogels As Platform for Chemical Sensors (Invited)

H. Chung*[1]

1. University of Alberta College of Natural and Applied Sciences, Chemical and Materials Engineering, Canada

1:45 PM

(PACRIM-S19-012-2025) Silver nanocluster-embedded ceramic coatings: Scalable Antimicrobial Coatings via Co-Sputtering (Invited)

C. Balagna[1]; A. Luceri[1]; S. Perero[1]; M. Ferraris*[1]

1. Politecnico di Torino, Department of Applied Science and Technology, Italy

2:15 PM

(PACRIM-S19-013-2025) Design and DLP 3D Printing of Biphasic Calcium Phosphate Scaffolds for Bone Regeneration

J. Chen[1]; M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

2:35 PM

(PACRIM-S19-014-2025) Nanostructured Metal Oxide Coatings for Antibacterial and Self-Cleaning Surfaces (Invited)

J. Cho*[1]

1. Binghamton University, Mechanical Engineering / Materials Science and Engineering, USA

PacRim S20 - Advanced Functional Materials for Clean Energy Solutions

PACRIM Symposium 20 - Adv synthesis, characterization and modeling of catalytic and energy storage materials

Room: Georgia A

Session Chairs: Sanjay Mathur, University of Cologne; Gunnar Westin, Uppsala University; Nicola Pinna, Humboldt University

3:30 PM

(PACRIM-S20-001-2025) Disordered versus ordered niobates as electrode materials for rechargeable batteries (Invited)

Y. Liu[1]; P. Russo[1]; N. Pinna*[1]

1. Humboldt-Universität zu Berlin, Department of Chemistry, Germany

4:00 PM

(PACRIM-S20-002-2025) Plasma-Enhanced Thin Films on Current Collectors for Safer Anode-Free Batteries

D. Patrun*[1]; B. Witulski[1]; Z. Aytuna[1]; T. Fischer[1]; Y. Yamada[3]; T. Sekino[2]; S. Mathur[1]

1. University of Cologne, Institute of Inorganic and Materials Chemistry, Germany
2. Osaka University, SANKEN (The Institute of Scientific and Industrial Research), Japan
3. Osaka University, SANKEN, Japan

4:20 PM

(PACRIM-S20-003-2025) Using synthetic design to control the electrochemical performance of electrode materials for sodium- and lithium-ion batteries (Invited)

A. Zambotti*[1]; Q. Nguyen[1]; B. Dunn[1]

1. University of California Los Angeles, Materials Science and Engineering, USA

4:50 PM

(PACRIM-S20-004-2025) Oxygen reaction activities in Li-ion battery cathodes materials studied through resonant inelastic soft x-ray spectroscopy (RIXS) (Invited)*WITHDRAWN*

Z. Zhuo*[1]; W. Yang[1]; J. Guo[1]

1. E O Lawrence Berkeley National Laboratory, Advanced Light Source, USA

5:20 PM

(PACRIM-S20-005-2025) Energy Challenges from a materials perspective (Invited)

F. Rosei*[1]

1. Universita degli Studi di Trieste, Department of Chemical and Pharmaceutical Sciences, Italy

PacRim S21 - Cultural Heritage of the Pacific Rim

PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim III

Room: English Bay

Session Chair: Christina Bisulca, Detroit Institute of Arts

1:15 PM

(PACRIM-S21-017-2025) Ancient Glazes in China

W. Li*[1]

1. Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

1:35 PM

(PACRIM-S21-018-2025) The first pottery from the last Ice Age in Hokkaido, Northern Japan

F. Iizuka*[1]; D. Natsuki[2]; M. Izuho[3]

1. University of Wisconsin-Madison, Anthropology, USA
2. University of Tokyo, Graduate School of Humanities and Sociology, Japan
3. Tokyo Metropolitan University, Faculty of Social Sciences and Humanities, Japan

1:55 PM

(PACRIM-S21-019-2025) A scientific study of ceramic bronze-casting molds from Bronze Age foundries in the Central Plain of China

Q. Wang*[1]

1. Shandong University, Institute of Cultural Heritage, China

2:15 PM

(PACRIM-S21-020-2025) The origin and early development of Chinese high-fired glaze- From Proto-porecelain to Celadon

X. Zhou*[3]; J. Cui[1]; T. Rehren[2]

1. Peking University, China
2. The Cyprus Institute, Cyprus
3. Hangzhou City University, China

2:35 PM

(PACRIM-S21-021-2025) Study of Faience in the Bronze Age Xinjiang, China: Origins, Transmission, and Localization

N. Liu*[1] *WITHDRAWN*

1. Chinese Academy of Social Sciences Institute of Archaeology, China

2:55 PM

(PACRIM-S21-022-2025) Reassessing the Circulation of Enamelled Objects between France and China: Technological, Cultural, and Diplomatic Interactions

X. Jiang*[1]

1. Peking University School of Archaeology and Museology, China

3:15 PM

Break

3:30 PM

(PACRIM-S21-025-2025) Simulation Experimental Study on the Transition from Proto-Porcelain to Celadon

J. Cui*[1]

1. Peking University, China

PacRim S23 - Advanced Processing and Manufacturing Technologies for Ceramics

PACRIM Symposium 23 - Novel forming technologies

Room: Georgia B

Session Chairs: Hidehiro Yoshida, The University of Tokyo; Yasuhiro Kodera, University of California, San Diego

1:15 PM

(PACRIM-S23-011-2025) Fabrication of Proton Conducting Membranes by Tape Casting and Additive Manufacturing (Invited)

W. A. Meulenberg*[1]; J. L. Wolter[1]; W. Deibert[1]; O. Guillon[1]; S. Gross-Barsnick[2]; I. Jevtovikj[3]; C. Mai[3]; M. Hassan[3]; S. Schunk[3]; A. Pelka[4]; D. Nikolay[4]

1. Forschungszentrum Julich GmbH, Institute of Energy Materials and Devices (IMD-2), Germany
2. Forschungszentrum Julich GmbH, Central Institute of Engineering (ZEA-1), Germany
3. hte GmbH, Germany
4. WZR ceramic solutions GmbH, Germany

1:55 PM

(PACRIM-S23-012-2025) Exploration of Novel Lead-free Halides Towards Optoelectronic Applications (Invited)

T. Zhou[1]; Y. Wang[1]; H. Chen*[1]

1. Donghua University, China

PACRIM Symposium 23 - Spark plasma sintering

Room: Georgia B

Session Chair: Haijie Chen, Donghua University

3:15 PM

Break

3:30 PM

(PACRIM-S23-015-2025) Obtaining non-conventional properties from conventional materials with far from equilibrium state via tailored powder-densification process (Invited)

Y. Kodera*[1]

1. Ryukoku Daigaku - Seta Campus, Materials Chemistry, Japan

4:00 PM

(PACRIM-S23-016-2025) High-Temperature Sintered Ceramic Electrolytes for Solid-State Batteries (Invited)

E. J. Cheng*[1]

1. Tohoku Daigaku, Japan

4:30 PM

(PACRIM-S23-017-2025) Revolutionizing Advanced Ceramics Manufacturing: Spark Plasma Sintering as a Low-Cost, Energy-Efficient Solution

C. Melnyk[1]; E. Eyerman*[1]

1. California Nanotechnologies, USA

PacRim S24 - Solid-State Optical Materials and Luminescence Properties

PACRIM Symposium 24 - Novel optical materials design and their properties II

Room: Prince of Wales

Session Chairs: Junichi Tatami, Yokohama National University; Shibin Jiang, AdValue Photonics Inc

1:15 PM

(PACRIM-S24-012-2025) Transparent tellurite ceramics obtained by full crystallization of glass (Invited)

S. Chenu*[1]; H. Benchorfi[2]; J. Cornette[1]; M. Dutreilh-Colas[3]; V. Couderc[4]; J. Duclere[1]; C. Genevois[5]; M. Allix[6]; G. Delaizir[1]

1. Institut de Recherche sur les Ceramiques, France
2. Université Laval, Chemistry, Canada
3. IRCER, France
4. XLIM, France
5. Conditions Extremes et Materiaux Haute Temperature et Irradiation, France
6. CNRS (CEMHTI), France

1:45 PM

(PACRIM-S24-013-2025) Crystal Structure and luminescence properties of yellow persistent $Ca_3Ta_{1.5}Ga_{3.5}O_{12}$ and red persistent $Ca_3Ta_{1.5}Ga_{3.5}O_{12}:Pr^{3+}$ phosphor

T. Onoe*[1]; Y. Tonogai[1]; M. Okamoto[1]; K. Murai[1]; T. Moriga[1]

1. Tokushima Daigaku, Japan

PACRIM Symposium 24 - Optical Materials

Room: Prince of Wales

Session Chair: Sébastien Chenu, Institut des Sciences Chimiques de Rennes

2:05 PM

(PACRIM-S24-014-2025) Rare earth-doped borogermanate glasses from electronic waste for advanced magneto-optical applications

D. F. Franco*[1]; A. Berno[1]; F. Caixeta[1]; S. J. Ribeiro[1]

1. São Paulo State University- UNESP, Institute of Chemistry, Brazil

2:25 PM

(PACRIM-S24-015-2025) Glasses and Optical Fibers Containing Tb^{3+} for Magneto-Optical Applications

T. A. Lodi*[1]; E. O. Ghezzi[1]; L. V. Albino[1]; D. F. Franco[1]; M. Nalin[1]

1. Universidade Estadual Paulista Julio de Mesquita Filho, Analytical, Physical and Inorganic Chemistry, Brazil

2:45 PM

(PACRIM-S24-016-2025) Development of novel NIR emission phosphor and their application

S. Kim*[1]; T. Kang[1]; B. Bae[2]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Republic of Korea
2. Yeongwol Industrial Promotion Agency, Republic of Korea

3:05 PM

Break

3:30 PM

(PACRIM-S24-017-2025) Tunable NIR luminescence in Bi-doped phosphosilicate fibers for optical amplifier applications

A. Cheriyathu Valappil*[1]; T. Meyneng[1]; J. Lefebvre[1]; P. Labranche[1]; S. LaRochelle[1]; Y. Messaddeq[1]

1. Université Laval, Optic-Photonic Pavillion, Canada

PacRim S27 - International Symposium of Fundamental and Frontier Sciences of Ceramics

PACRIM Symposium 27 - International Symposium of Fundamental and Frontier Sciences of Ceramics III

Room: Cypress

Session Chairs: Amanda Krause, Carnegie Mellon University; Rajendra Bordia, Clemson University

1:15 PM

(PACRIM-S27-013-2025) Current status and challenges in understanding room-temperature impact consolidation (RTIC) phenomena in the AD process (Invited)

J. Akedo*[1]

1. National Institute of Advanced Industrial Science and Technology Tsukuba, Sangyo Gijutsu Sogo Kenkyujo Tsukuba, Tsukuba, Ibaraki Prefecture, JP, academic/tech, Device Technology Research Institute, Japan

1:45 PM

(PACRIM-S27-014-2025) Using mechanochemistry to obtain sulfur-based glass-ceramics and ceramics for solid state electrolytes applications (Invited)

L. Verger*[1]; S. Chenu[1]; J. Zhang[1]; J. Trébosc[2]; O. Lafon[2]; V. Nazabal[1]; D. Le Coq[1]; L. Calvez[1]

1. University of Rennes, ISCR, France
2. Universite de Lille, France

2:15 PM

(PACRIM-S27-015-2025) Microcantilever Bending Tests Leading to Reliability Innovation in Ceramics (Invited)

J. Tatami*[1]

1. Yokohama National University, Japan

2:45 PM

(PACRIM-S27-016-2025) Lead-free ferroelectric ceramics for capacitive energy-storage applications (Invited)

J. Li*[1]

1. Tsinghua University, School of Materials Science and Engineering, China

3:15 PM

Break

3:30 PM

(PACRIM-S27-017-2025) New perspectives on grain boundary migration during grain growth (Invited)

G. Rohrer*[1]

1. Carnegie Mellon University, USA

4:00 PM

(PACRIM-S27-018-2025) Sintering Ceramics in Seconds: Ion Conductors for Solid State Batteries, Hydrogen Electrolyzers and Thermal Barrier Coatings (Invited)*WITHDRAWN*

L. Hu*[1]

1. Yale University, Electrical & Computer Engineering, USA

4:30 PM

(PACRIM-S27-019-2025) Production of high-temperature ceramics by flash sintering (Invited)

V. M. Sglavo*[1]

1. University of Trento, Italy

5:00 PM

(PACRIM-S27-020-2025) How Do Nanoscale Effects Alter Ceramic Phase Diagrams? (Invited)

R. Castro*[1]; K. Joshi[1]

1. Lehigh University, Material Science & Engineering, USA

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - Mechanical Properties

Room: Plaza A

Session Chairs: Mingwei Zhang, University of California Davis;

1:15 PM

(PACRIM-S29-012-2025) From High-Entropy Ceramics (HECs) to Compositionally Complex Ceramics (CCCs): A New Perspective (Invited)

J. Luo*[1]

1. University of California San Diego, USA

1:55 PM

(PACRIM-S29-013-2025) Status of FCC and BCC high-entropy alloys (Invited)

E. P. George*[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Department of Materials Science and Engineering, USA

2:35 PM

(PACRIM-S29-014-2025) Current Progress and Future Perspectives on High-Temperature Creep-Resistant Refractory High Entropy Alloys (Invited)

M. Zhang*[1]

1. University of California Davis, Materials Science and Engineering, USA

3:05 PM

Break

3:30 PM

(PACRIM-S29-041-2025) Exploring Non-Equimolar High-Entropy Diborides: From Atomic Structure to Mechanical and Thermodynamic Performance

I. Zhukova*[1]; D. Zagorac[2]; M. Tatarková[1]; B. Matovic[2]; P. Tatarko[1]

1. Slovak Academy of Sciences, Slovakia
2. Belgrade University, Serbia

PacRim S32 - Advanced Characterization, Testing, and Analysis of Materials

PACRIM Symposium 32 - Advanced Characterization, Testing, and Analysis of Materials II

Room: Seymour

Session Chair: Scott Misture, Alfred University

1:15 PM

(PACRIM-S32-005-2025) Advanced Characterization of Disorder: Insights into High Entropy and Amorphous Phases (Invited)

C. M. Rost*[2]; G. R. Bejger[2]; J. Barber[2]; B. Jiang[3]; K. Lam[4]; Y. Son[6]; G. Niculescu[1]; K. Holsgrove[5]; A. Kumar[5]; S. Trolier-McKinstry[6]; J. Ihlefeld[4]; K. L. Page[3]

1. James Madison University, Physics and Astronomy, USA
2. Virginia Polytechnic Institute and State University, Materials Science & Engineering, USA
3. The University of Tennessee Knoxville Tickle College of Engineering, USA
4. University of Virginia, USA
5. Queens University Belfast, United Kingdom
6. The Pennsylvania State University, USA

1:45 PM

(PACRIM-S32-006-2025) Radiation damage characterization of ion-irradiated high entropy ceramics

K. Wang*[1]; D. Chen[2]

1. Alfred University, USA
2. Idaho National Laboratory, USA

2:05 PM

(PACRIM-S32-007-2025) Glass goes DIGITAL – Digitalization of glass data through full automated screening

A. Diegeler*[1]

1. Fraunhofer ISC, Center of Device Development, Germany

2:25 PM

(PACRIM-S32-008-2025) Material Characterization of Mixed Glass-Former Sodium Germanophosphate Glasses

B. M. AlHasni*[1]

1. University of Technology and Applied Sciences, Oman

2:45 PM

(PACRIM-S32-009-2025) A structural characterization study of iron-bearing aluminosilicate mineral wool fibres upon heating under oxidizing conditions

K. H. Rasmussen*[1]; D. Okhrimenko[2]; L. Belmonte[2]; D. B. Ravnsbæk[3]; E. D. Bøjesen[1]

1. Aarhus Universitet, Interdisciplinary Nanoscience Center, Denmark
2. Rockwool International A/S, Denmark
3. Aarhus Universitet, Department of Chemistry, Denmark

3:05 PM

Break

3:30 PM

(PACRIM-S32-010-2025) Revisiting Optical Spectroscopy (Invited)

D. Möncke*[1]

1. Alfred University, Hall of Glass Science, Rm 100, USA

4:00 PM

(PACRIM-S32-011-2025) In-situ phase transformation in glasses followed by changes in the electrical properties measured using Electrochemical Impedance Spectroscopy (EIS) (Invited)

N. Elango[3]; M. Wlochal[2]; C. B. Bragatto*[1]

1. Alfred University, Engineering Department, USA
2. Coe College, USA
3. University of Minnesota Twin Cities, USA

4:30 PM

(PACRIM-S32-012-2025) Oxidation Behavior of Laser-assisted Chemical Vapor Deposited SiC Fibers (Invited)

M. Pavel[3]; K. L. Williams[2]; R. K. Goduguchinta[2]; J. Vervlied[2]; S. Harrison[2]; G. Thompson*[1]

1. University of Alabama, Metallurgical & Materials Engineering, USA
2. Free Form Fibers, USA
3. Alabama Materials Institute, USA

Poster Session

Room: Regency A- F

5:30 PM

(GOMD-P001G-2025) Relaxation Behavior of Sodium Aluminosilicate Glasses from Modulated Differential Scanning Calorimetry

B. M. Hauke*[1]; J. C. Mauro[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA

(GOMD-P002G-2025) Evaluation of mid-wave infrared dispersion properties of chalcogenide glass for GRIN applications

C. Kosan*[1]; S. Banker[1]; R. Sharma[1]; G. Sop Tagne[2]; M. Kang[2]; I. Mingareev[3]; Z. Xu[4]; J. Hu[4]; A. Howe[1]; B. A. Zerbe[5]; S. D. Campbell[5]; D. H. Werner[5]; K. Richardson[1]

1. University of Central Florida, CREOL, The College of Optics and Photonics, USA
2. Alfred University, New York State College of Ceramics, USA
3. Florida Institute of Technology, Department of Mechanical and Civil Engineering, USA
4. Massachusetts Institute of Technology, Department of Materials Science and Engineering, USA
5. The Pennsylvania State University, Materials Research Institute, USA

(GOMD-P003UG-2025) Steady-State Nucleation Rate vs Transient Nuelceation Rate*WITHDRAWN*

E. Manqueros*[1]; K. S. Ranasinghe[2]

1. Kennesaw State University, USA
2. Kennesaw State University, Physics, USA

(GOMD-P004G-2025) Chemical Strengthening Characteristics and Mechanical Properties of Sodium-Alumino borosilicate Glasses with Compositional Changes

J. Jang*[1]; K. Park[1]; W. Chung[1]

1. Kongju National University College of Engineering, Division of Advanced Materials Engineering, Republic of Korea

(GOMD-P005G-2025) Compositional Study on SiO_2-Al_2O_3-B_2O_3-Na_2O Glasses for Pharmaceutical Vial Applications

Y. Kim*[1]; W. Chung[1]

1. Kongju National University, Division of Advanced Materials Engineering, Republic of Korea

(GOMD-P006G-2025) Revealing Local Environment and Network Topology of ZrO_2-containing Mullite Glasses using Machine Learning Potential

R. Kayano*[1]; I. Sato[2]; A. Masuno[2]; T. Ohkubo[1]

1. Graduate School of Engineering, Chiba University, Japan
2. Kyoto Daigaku, Graduate School of Engineering, Japan

(GOMD-P007G-2025) Pressure-Induced Structural Transformations at Different Length Scales in Soda-Lime Silica Glasses

WITHDRAWN

A. Fadavi Firooz*[2]; S. Ganisetti[1]; L. Biscio[1]; M. M. Smedskjaer[2]

1. Aalborg Universitet, Department of Mathematical Sciences, Denmark
2. Aalborg University, Department of Chemistry and Bioscience, Denmark

(GOMD-P008UG-2025) Four-Coordinated Boron Pairs in Lithium Borate Glasses: Implications for the Borate Anomaly

E. Taniashvili*[1]; R. Welch[3]; S. Feller[2]; C. Wilkinson[3]

1. Alfred University, Inamori School of Engineering, USA
2. Coe College, Physics, USA
3. Alfred University, Glass Science, USA

(GOMD-P009UG-2025) Molecular Dynamics Simulation Study of Composition Effects on the Diffusion of Calcium–Magnesium–Aluminosilicate Glasses

S. Chang*[1]; C. Chang[1]; Y. Shih[1]

1. National Taipei University of Technology, Department of Materials and Mineral Resources Engineering, Taiwan

(GOMD-P010-2025) Transitions in silica glass studied by the novel High Temperature Scanning Indentation approach

S. Bruns*[1]; M. Sos[1]; K. Durst[1]

1. Technische Universitat Darmstadt, Physical Metallurgy, Germany

(GOMD-P012UG-2025) Scale-Up of a Hard and Crack-Resistant Glass

B. N. Wang*[1]; A. Goel[1]

1. Rutgers University New Brunswick, Materials Science & Engineering, USA

(GOMD-P013G-2025) Hydrothermally Treated Cesium Borosilicate Glass with Enhanced Crack Initiation Resistance and Indent Volume Recovery

E. J. Pedersen*[1]; L. R. Jensen[2]; M. M. Smedskjaer[1]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. Aalborg Universitet Institut for Materialer og Produktion, Denmark

(GOMD-P014G-2025) Intrinsic limitation of conductivity in depolymerized fast-ion glassy networks

L. Poitras*[1]; M. Micoulaut[1]

1. Sorbonne Universite, Physics, France

(GOMD-P015-2025) Tailoring Chalcogenide Glasses for Novel Applications

C. Lin*[1]

1. Laboratory of Infrared Materials and Devices, Research Institute of Advanced Technology, Ningbo University, China

(GOMD-P016UG-2025) Understanding Amorphous GeO_2 Nanoparticle Growth and Stability via Kinetics

A. Kayton*[1]; F. Lopez[1]; S. Cayo[1]; J. F. Destino[1]

1. Creighton University, Chemistry & Biochemistry, USA

(GOMD-P017G-2025) Impact of K and Mg on Nepheline Crystallization in High Level Waste Glasses

L. Saini*[1]; P. Malviya[1]; A. Goel[1]

1. Rutgers The State University of New Jersey, Material Science and Engineering, USA

(GOMD-P018G-2025) Bromine Addition to Sulfate-containing Hanford Site Low Activity Waste Alumino-Borosilicate Glasses

K. Rodman*[1]; J. Bussey[1]; J. McCloy[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA

(GOMD-P019G-2025) Terahertz Time Domain Spectroscopy of Cermets for Nuclear Waste Immobilization

K. Matthies*[1]; N. O. Marrero[1]; S. K. Sundaram[2]

1. Alfred University, USA
2. Alfred University, Inamori School of Engineering, USA

(GOMD-P020G-2025) Interionic Effects of F^- and PO_4^{3-} and Cation Preference in Simulant Direct-Feed High-Level (DF-HLW) Alumino-Borosilicate Glasses

R. Bergman*[1]; J. Bussey[1]; A. Azeddioui[1]; J. McCloy[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA

(GOMD-P021-2025) Selected transformation of dicalcium phosphate dihydrate (DCPD) to lead-substituted apatite for usage of stabilization of pollutants

E. Ishida*[1]; M. Tafu[1]; T. Toshima[1]; Y. Hata[2]; K. Nagano[2]; y. Hagino[2]

1. National Institute of Technology, Toyama College, Japan
2. Fudo Tetra Corp, Japan

(GOMD-P022G-2025) Effects of Rare-Earth Elements on Sulfur Solubility in Borosilicate Glasses for Nuclear Waste Immobilization

S. Kim*[1]; J. Cho[1]; J. McCloy[2]

1. Pohang University of Science and Technology(POSTECH), Division of Advanced Nuclear Engineering, Republic of Korea
2. Washington State University, School of Mechanical and Materials Engineering, USA

(GOMD-P023G-2025) Ultrafast Laser Welding and Characterization of Glasses and Welded Joints

K. Matthies*[1]; S. K. Sundaram[2]

1. Alfred University, USA
2. Alfred University, Inamori School of Engineering, USA

(GOMD-P024G-2025) Terahertz and optical properties of different oxide based glasses

H. Kaur*[1]; R. Puranik[2]; S. Prabhu[2]; S. Kaur[1]; N. Verma[1]; G. Sharma[1]

1. Kanya Maha Vidyalaya, Physics, India
2. Tata Institute of Fundamental Research, Department of Condensed Matter Physics and Material Science, India

(GOMD-P025-2025) Thermal conduction in sodium silicate glasses is governed modal phase changes

P. Rasmussen[1]; S. S. Sørensen*[1]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark

(GOMD-P026G-2025) The Impact of Anion Ratio on Defect Concentration and the Electrochemical Performance of Sodium Phosphosilicate Mixed Oxy-Sulfide Glass Electrolytes

K. M. Maier*[1]; N. Tader[1]; A. G. Wakefield[1]; S. W. Martin[1]

1. Iowa State University of Science and Technology, Materials Science & Engineering, USA

(GOMD-P027-2025) Precision structured glass for PV and other applications

W. Kuhn*[1]

1. Fives Stein, Glass Division, France

(GOMD-P028UG-2025) The Impact of Silicon Ejection on NaPSiSO Glassy Solid Electrolytes

N. Tader*[1]; K. M. Maier[2]; A. G. Wakefield[2]; S. W. Martin[2]

1. Iowa State University of Science and Technology, USA
2. Iowa State University, Materials Science and Engineering, USA

(GOMD-P029UG-2025) Analysis of structure-property relationships of LiPON doped glassy solid electrolytes (GSEs): 58 Li_2S + 42[(1-x) SiS_2 + (x) {(1-y) $LiPO_3$ + (y) LiPON}]

A. R. Carr*[1]; V. M. Torres[1]; S. W. Martin[1]

1. Iowa State University of Science and Technology, Materials Science and Engineering, USA

(GOMD-P030UG-2025) The Effect of LiCl Doping in the 50 Li_2S+45 SiS_2+5 $Li_{3.48}SiO_{3.74}$ Glass System

I. Schrooten*[1]; J. Lee[1]; C. Lyle[1]; S. W. Martin[1]

1. Iowa State University of Science and Technology, Materials Science and Engineering, USA

(GOMD-P031-2025) Advanced melting technology for low carbon footprint PV glass

W. Kuhn*[1]

1. Fives Stein, Glass division, France

(GOMD-P032UG-2025) Glass-refractory interactions with industrial scaleup of LionGlass

E. Aichele*[1]; N. Clark[1]; J. C. Mauro[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA

(GOMD-P033-2025) Decarbonized glass melting with high TRL tank technology

W. Kuhn*[1]

1. Fives Stein, Glass division, France

(GOMD-P034-2025) Create low-carbon limes from unused alkaline in washing drainage of returnable glass bottles

M. Tafu*[1]; T. Toshima[1]; T. Tobe[2]; N. Tobe[3]

1. National Institute of Technology, Toyama Cllege, Japan
2. Ecoma Inc., Japan
3. Tobe Shoji Co. Ltd., Japan

(GOMD-P035UG-2025) Thermal Treatment and Structural Evolution of Hybrid Glass Materials Derived from Nanoparticles

J. Chou*[1]; R. M. Vires[1]; R. M. Wayne[1]; S. Garapati[1]; L. O'Keefe[1]; M. Murthi[1]; J. F. Destino[1]

1. Creighton University, Chemistry & Biochemistry, USA

(GOMD-P036UG-2025) Effects of Particle Size and Surface Chemistry on Direct Ink Write Glass Printing

N. Tobin*[1]; J. Chou[1]; M. Murthi[1]; J. F. Destino[1]

1. Creighton University, Chemistry & Biochemistry, USA

(GOMD-P037-2025) Literature Review on High Temperature Glass-Ceramic Sealant Research

E. I. DeSantis*[1]

1. USA

(GOMD-P038G-2025) Insights into the dissolution of boroaluminosilicate glasses using solid-state NMR

M. Brytskyi*[1]; K. Penner[1]; S. Kroeker[1]

1. University of Manitoba, Chemistry, Canada

(GOMD-P039G-2025) Understanding the optical and photoelastic properties of lanthanum borate glasses through spectroscopic investigation

A. Farrant*[1]; L. Farr[1]; S. Molloy[1]; J. Zwanziger[2]

1. Dalhousie University, Chemistry, Canada
2. Dalhousie University, Physics and Atmospheric Sciences, Canada

(GOMD-P040G-2025) Structural disorder in Pb- and Zn-bearing silicate glasses: A view from multi-nuclear solid-state NMR spectroscopy

S. Lee*[1]; S. Lee[1]

1. Seoul National University, Republic of Korea

(GOMD-P041UG-2025) NMR studies of borosilicate glass alteration related to long-term nuclear waste immobilization

K. Penner*[1]; M. Brytskyi[1]; S. Kroeker[1]

1. University of Manitoba, Chemistry, Canada

(PACRIM-P001-2025) Development of a Wide-Bandgap Semiconductor Materials Hub Using Process Informatics and AI Technologies

S. Jeong*[1]

1. Korea Institute of Ceramic Engineering and Technology, Semiconductor Materials Center, Republic of Korea

(PACRIM-P002-2025) Sonochemically assisted solid-state synthesis of $BaZrO_3$ powder

M. Jang[1]; G. Lee[1]; W. Chung[1]; G. Lee[1]; Y. Lim*[1]

1. Pukyong National University, Republic of Korea

(PACRIM-P003-2025) Hydrogen separation and boosting technology using Protonic Ceramic Electrochemical Reactor

M. Mori*[1]; S. Kobayashi[1]; H. Shimada[2]; M. Fujioka[2]; J. Otomo[3]

1. Denryoku Chuo Kenkyujo, Energy Transformation Research Laboratory, Japan
2. National Institute of Advanced Industrial Science and Technology (AIST), Japan
3. Institute of Science Tokyo, Department of Transdisciplinary Science and Engineering, School of Environment and Society, Japan

(PACRIM-P004-2025) Inkjet printing of polysilazane and molybdenum disilicide nanoparticles ceramic coatings for high-temperature applications

A. Qazzazie-Hauser*[2]; J. Kraemer[2]; K. Honnef[2]; T. Hanemann[1]

1. Karlsruher Institut fur Technologie, Institute for Applied Materials IAM-WK, Germany
2. Albert-Ludwigs-Universitat Freiburg Institut fur Mikrosystemtechnik, Laboratory for Materials Processing, Germany

(PACRIM-P005-2025) Investigation on oxidation behavior of nearly stoichiometric polycrystalline SiC-ZrB_2 fibers doped with ytterbium

Q. Sun[1]; H. Zhang*[2]; M. Ge[2]; S. Yu[2]

1. University of Science and Technology of China, China
2. Institute of Process Engineering Chinese Academy of Sciences, China

(PACRIM-P007-2025) Structural characterization of materials for Digital Light Processing of silicon oxycarbide ceramics

J. Marchewka*[1]; P. Jelen[1]; M. T. Sitarz[1]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Poland

(PACRIM-P008-2025) Structural and functional studies of bioactive PDC layers based on SiMeOC system

M. T. Sitarz*[1]; W. Wieczorek[1]; J. Marchewka[1]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Poland

(PACRIM-P010-2025) Direct Ink Writing for the fabrication of the geopolymer-based components

W. Mozgawa*[1]; J. Kedzierska[1]; M. Krol[1]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Poland

(PACRIM-P011-2025) Characterization of Low Dielectric Properties of Borosilicate fiber glasses for PCB application at a high frequency of 15 GHz

J. Lee*[1]; J. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Republic of Korea

(PACRIM-P012-2025) Nanowire-Bundled Grain Boundaries in $Bi_{0.4}Sb_{1.6}Te_3$ Thermoelectric Materials

G. Park[1]; J. Kim*[1]; S. Baek[2]; S. Kim[1]

1. Korea Institute of Science and Technology, KU-KIST Graduate School of Converging Science and Technology, Republic of Korea
2. Korea Institute of Science and Technology, Republic of Korea

(PACRIM-P013-2025) How PCSA Supports STEM Outreach with Mini Materials Demo Kits

B. M. Hauke*[1]; A. Bossen[1]; N. McIlwaine[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA

(PACRIM-P014-2025) Fabrication of Ce-Based Defective Oxide Thin Films via Spray Pyrolysis for Electrostriction Application

S. Molin*[1]; M. Mehdizade[1]

1. Gdansk University of Technology, Laboratory of Functional Materials, Faculty of Electronics, Telecommunications and Informatics, Poland

(PACRIM-P015UG-2025) Characterization of ammonia gas adsorption property on various calcium phosphate particles

M. Shimada*[1]; M. Tafu[1]; I. Kanahara[1]; N. Okajima[2]; H. Tsukamoto[2]; Y. Morioka[2]; T. Nakagawa[3]; T. Kawai[4]

1. National Institute of Technology, Toyama College, Japan
2. Nitta Gelatin Inc., Japan
3. University of Ryukyus, Faculty of Science, Japan
4. Yamagata University, Japan

(PACRIM-P016-2025) Development and characterization of oxide-carbide ceramic composites for cutting applications

A. Letocha*[1]; P. Klimczyk[1]; M. Podsiadlo[1]; J. Laszkiewicz-Lukasik[1]

1. Siec Badawcza Lukasiewicz - Krakowski Instytut Technologiczny, Centre of Materials and Manufacturing Technologies, Poland

(PACRIM-P017G-2025) Grain design strategy for 3D-printed strong and tough textured ceramics

Z. Ma*[1]

1. Nanyang Technological University, Singapore

(PACRIM-P018-2025) SPS reactive sintering technology in the production of ultra high temperature borides

J. Laszkiewicz-Lukasik*[1]; M. Podsiadlo[1]; P. Putyra[1]

1. Siec Badawcza Lukasiewicz - Krakowski Instytut Technologiczny, Poland

(PACRIM-P019-2025) Temperature dependence and thermal cycling behavior of elastic properties of fireclay and high-alumina refractories determined by impulse excitation

E. Gregorova*[1]; W. Pabst[2]

1. UCT Prague, Department of Glass and Ceramics, Czechia
2. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czechia

(PACRIM-P020G-2025) Activation of volcanic ash as support for FeO_x gliding arc plasma deposition and application in the catalytic oxidation of Rhodamine 6G

M. M. Pitap*[1]

1. Universite de Yaounde I, Chimie Inorganique, Cameroon

(PACRIM-P021G-2025) Reinterpreting Portuguese Traditional Red Clay Works with Binder Jetting

I. F. Castro*[1]; J. Luís[1]; M. Oliveira[1]; A. J. Gomes[1]

1. School of Design, Management and Production Technologies Northern Aveiro (ESAN), Portugal

(PACRIM-P022-2025) Utilization of radiation technique for synthesis of oxygen-deficient TiO_2 nanoparticles

A. Idesaki*[1]; S. Yamamoto[1]

1. National Institutes for Quantum Science and Technology, Takasaki Institute for Advanced Quantum Science, Japan

(PACRIM-P024-2025) Preparation and Mechanical Properties of Glass-Ceramic Composites with Controlled Amounts of Leucite for Dental Applications

A. Klouzkova*[1]; M. Kolárová[1]; J. Kralikova[1]

1. Institute of Chemical Technology, Department of Glass and Ceramics, Czechia

(PACRIM-P025-2025) New Hydrogel and 3D Printing of Highly Resilient Scaffolds for Esophagus Regeneration

Y. Li[1]; M. Wang*[1]

1. The University of Hong Kong, Department of Mechanical Engineering, Hong Kong

(PACRIM-P026-2025) Advancing Low-Humidity Operation in PEMFCs via Membrane Surface Modification

T. Kim*[1]

1. Korea Institute of Industrial Technology, Republic of Korea

(PACRIM-P027G-2025) Study on the Aging Effects of Different Relative Humidity on the Properties of Palm Leaf Manuscripts

W. Zhang*[1]; S. Wang[2]; H. Guo[1]

1. University of Science and Technology Beijing, Institute of Cultural Heritage and History of Science & Technology, China
2. Chinese Academy of Cultural Heritage, China

(PACRIM-P028G-2025) Southeast Asian Origins of Gold-in-Glass Beads from the Luobucuo Lake Site, Tibet: Evidence of Early Maritime Trade between China and Southeast Asia

A. Chen*[1]; J. Cui[2]

1. Peking University, School of Archaeology and Museology, China
2. Peking University, China

(PACRIM-P029-2025) Multiphased Al_2O_3-YAG fiber: influence of seeding material and thermal treatment

F. Vergnaud[1]; P. Thomas[1]; G. Delaizir[1]; J. Jouin[1]; S. Bernard*[1]

1. CNRS, IRCER, France

(PACRIM-P030-2025) Near-infrared luminescence enhancement in Nd^{3+} and Er^{3+} doped telluride glasses co-doped with Cr^{3+} ions

R. Yatskiv*[1]; P. Kostka[2]

1. Ustav fotoniky a elektroniky Akademie ved Ceske republiky, Czechia
2. Ustav struktury a mechaniky hornin Akademie ved Ceske republiky, Czechia

(PACRIM-P031-2025) Optimization of Optical and Electrical Properties of Doped ZnO Thin Films Using Machine Learning Models for Advanced Optoelectronic Applications

I. Niang*[1]

1. Universite Cheikh Anta Diop de Dakar, Physique, Senegal

(PACRIM-P032-2025) Effect of B_2O_3, CaO, and Fe_2O_3 on the solubility of Cr_2O_3 in high-level waste glasses

V. Gervasio*[1]; X. Lu[1]; N. Bontha[1]; T. Jin[1]; J. V. Crum[1]; N. Lumetta[1]; D. Cutforth[1]; M. Torres[1]; P. Metheny[1]; T. Droubay[1]; B. J. Riley[1]; A. A. Kruger[2]; J. Vienna[1]

1. Pacific Northwest National Laboratory, USA
2. US Department of Energy, Hanford Field Office, USA

(PACRIM-P033-2025) Fabrication Process of SiC Matrix Fuel Compacts for High Temperature Gas-Cooled Reactors by Reaction Sintering and Their Properties

K. Yoshida*[1]; Y. Fukaya[2]; M. Goto[3]; H. Abe[4]; K. Okamoto[4]

1. Institute of Science Tokyo, Japan
2. Japan Atomic Energy Agency (JAEA), Japan
3. University of Fukui, Japan
4. The University of Tokyo, Japan

(PACRIM-P034G-2025) Solid State Reduction of Oxide Mixtures to Achieve HIgh Entorpy Alloys: Microstructural Development and Mechanisms

W. Jin*[1]; J. McArdle[2]; M. Watson[2]; G. Balasubramanian[3]; A. Kundu[4]; H. M. Chan[1]

1. Lehigh University P C Rossin College of Engineering and Applied Science, Materials Science & Engineering, USA
2. University of Canterbury, Chemical and Process Engineering, New Zealand
3. University of New Haven, Mechanical Engineering, USA
4. Lehigh University, Mechanical Engineering & Mechanics, USA

(PACRIM-P035-2025) Thermodynamic prediction and experimental verification of oxide formation and its effect on oxidation behaviors in Al–Mg and Al–Mg–Si alloys

Y. Yoon*[1]; N. Kim[1]; S. Ha[1]; B. Kim[1]; H. Lim[1]; S. Kim[1]

1. Korea Institute of Industrial Technology, Republic of Korea

(PACRIM-P036-2025) Influence of Metal Sulfide Precursors on Enhancing Sulfur Tolerance in NH_3-SCR Catalysts

B. Ye*[1]; H. Kim[1]

1. Korea Institute of Industrial Technology, Republic of Korea

(PACRIM-P037G-2025) In situ X-ray tomographic analysis of terracotta sketches at the Museum Gypsotheca Antonio Canova in Italy

J. Wang*[1]

1. Universita degli Studi di Bologna, Italy

(PACRIM-P038UG-2025) Impact of Processing Parameters on Si Contamination in Oxy-Sulfide GSE: Comparative Analysis of Silicon Contaminated vs. Noncontaminated Glass***WITHDRAWN***

J. Lee*[1]; I. Schrooten[2]; W. Fettkether[2]

1. Iowa State University of Science and Technology, USA
2. Iowa State University of Science and Technology, Materials Science and Engineering, USA

(PACRIM-P039-2025) Impedance spectroscopy studies on diamond-based nanomaterials and nanostructures

R. Zhang[1]; N. Peng[2]; H. Ye*[1]

1. University of Leicester, School of Engineering, United Kingdom
2. University of Surrey, Surrey Ion Beam Centre, United Kingdom

(PACRIM-P040-2025) Carbon Quantum Dots from rice husk for Sustainable Antibacterial Coatings

S. C. Amaral*[1]; A. Ciccone[2]; R. E. Galian[2]; J. Pérez-Prieto[2]; J. P. Sousa[1]

1. International Iberian Nanotechnology Laboratory, Portugal
2. Universitat de Valencia, Instituto de Ciencia Molecular (ICMOL), Spain

(PACRIM-P041UG-2025) Compositional Exploration of the Li_2S + SiS_2 Glass System for Use in Glassy Solid-State Electrolytes

H. Cochran*[1]; S. J. Leland[1]; S. W. Martin[1]

1. Iowa State University of Science and Technology, Materials Science and Engineering, USA

(PACRIM-P042G-2025) Investigating Femtosecond Laser Processing of Silica Sand: Crystallization and Impurity Removal

A. Naim*[1]

1. University of California Davis, Materials Science and Engineering, USA

(PACRIM-P043G-2025) In-situ local probing of domain structures under an applied bias in multi-layered ceramic capacitors

J. Shim*[2]; W. Kim[2]; c. Jeon[1]; s. lee[1]; Y. Shin[1]; S. Kim[2]; Y. Kim[2]***WITHDRAWN***

1. Samsung Electromechanics Research and Development Center, Republic of Korea
2. Sungkyunkwan University College of Engineering, Republic of Korea

(PACRIM-P044-2025) Plasma-Treated Nitrogen-Doped Carbon-Supported Pd catalysts for Hydrogen Storage in N-Methylindole

Y. Kim*[1]; J. Kim[1]; D. Lee[1]; M. Lee[1]

1. Korea Institute of Industrial Technology, Republic of Korea

Wednesday, May 7, 2025

PacRim S3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies

PACRIM Symposium 3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies I

Room: English Bay

Session Chairs: Hiroyuki Shimada, National Institute of Advanced Industrial Science and Technology (AIST); Sebastian Molin, Gdansk University of Technology

10:20 AM

(PACRIM-S03-001-2025) Protective-conducting composite coatings for SOFC steel interconnects (Invited)

T. Brylewski*[1]; K. Domaradzki[1]; L. Mazur[1]; M. Zajusz[1]; M. Bik[1]; P. Winiarski[1]

1. AGH University of Krakow, Faculty of Materials Science and Ceramics, Poland

10:50 AM

(PACRIM-S03-002-2025) Spray pyrolysis of interconnect protective coatings: processing and properties

S. Molin*[1]; M. Mehdizade[1]

1. Politechnika Gdanska Wydzial Elektroniki Telekomunikacji i Informatyki, Department of Functional Materials Engineering, Poland

11:10 AM

(PACRIM-S03-003-2025) Tailoring NiCoMn materials for optimal HER performance

C. M. Freitas*[1]; J. P. Sousa[2]

1. INL - International Iberian Nanotechnology Laboratory, Kolen'ko Group, Portugal
2. International Iberian Nanotechnology Laboratory, Portugal

11:30 AM

(PACRIM-S03-004-2025) Clean Hydrogen Technologies: Utilization of Ceramics in Production, Distribution and End-Use (Invited)

F. Dogan*[1]

1. Missouri University of Science and Technology, Dept. of Materials Science and Engineering, USA

PacRim S4 - Polymer-Derived Ceramics/ Composites/Nanocomposites as Functional Inorganic Materials

PACRIM Symposium 4 - Preceramic polymer chemistry-Structural, chemical and thermal transformations

Room: Plaza C

Session Chair: Aitana Tamayo, Institute of Ceramics and Glass, CSIC

8:00 AM

(PACRIM-S04-024-2025) Development of Processable Polymer Derived Ultra-High Temperature and Compositionally Complex Ceramics and Composites (Invited)

T. Pruyn*[1]; J. Delcamp[1]; M. B. Dickerson[1]

1. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

8:30 AM

(PACRIM-S04-025-2025) Novel oxygen-free precursors for Hf-based ultra-high temperature ceramics and composites

Y. Wu*[1]; W. Han[1]; T. Zhao[1]

1. Institute of Chemistry, Chinese Academy of Sciences, China

8:50 AM

(PACRIM-S04-026-2025) Development of Tailored Polymeric Precursors for Advanced UHTC Fabrication via the PIP Method

J. So*[1]; K. Lee[1]; S. kim[1]; S. Lee[1]

1. Korea Institute of Materials Science, Republic of Korea

9:10 AM

(PACRIM-S04-027-2025) High-pressure synthesis, mechanical properties and oxidation behavior of polymer-derived boron-containing α/β-Si_3N_4/Si ceramics

W. Li*[1]

1. The University of Alabama at Birmingham, Department of Mechanical and Materials Engineering, USA

PACRIM Symposium 4 - Forming technologies of preceramic polymers including 3D-printing

Room: Plaza C

Session Chair: Shotaro Tada, Nagoya Institute of Technology

9:30 AM

(PACRIM-S04-028-2025) Formulation of Preceramic Polymers for Photocuring and 3D Printing (Invited)

H. Yazdani Sarvestani[1]; T. Lacelle[3]; A. Kulkarni[1]; Y. Martinez-Rubi[3]; A. Robitaille[2]; B. Ashrafi[1]; M. Jakubinek*[3]

1. National Research Council Canada, Aerospace, Canada
2. Defence Research and Development Canada, Valcartier Research Centre, Canada
3. National Research Council Canada, Division of Emerging Technologies, Canada

10:00 AM

(PACRIM-S04-029-2025) Characterization of shaped articles made from polycarbosilane and their deformation characteristics during heat treatment

D. Shin*[1]; Y. Lee[2]

1. Korea Institute of Ceramic Engineering and Technology, Emerging Materials R&D Division, Republic of Korea
2. Korea Institute of Ceramic Engineering and Technology, Republic of Korea

10:20 AM

(PACRIM-S04-030-2025) Preparation and Processing of Silicon based Polymer-Derived Ceramic Precursors

Y. Lu*[1]; H. Chen[1]; X. Hu[1]

1. Nanyang Technological University, Singapore

PacRim S6 - Dielectric Ceramics for Microwave and Submillimeter-Wave Applications

PACRIM Symposium 6 - Materials for Microwave and Millimeter-Wave Applications

Room: Balmoral

Session Chairs: Michael Lanagan, Penn State University; Rick Ubic, Boise State University

8:00 AM

(PACRIM-S06-020-2025) The Structure and Microwave Properties of $Mg_4Nb_2O_9$ Ceramic with addition $SrTiO_3$

C. Lei*[1]; Y. Chen[1]; Y. Wu[2]; K. Feng[3]

1. Chinese Culture University, Department of Chemical & Materials Engineering, Taiwan
2. National Taipei University of Technology, Department of Materials and Mineral Resources Engineering, Taiwan
3. Ming Chi University of Technology, Department of Mechanical Engineering, Taiwan

8:20 AM

(PACRIM-S06-021-2025) Oxygen deviation drives the formation of 1:1 ordering in $Ba(Mg_{1/3}Nb_{2/3})O_3$ Ceramics revealed by iDPC-STEM

L. Zhang*[1]; M. Fu[2]

1. Northwestern Polytechnical University, Materials Science and Engineering, China
2. Northwestern Polytechnical University, China

8:40 AM

(PACRIM-S06-022-2025) High Tunability and Low Loss in Layered Perovskite Dielectrics through Intrinsic Elimination of Oxygen Vacancies

H. Zhang*[1]; H. Gidden[1]; T. Saunders[1]; N. Liu[1]; V. Aurallo-Peters[2]; X. Xu[3]; M. Palma[3]; M. Reece[2]; I. Abrahams[3]; H. Yan[2]; Y. Hao[1]

1. Queen Mary University of London, School of Electronic Engineering and Computer Science, United Kingdom
2. Queen Mary University of London, School of Engineering and Materials Science, United Kingdom
3. Queen Mary University of London Faculty of Science and Engineering, United Kingdom

9:00 AM

(PACRIM-S06-023-2025) Observation of high out-of-plane tunability and low loss in Ruddlesden-Popper phase films

V. St. George*[2]; F. Bergmann[2]; M. Barone[1]; A. Ross[4]; Z. Tian[3]; S. Freed[2]; M. Papac[2]; D. Schlom[1]; N. Orloff[2]

1. Cornell University, Department of Materials Science and Engineering, USA
2. NIST, Communications Technology Laboratory, USA
3. University of California, Berkeley, USA
4. The Pennsylvania State University, USA

PACRIM Symposium 6 - Domain Structures/ Engineering

Room: Balmoral

Session Chairs: Rick Ubic, Boise State University; Michael Lanagan, Penn State University

10:20 AM

(PACRIM-S06-024-2025) Domain interface structure analysis and dielectric properties regulation of non-stoichiometric $Ba(Mg_{1/3+x}Nb_{2/3})O_{3+x}$ microwave dielectric ceramics

Y. Liu*[1]; M. Fu[1]; X. Ma[1]

1. Northwestern Polytechnical University, China

10:40 AM

(PACRIM-S06-025-2025) Determination of Domain Structures in Ca-based Perovskite Ceramics with Pseudo-cubic Structure

X. Ma*[1]

1. Northwestern Polytechnical University, China

11:00 AM

(PACRIM-S06-026-2025) Effect of microstructure and microwave dielectric properties in nonstoichiometric 1:1 ordered $Nd(Mg_{1/2+x}Ti_{1/2})O_{3+x}$ perovskite ceramics

M. Fu*[1]

1. Northwestern Polytechnical University, China

PacRim S12 - Eng Ceramics and Ceramic Matrix Composites - Processing/Design/ Applications

PACRIM Symposium 12 - Novel sintering and microstructure control IV

Room: Plaza B

Session Chair: Kevin Plucknett, Dalhousie University

8:00 AM

(PACRIM-S12-022-2025) Micromechanical characterization of room-temperature plasticity in oxide ceramics (Invited)

H. Masuda*[1]

1. The University of Tokyo, Department of Materials Engineering, Japan

PACRIM Symposium 12 - Novel sintering and microstructure control V

Room: Plaza B

Session Chair: Kevin Plucknett, Dalhousie University

8:30 AM

(PACRIM-S12-023-2025) Elucidation of initial low-temperature degradation mechanism of 3 mol% Y_2O_3 stabilized ZrO_2 ceramics by using microcantilever bending tests (Invited)

T. Takahashi*[1]; K. Niregi[1]; t. yahagi[1]; T. Ohji[3]; J. Tatami[2]

1. Chiho Dokuritsu Gyosei Hojin Kanagawa Kenritsu Sangyo Gijutsu Sogo Kenkyujo, Japan
2. Yokohama National University, Japan
3. Yokohama Kokuritsu Daigaku, Japan

PACRIM Symposium 12 - Novel sintering and microstructure control VI

Room: Plaza B

Session Chair: Kevin Plucknett, Dalhousie University

9:00 AM

(PACRIM-S12-024-2025) Process Parameter Effects on the Wear Response of Al_2O_3 Ceramics Produced Using Digital Light Projection Additive Manufacturing (Invited)

A. David[1]; G. Boubnova[1]; M. Amegadzie[1]; K. P. Plucknett*[1]

1. Dalhousie University, Mechanical Engineering, Canada

9:30 AM

(PACRIM-S12-025-2025) Tribological behavior of plasma sprayed bimodal microstructured Al_2O_3-YSZ -CNT composite coatings

S. Ponnapureddy*[1]; A. Kumar[2]; M. k. Singh[2]; K. Balani[1] ***WITHDRAWN***

1. Indian Institute of Technology Kanpur, Materials Science and Engineering, India
2. Indian Institute of Technology Kanpur, Mechanical Engineering, India

9:50 AM

(PACRIM-S12-033-2025) Thermal Conductivity Measurement of Heat-Dissipating Filler Particles Using Frequency-Domain Thermoreflectance Microscopy

T. Uchiyama*[1]; S. Yabumoto[1]; D. Hayashi[1]; T. Ota[1]

1. ScienceEdge Inc., Japan

10:10 AM

(PACRIM-S12-034-2025) Development of Solid-State Li-ion and Metal-Air Batteries (Invited)

R. Liu*[1]

1. National Taiwan University, Department of Chemistry, Taiwan

10:40 AM

(PACRIM-S12-035-2025) A new, affordable clay-based ceramic membrane for oil-water emulsion separation

Y. Manawi*[1]

1. Hamad Bin Khalifa University Qatar Environment & Energy Research Institute, Qatar

PacRim S13 - Functional Defects in Ceramic Materials

PACRIM Symposium 13 - Characterization and applications of defect-induced emergent phenomena

Room: Grouse

Session Chair: Candace Chan, Arizona State University

8:30 AM

(PACRIM-S13-005-2025) Effect of rare earth oxides on the thermal stability of $Mn_{0.76}Fe_{0.87}Co_{1.07}Zn_{0.3}O_4$ NTC ceramics under high temperature nitrogen atmosphere (Invited)

S. Liang*[1]

1. Ningxia University, China

9:00 AM

(PACRIM-S13-006-2025) Functional Defects in Advanced Ceramics Fabricated by Selective Laser Sintering (Invited)

B. Cui*[1]; L. Trinh[1]; X. Zhang[1]; F. Wang[1]; L. Wadle[1]; H. Dong[1]; Y. Lu[1]

1. University of Nebraska-Lincoln, USA

PACRIM Symposium 13 - Defects for energy, thermal, mechanical, and electronic applications II

Room: Grouse

Session Chair: Munekazu Motoyama, Kyushu University, Kyushu Daigaku, Fukuoka, Fukuoka Prefecture, JP, academic

10:20 AM

(PACRIM-S13-007-2025) The effect of light illumination on the dislocation behavior in inorganic semiconductors (Invited)

A. Nakamura*[1]

1. Osaka Daigaku, Department of Mechanical Science and Bioengineering, Japan

10:50 AM

(PACRIM-S13-008-2025) Photo-plasticity of semicondutors: Controlling dislocation motion using illumination

Y. Zou*[1]

1. University of Toronto, Canada

11:10 AM

(PACRIM-S13-009-2025) Ceramic coating for passive daytime radiative cooling applications

K. Banerjee*[1]; Z. Wu[1]; Y. Tang[1]; H. Wang[1]; H. Yan[1]

1. Queen Mary University of London, School of Engineering and Materials Science, United Kingdom

PacRim S14 - Advanced Structural Ceramics and CMCs for Ultra Extreme Environments

PACRIM Symposium 14 - Advanced Structural Ceramics and CMCs for Ultra Extreme I

Room: Cypress

Session Chairs: Theresa Davey, Bangor University; Samuel Humphry-Baker, Imperial College London

10:20 AM

(PACRIM-S14-001-2025) Crystal plasticity and strengthening of rock salt carbides from the atomic level to the micro-scale (Invited)

T. Csanádi*[1]; J. Koltai[2]; Z. Dankházi[2]; Y. Ravikumar[1]; A. Kovalčíková[1]; M. Reece[3]

1. Institute of Materials Research, Slovak Academy of Sciences, Slovakia
2. Eotvos Lorand Tudomanyegyetem Termeszettudomanyi Kar, Hungary
3. Queen Mary University of London, School of Engineering and Materials Science, United Kingdom

10:50 AM

(PACRIM-S14-002-2025) Developing Anisotropic Microstructures in UHTCs for New Thermal Protection Systems (Invited)

C. Tallon*[1]

1. Virginia Polytechnic Institute and State University, Materials Science and Engineering, USA

PacRim S15 - Porous Ceramics - From Innovative Processing to Advanced Industrial applications

PACRIM Symposium 15 - Porous Ceramics: From Innovative Processing to Advanced Industrial applications II

Room: Seymour

Session Chair: Tobias Fey, Friedrich-Alexander University Erlangen-Nürnberg

8:00 AM

(PACRIM-S15-003-2025) Composite materials with cross-scale cellular and porous structure and their application in heat conversion processes (Invited)

F. Scheffler*[1]; U. Betke[2]; M. Scheffler[2]

1. Otto-von-Guericke-Universitat Magdeburg, Inst for Chemistry, Germany
2. University of Magdeburg, Inst for Materials and Joining Technology, Germany

8:30 AM

(PACRIM-S15-004-2025) From Timeless Japanese Wood Joinery to Advanced Ceramic Joint Interlocking

P. Hoffmann*[1]; L. Wahl[1]; S. Funk[1]; T. Fey[2]

1. FAU Erlangen-Nürnberg, Institute of Glass and Ceramics, Germany
2. Friedrich-Alexander University Erlangen-Nürnberg, Department Material Science and Engineering, Germany

8:50 AM

(PACRIM-S15-005-2025) Combination of Freeze Casting and Gelcasting to obtain porous ceramics

I. Klösel*[1]; T. Fey[1]

1. Friedrich-Alexander-Universitat Erlangen-Nurnberg, Department Materials Science and Engineering, Germany

9:10 AM

(PACRIM-S15-006-2025) Lightweight and high-strength textured fibrous Si_3N_4 3D scaffold seeded with β-Si_3N_4 particles prepared via freeze casting

J. Yang*[1]; Q. Zhi[1]; B. Wang[1]

1. Xi'an Jiaotong University, State Key Laboratory for Mechanical Behavior of Materials, China

9:30 AM

(PACRIM-S15-007-2025) Automating the Future: High-Throughput Production of Porous Alumina Ceramics

E. Wolf*[1]; K. G. Webber[1]; T. Fey[1]

1. Friedrich-Alexander-Universitat Erlangen-Nurnberg, Institute of glass and ceramics, Germany

PACRIM Symposium 15 - Porous Ceramics: From Innovative Processing to Advanced Industrial applications I

Room: Seymour

Session Chairs: Patrizia Hoffmann, Friedrich-Alexander-Universitat Erlangen-Nurnberg; Tobias Fey, Friedrich-Alexander University Erlangen-Nürnberg

10:20 AM

(PACRIM-S15-001-2025) Deformation Control for Optimizing Kelvin Cell Architecture

S. Funk[1]; T. Fey*[1]

1. Friedrich-Alexander University Erlangen-Nürnberg, Department Material Science and Engineering, Germany

10:40 AM

(PACRIM-S15-002-2025) Preparations and Characterizations of Reticulated Porous Ceramics for Environmental and Military applications

J. Ha*[1]; H. Lee[1]; J. Lee[1]; I. Song[1]

1. Korea Institute of Materials Science, Republic of Korea

PacRim S16 - Advanced Powder Processing and Manufacturing Technologies

PACRIM Symposium 16 - Novel synthesis of powder and granulation technology

Room: Stanley

Session Chair: Yuki Yamaguchi, National Institute of Advanced Industrial Science and Technology (AIST)

8:00 AM

(PACRIM-S16-001-2025) On the Large-Scale Combustion Synthesis of SiC Aerogels (Invited) *WITHDRAWN*

L. Han[1]; H. Li[1]; Y. Li[1]; J. Li*[1]

1. Technical Institute of Physics and Chemistry, China

8:30 AM

(PACRIM-S16-002-2025) Graphene coating by mechanical treatment on water resistance of aluminium nitride particles for spray freeze granulation drying of aquaous slurry (Invited)

J. Tatami*[1]; R. Yamazaki[1]; M. Iijima[1]; N. Kondo[3]; S. Kawaguchi[2]

1. Yokohama National University, Japan
2. PRECI Co., Ltd., Japan
3. National Institute of Advanced Industrial Science and Technology, Japan

9:00 AM

(PACRIM-S16-003-2025) Spray freeze granulation drying using non-aqueous slurries for fabricating homogeneous silicon nitride ceramics

R. Yamazaki*[1]; J. Tatami[2]; M. Iijima[1]; S. Kawaguchi[3]; N. Kondo[4]

1. Yokohama-shi, Graduate School of Environment and Information Sciences, Japan
2. Yokohama National University, Japan
3. PRECI Co., Ltd., Japan
4. Sangyo Gijutsu Sogo Kenkyujo Chubu Center, Japan

9:20 AM

(PACRIM-S16-004-2025) Freeze-granulation of suspension or solution: innovative processes for MOX fuel fabrication

L. Ramond*[1]; F. La Lumia[1]; F. Lebreton[1]; G. Bernard-granger[1]; C. Pagnoux[2]

1. Commissariat a l'energie atomique et aux energies alternatives Marcoule, CEA/DES/ISEC/DMRC, Université de Montpellier, France
2. Institut de Recherche sur les Ceramiques, France

9:40 AM

(PACRIM-S16-005-2025) Fabrication of C12A7 with various anion encapsulation

K. Takiishi*[1]; J. Song[2]; M. Watanabe[2]; M. Inada[2]; T. Ishihara[2]

1. Kyushu Daigaku Kogakubu Daigakuin Kogakufu, Japan
2. Kyushu Daigaku, Japan

PACRIM Symposium 16 - Novel forming and sintering technology

Room: Stanley

Session Chairs: Junichi Tatami, Yokohama National University

10:00 AM

Break

10:20 AM

(PACRIM-S16-006-2025) Advanced Powder Processing: From Flash Sintering to Ultrafast Sintering without Electric Currents in Specimens (Invited)

J. Luo*[1]

1. University of California San Diego, USA

10:50 AM

(PACRIM-S16-007-2025) Study on the 3D printing of zirconia and silicon nitride by stereolithography (Invited)

J. Zhang*[1]

1. Shanghai Institute of Ceramics Chinese Academy of Sciences, China

11:20 AM

(PACRIM-S16-008-2025) Fabrication of MgO bulk ceramics with dispersed nitride phosphor particles by reaction sintering with cold isostatic pressing (Invited)

T. Takahashi*[1]; J. Tatami[2]

1. Chiho Dokuritsu Gyosei Hojin Kanagawa Kenritsu Sangyo Gijutsu Sogo Kenkyujo, Japan
2. Yokohama National University, Japan

PacRim S17 - Additive Manufacturing of Ceramics and Composites

PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites I

Room: Prince of Wales

Session Chairs: Chao Ma, Arizona State University; Trent Allen, Tethon 3D

10:20 AM

(PACRIM-S17-001-2025) Additive Manufacturing of Textured Ceramics (Invited)

C. Ma*[1]

1. Arizona State University, USA

10:50 AM

(PACRIM-S17-002-2025) Tomorrow's additive manufactured ceramic materials look nothing like they do today (Invited)

T. Allen*[1]

1. Tethon 3D, USA

11:20 AM

(PACRIM-S17-003-2025) 3D printing buildability response of hybrid copper mine tailings geopolymer and cement material

A. Ventura[1]; M. Plata[1]; K. Baladad[1]; E. d. Magdaluyo*[1]

1. University of the Philippines Diliman, Department of Mining, Metallurgical and Materials Engineering, Philippines

11:40 AM

(PACRIM-S17-004-2025) Design concepts for strong and damage tolerance 3D-printing alumina-based multi-material components

R. Bermejo*[1]; J. Schlacher[1]; S. Nohut[2]; M. Schwentenwein[2]

1. Montanuniversitat Leoben, Materials Science, Austria
2. Lithoz GmbH, Austria

PacRim S20 - Advanced Functional Materials for Clean Energy Solutions

PACRIM Symposium 20 - Advanced synthesis and characterization of photovoltaic materials

Room: Georgia A

Session Chairs: Lionel Vayssieres, Xi'an Jiaotong University; Soham Mukherjee, Uppsala Universitet

8:00 AM

(PACRIM-S20-006-2025) External Magnetic Fields in Molecular and Materials Transformations (Invited)

T. Fischer*[1]; S. Mathur[1]

1. University of Cologne, Institute of Inorganic and Materials Chemistry, Germany

8:30 AM

(PACRIM-S20-007-2025) Mechaincal properties and instability of halide perovskite single crystals

Y. Zou*[1]

1. University of Toronto, Canada

8:50 AM

(PACRIM-S20-008-2025) Antimony selenide based thin film photovoltaic solar cells (Invited)

G. Liang[1]; S. Chen[1]; G. Chen[1]; Y. Luo[2]; M. Cathelinaud[2]; H. MA[2]; X. Zhang*[2]

1. Shenzhen University, College of Physics and Optoelectronic Engineering, China
2. Universite de Rennes, Chemistry, France

9:20 AM

(PACRIM-S20-009-2025) The local chemical environment of sulfur atoms: how to probe solar devices made of Cu(In,Ga)$(S,Se)_2$ and other things (Invited)

C. Heske*[1]

1. University of Nevada Las Vegas, Chemistry & Biochemistry, USA

PACRIM Symposium 20 - Advanced synthesis and characterization of lanthanide materials

Room: Georgia A

Session Chairs: Thomas Fischer, University of Cologne; Gunnar Westin, Uppsala University

10:00 AM

Break

10:20 AM

(PACRIM-S20-010-2025) Luminescent Rare Earth Doped Nanoparticles: Advancing Renewable Energy Solutions? (Invited)

F. Vetrone*[1]

1. INRS, Université du Québec, Centre Énergie, Matériaux et Télécommunications, Canada

10:50 AM

(PACRIM-S20-011-2025) Microwave-Driven Materials Chemistry: Tuning the Properties of Lanthanide-Doped Nanostructures (Invited)

E. Hemmer*[1]

1. University of Ottawa, Chemistry and Biomolecular Sciences, Canada

11:20 AM

(PACRIM-S20-012-2025) Defect engineering – Molecule like europium clusters in ZnO (Invited)

G. Westin*[1]

1. Uppsala University, Sweden

11:50 AM

(PACRIM-S20-013-2025) Synthesis Strategies for Tunable Amorphous-Crystalline Metal-Organic Framework Nanohybrids

W. Zhang[1]; N. Pinna*[1]

1. Humboldt-Universität zu Berlin, Department of Chemistry, Germany

PacRim S21 - Cultural Heritage of the Pacific Rim

PACRIM Symposium 21 - Cultural Heritage of the Pacific Rim IV

Room: English Bay

Session Chair: Christina Bisulca, Detroit Institute of Arts

8:00 AM

(PACRIM-S21-027-2025) Degradation of cellulose acetate films during ageing

L. Liu*[1]

1. Fuzhou University, China

8:20 AM

(PACRIM-S21-028-2025) Study of the Lacquering Materials and Techniques in East Zhou, Qin and Han Dynasties

Y. Fu*[1]; S. Wei[2]

1. University of Science and Technology Beijing, Institute for Cultural Heritage and History of Science & Technology, China
2. University of Science and Technology Beijing, China

8:40 AM

(PACRIM-S21-029-2025) Innovative machine learning algorithms for prediction and classification of archaeological metals

F. Armetta[1]; M. Saladino*[1]

1. Universita degli Studi di Palermo, STEBICEF, Italy

PacRim S23 - Advanced Processing and Manufacturing Technologies for Ceramics

PACRIM Symposium 23 - Novel forming technologies, 3D printing, near-net shaping

Room: Georgia B

Session Chairs: Xu Wang, Northwestern Polytechnical University; Koji Morita, National Institute for Materials Science (NIMS)

8:30 AM

(PACRIM-S23-018-2025) A Novel Approach of Fabricating Monodispersed Spherical Refractory Powders for Laser Additive Manufacturing (Invited)

N. Nomura*[1]; Z. Zhou[1]; W. Zhou[1]

1. Tohoku Daigaku, Graduate School of Engineering, Department of Materials Processing, Japan

9:10 AM

(PACRIM-S23-019-2025) Tuning the properties of hybrid glasses through processing (Invited)

M. M. Smedskjaer*[1]; S. Mollick[1]; F. Cao[1]; S. S. Sørensen[1]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark

9:40 AM

(PACRIM-S23-020-2025) Fabricating Luminescent Glass and Ceramics Derived from Mesoporous Powders by Spark Plasma Sintering

B. Zhou*[1]; L. Wang[2]; W. Jiang[1]

1. Donghua University, Institute of Functional Materials, China
2. Donghua University, College of Materials Science and Technology, China

PACRIM Symposium 23 - Joining, integration, and machining technologies

Room: Georgia B

Session Chairs: Morten Smedskjaer, Aalborg University; Naoyuki Nomura, Tohoku Daigaku

10:00 AM

Break

10:20 AM

(PACRIM-S23-021-2025) Defect-mediated mechanical behaviors of oxide ceramics subjected to flash processing (Invited)

H. Masuda*[1]

1. The University of Tokyo, Department of Materials Engineering, Japan

10:50 AM

(PACRIM-S23-022-2025) Effect of interfacial structure on the preferred orientation and phase distribution of alumina-based eutectic ceramics (Invited)

X. Wang*[1]; Q. Hu[2]

1. Northwestern Polytechnical University, China
2. Shanghai Jiao Tong University, School of Materials Science and Engineering, China

PacRim S24 - Solid-State Optical Materials and Luminescence Properties

PACRIM Symposium 24 - Solid-State Optical Materials and Luminescence Properties

Room: Prince of Wales

Session Chair: Marcelo Nalin, Institute of Chemistry and Chemical Technology, Mongolian Academy of Sciences

8:00 AM

(PACRIM-S24-018-2025) Machine Learning-Driven Design of Phosphors with Activators Exhibiting Tunable Oxidation States (Invited)

F. Massuyeau[1]; E. Glais[1]; H. Yuan[1]; R. Gautier*[1]

1. Institut des Materiaux de Nantes Jean Rouxel, France

8:30 AM

(PACRIM-S24-019-2025) Thermal, structural and low-temperature spectroscopic properties of laser ceramics based on yttrium-aluminum garnet heavily doped with neodymium ions (Invited)

D. Hreniak*[1]

1. Institute of Low Temperature and Structure Research, Division of Optical Spectroscopy, Poland

9:00 AM

(PACRIM-S24-020-2025) Synthesis of Novel Luminescent Materials via Glass Crystallization Techniques (Invited)

A. J. Fernández Carrión*[1]; V. Castaing[4]; A. Becerro Nieto[4]; M. Pitcher[3]; M. Allix[2]

1. Universidad de Sevilla, Química Inorgánica & Instituto de Ciencia de los Materiales de Sevilla, Spain
2. CNRS (CEMHTI), France
3. Centre National de la Recherche Scientifique, France
4. Consejo Superior de Investigaciones Cientificas, Instituto de Ciencia de los Materiales de Sevilla, Spain

9:30 AM

(PACRIM-S24-021-2025) Development of RF magnetron co-sputtered amorphous Ge-Bi-Se chalcogenide films for photonic applications

A. Viswanathan[5]; J. Gutwirth[5]; Y. Ghandaoui[1]; A. Hammouti[2]; T. Halenkovic[5]; S. Slang[5]; M. Pavlista[5]; S. Pechev[3]; J. Guin[4]; L. Deniel[2]; L. Bodiou[2]; M. Alouini[2]; J. Charrier[2]; P. Nemec[5]; V. Nazabal*[1]

1. CNRS-University of Rennes 1, ISCR, France
2. Institut Fonctions Optiques pour les Technologies de l'Information, France
3. Institut de Chimie de la Matiere Condensee de Bordeaux, France
4. Univ Rennes CNRS, Physics Institute Rennes, France
5. University of Pardubice, Czechia

PacRim S27 - International Symposium of Fundamental and Frontier Sciences of Ceramics

PACRIM Symposium 27 - International Symposium of Fundamental and Frontier Sciences of Ceramics IV

Room: Cypress

Session Chair: Ricardo Castro, Lehigh University

8:00 AM

(PACRIM-S27-021-2025) Hard-to-sinter oxide ceramics: are there easier ways how to sinter them? (Invited)

A. Talimian[2]; A. Najafzadekhoee[2]; M. Michálková[1]; K. Maca[3]; D. Galusek*[2]

1. IIC SAS, Joint Glass centre, Slovakia
2. Trencianska Univerzita Alexandra Dubceka v Trencine, Centre for functional and surface-functionalized glass, Slovakia
3. Brno University of Technology, Czechia

8:30 AM

(PACRIM-S27-022-2025) Achieving Superhardness and Enhanced Toughness in High-Entropy Boride-Based Composites by Tailoring Their Multi-Scale Microstructures (Invited)

J. Zou*[1]

1. Wuhan University of Technology, China

9:00 AM

(PACRIM-S27-023-2025) Dopant effects on grain boundary plane distributions in alumina (Invited)

A. Erlacher[1]; M. Stuer*[1]

1. Swiss Federal Laboratories for Materials Science and Technology, Empa, Switzerland

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - Multiscale modeling and simulations

Room: Plaza A

Session Chairs: Dilpuneet Aidhy, Clemson University; Michael Widom, Carnegie Mellon University

8:00 AM

(PACRIM-S29-017-2025) Disordered enthalpy-entropy descriptor for high-entropy ceramics discovery (Invited)

S. Curtarolo*[1]; H. Eckert[1]; S. Divilov[1]

1. Duke University, Materials Science, Electrical Engineering and Physics, USA

8:40 AM

(PACRIM-S29-018-2025) Ab Initio Design of High-Entropy Thermal/Environmental Barrier Coatings (Invited)

S. Hao[1]; R. Oleksak[1]; Ö. Doğan[1]; M. Gao*[1]

1. National Energy Technology Laboratory, USA

9:10 AM

(PACRIM-S29-019-2025) High-throughput DFT Simulations of High Entropy Perovskite Using Neural Network Potential (Invited)

G. Liu[1]; S. Yang[1]; Y. Zhong*[1]

1. Worcester Polytechnic Institute, Mechanical and Materials Engineering, USA

9:40 AM

(PACRIM-S29-020-2025) First-principles study of the order-disorder transition in the AlCrTiV high entropy alloy (Invited)

M. Widom*[1]

1. Carnegie Mellon University, USA

10:10 AM

Break

10:30 AM

(PACRIM-S29-021-2025) High temperature dislocation glide mechanisms in refractory multi-principal element alloys (Invited)

I. Beyerlein*[1]

1. University of California System, Santa Barbara, USA

11:00 AM

(PACRIM-S29-022-2025) Electronic density of states as the descriptor of elastic bond strength, ductility, and local lattice distortion in BCC refractory alloys (Invited)

D. Pant[1]; D. Aidhy*[1]

1. Clemson University, Materials Science and Engineering, USA

11:30 AM

(PACRIM-S29-023-2025) Tuning Structure and Properties in High-Entropy Materials through Disorder (Invited)

C. M. Rost*[2]; G. Niculescu[1]; G. R. Bejger[2]; J. Barber[2]; S. Ayyagari[3]; M. Webb[4]; L. Min[3]; S. Almishal[3]; N. Alem[3]; J. Heron[4]; Z. Mao[3]; J. Maria[3]

1. James Madison University, USA
2. Virginia Polytechnic Institute and State University, Materials Science & Engineering, USA
3. The Pennsylvania State University, USA
4. University of Michigan, USA

PacRim S31 - On the design & dev of next generation nanolayered (3D and 2D) structural & func mtls

PACRIM Symposium 31 - Next-generation nanolayered structural/functional materials I

Room: Oxford

Session Chairs: Michael Naguib, Tulane University; Vadym Mochalin, Missouri University of Science and Technology

8:00 AM

(PACRIM-S31-001-2025) Synthesis of 2D Functional Ceramics and their Hybrids for Energy Applications (Invited)

M. Naguib*[1]

1. Tulane University, Physics and Engineering Physics, USA

8:30 AM

(PACRIM-S31-002-2025) Let's talk A: MAX phases with exotic A-elements (Invited)

C. Birkel*[1]

1. Arizona State University, USA

9:00 AM

(PACRIM-S31-003-2025) Order-Disorder in Multi-Transition Metal MAX phases and MXenes (Invited)

B. C. Wyatt[1]; B. Anasori*[1]

1. Purdue University, Materials Engineering, USA

9:30 AM

(PACRIM-S31-004-2025) Reactivity and applications of 2D Transition Metal Carbides (MXenes) (Invited)

V. Mochalin*[1]

1. Missouri University of Science and Technology, USA

10:00 AM

Break

Thursday, May 8, 2025

PacRim S1 - Environmental barrier coatings for high-performance ceramics

PACRIM Symposium 1 - Environmental barrier coatings for high-performance ceramics I

Room: Oxford

Session Chair: Eeshani Godbole, GE Aerospace Inc

10:20 AM

(PACRIM-S01-001-2025) Environmental Barrier Coatings Applied by Axial Plasma Spraying (Invited)

N. Markocsan*[1]

1. University West, Dept. of Engineering Science, Sweden

10:50 AM

(PACRIM-S01-002-2025) Tailoring Microstructure and Phase Constitution of Ytterbium Disilicate Environmental Barrier Coatings Manufactured by Atmospheric Plasma Spraying (Invited)

J. Zhang*[1]; H. Wang[2]; Z. Luo[1]; J. Wang[1]

1. Institute of Metal Research Chinese Academy of Sciences, Shenyang National Laboratory for Materials Science, China
2. Liaoning Academy of Materials, Institute of Coating Technology for Hydrogen Gas Turbines, China

11:20 AM

(PACRIM-S01-003-2025) Design and Synthesis of Innovative Sol-Gel Coatings for Metal Substrates and Future CMC. Applications in High-Temperature Environments for Aeronautics

B. Toury*[1]; L. Lager[2]; J. Delfosse[3]; S. Benayoun[2]; S. Senani - de Monredon[3]

1. Universite Claude Bernard Lyon 1, France
2. Ecole Centrale de Lyon, France
3. Safran SA, France

11:40 AM

(PACRIM-S01-004-2025) Oxygen activity in composite mullite-Si sintered pellets

A. Setlur*[1]; J. Wan[1]; C. Henderson[1]; R. Davis[1]

1. GE Research, USA

PacRim S2 - Frontier of modeling and Design of Ceramics and composites

PACRIM Symposium 2 - Modeling Surfaces, interfaces, defects, amorphous matter

Room: Balmoral

Session Chairs: Dilpuneet Aidhy, Clemson University; Eva Zarkadoula, Oak Ridge National Lab

8:00 AM

(PACRIM-S02-001-2025) A Computational Framework for Analyzing Complex Interfaces: From First-Principles to Machine Learning, with a Case Study on $LaCoO_3$/La_2NiO_4 (Invited)

G. Liu[1]; S. Yang[1]; Y. Zhong*[1]

1. Worcester Polytechnic Institute, Mechanical and Materials Engineering, USA

8:30 AM

(PACRIM-S02-002-2025) Computational Insights into the Grain Boundaries and Interfaces Present in Yttria Stabilized Zirconia Used in Solid Oxide Fuel Cells (Invited)

J. C. Madrid[1]; K. K. Ghuman*[1]

1. Institut National de la Recherche Scientifique, Énergie Matériaux Télécommunications, Canada

9:00 AM

(PACRIM-S02-003-2025) Impact of quantum structures of dislocation cores on peculiar mechanical properties in inorganic semiconductor crystals (Invited)

K. Matsunaga*[1]

1. Nagoya University, Materials Physics, Japan

9:30 AM

(PACRIM-S02-004-2025) DFT-based calculations of equilibrium point-defect concentrations in semiconductors and ceramics (Invited)

T. Ogawa*[1]

1. Ippan Zaidan Hojin Fine Ceramics Center, Nanostructures Research Laboratory, Japan

PACRIM Symposium 2 - Machine Learning and Artificial Intelligence in Materials Modeling

Room: Balmoral

Session Chairs: Giacomo Giorgi, The University of Perugia;

10:20 AM

(PACRIM-S02-006-2025) Unified Moment Tensor Potential for Silicon and Silica: Bridging Crystalline and Amorphous States (Invited)

L. Béland*[1]; K. Zongo[2]; H. Sun[1]; N. Mousseau[3]; C. Ouellet-Plamondon[2]

1. Queen's University, Mechanical & Materials Engineering, Canada
2. ETS-Montreal, Canada
3. Universite de Montreal, Canada

10:50 AM

(PACRIM-S02-007-2025) Thermal conductivity analysis of polymer-derived composite via image-based structure reconstruction, computational homogenization and machine learning

M. Fathidoost*[1]; Y. Yang[1]; B. Xu[1]

1. Technische Universitat Darmstadt, Mechanics of Functional Materials Division, Institute of Materials Science, Germany

11:10 AM

(PACRIM-S02-017-2025) Atomistic Modeling of Ion Beam Irradiation: Insights into Ion-Matter Interactions for Material Modification (Invited)

E. Zarkadoula*[1]

1. Oak Ridge National Laboratory, Center for Nanophase Materials Science, USA

PacRim S3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies

PACRIM Symposium 3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies II

Room: English Bay

Session Chairs: Hiroyuki Shimada, National Institute of Advanced Industrial Science and Technology (AIST); Kevin Huang, University of South Carolina

8:00 AM

(PACRIM-S03-005-2025) Study of oxygen surface exchanges and oxygen diffusion through mixed ionic-electronic conductors by semi-permeation method (Invited)

P. Geffroy*[1]

1. IRCER CNRS, Ceramic processes, France

8:30 AM

(PACRIM-S03-006-2025) Materials for Intermediate Temperature Solid Oxide Cells (Invited)

K. Huang*[1]

1. University of South Carolina, Mechanical Engineering, USA

9:00 AM

(PACRIM-S03-008-2025) Innovative approaches to obtain c-axis-oriented apatite-type Lanthanum silicate electrolyte

C. Bourgès*[1]; L. Arbelaez[1]; P. Geffroy[1]; A. Aimable[1]; K. Fukuda[2]; E. Bechade[1]

1. Institut de Recherche sur les Ceramiques, France
2. Nagoya Kogyo Daigaku, Department of Environmental and Materials Engineering, Japan

9:20 AM

(PACRIM-S03-009-2025) Structural and Electrochemical Properties of Praseodymium Oxide as a High-Performance Oxygen Electrode for Low-temperature Solid Oxide Cells

B. Lemieszek*[1]; A. Maximenko[2]; M. Struzik[3]; M. Malys[3]; M. I. Asghar[4]; P. Z. Jasinski[1]; S. Molin[1]

1. Politechnika Gdanska Wydzial Elektroniki Telekomunikacji i Informatyki, Department of Functional Materials Engineering, Poland
2. Uniwersytet Jagiellonski w Krakowie, Poland
3. Politechnika Warszawska, Poland
4. Tampereen korkeakouluyhteisossa, Finland

PACRIM Symposium 3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies III

Room: English Bay

Session Chairs: Leonard Kwati, Kyushu Daigaku Carbon Neutral Energy Kokusai Kenkyujo; Kevin Huang, University of South Carolina

10:20 AM

(PACRIM-S03-010-2025) Electrochemical Performance of Ru Doped SFM Perovskite Electrode Materials for Solid Oxide Electrolysis cells

S. An*[1]

1. Inner Mongolia University of Science and Technology School of Materials and Metallurgy, Department of Metallurgical Engineering, China

10:40 AM

(PACRIM-S03-011-2025) Mesoscale Simulations of Solid Oxide Electrolysis Cells with Synthetic Structures (Invited)

P. Jayapragasam[3]; Y. Shoukry[1]; K. Huang[2]; X. Jin*[1]

1. The University of Texas at Dallas School of Economic Political and Policy Sciences, Mechanical Engineering, USA
2. University of South Carolina, Mechanical Engineering, USA
3. National Renewable Energy Laboratory, USA

11:10 AM

(PACRIM-S03-012-2025) Automatic & Autonomous Solution For New Generation SOFC

A. Huang*[1]

1. MTI Corporation, Technical Department, USA

11:30 AM

(PACRIM-S03-013-2025) Effect of BaO/Al_2O_3 ratio on crystallization and properties of glass ceramic sealants

J. Begos*[1]; A. F. Laplace[1]; G. Delaizir[2]

1. Commissariat a l'energie atomique et aux energies alternatives Marcoule, University of Montpellier, CEA/DES/ISEC/DPME/LFCM, France
2. Institut de Recherche sur les Ceramiques, Université de Limoges, UMR CNRS 7315, France

PacRim S4 - Polymer-Derived Ceramics/ Composites/Nanocomposites as Functional Inorganic Materials

PACRIM Symposium 4 - Detailed characterization of PDC and hybrids

Room: Plaza C

Session Chair: Qingbo Wen, Central South University

8:00 AM

(PACRIM-S04-032-2025) Probing structure of PDCs with solid-state NMR: an overview of possibilities (Invited)

C. Gervais*[1]

1. Sorbonne Universite, LCMCP, France

8:30 AM

(PACRIM-S04-033-2025) Frustrated Lewis Pair Functionalization of Precursor-Derived Ceramic for Small Molecule Activation (Invited)

S. Tada*[1]

1. Indian Institute of Technology Madras, Department of Metallurgical and Materials Engineering, India

9:00 AM

(PACRIM-S04-034-2025) Polymer-Derived Ceramics: Probing Structure Through Infrared and Raman Spectroscopy

P. Jelen*[1]; M. Bik[1]; J. Marchewka[1]; M. T. Sitarz[1]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Poland

PACRIM Symposium 4 - Development of porous architectures spanning single and multiple length scales

Room: Plaza C

Session Chair: Zhaoju Yu, Xiamen University

9:20 AM

(PACRIM-S04-035-2025) Hierarchically porous polymer-derived SiOC monoliths for chemical conversion and adsorption (Invited)

T. Konegger*[1]; K. Rauchenwald[1]; T. Felsberger[1]; J. Eßmeister[1]; K. Föttinger[2]

1. TU Wien, Institute of Chemical Technologies and Analytics, Austria
2. Technische Universitat Wien Institut fur Materialchemie, Austria

9:50 AM

(PACRIM-S04-037-2025) Nitrogen-doped carbon/CoFe nanoparticle/CoN composite with hierarchical meso-macro pores as an electrocatalyst for the oxygen reduction reaction

Y. Sugahara*[1]; Y. Li[1]; N. Ebato[1]; Y. Guo[1]; Y. Yamauchi[2]

1. Waseda Universitry, Japan
2. Nagoya University, Department of Materials Process Engineering, Japan

10:10 AM

Break

PACRIM Symposium 4 - Fundamental processing-microstructure-properties relationships

Room: Plaza C

Session Chair: Michael Jakubinek, National Research Council Canada Emerging Technologies Division

10:25 AM

(PACRIM-S04-038-2025) Fabrication of Simple and Complex Shaped Ultra-High Temperature Ceramic Matrix Composites and Their Performance in Relevant Environments (Invited)

D. Sciti*[3]; A. Vinci[3]; L. Zoli[3]; A. Airoldi[1]; M. De Stefano Fumo[2]; A. M. Caporale[1]

1. Politecnico di Milano, Italy
2. Centro Italiano Ricerche Aerospaziali, Italy
3. Consiglio Nazionale delle Ricerche, ISSMC, Italy

10:55 AM

(PACRIM-S04-039-2025) Single-source precursor synthesis of novel Si(Hf, Ta, B)CN-based ceramic nanocomposites and their behavior in harsh environments

M. Boroojerdi*[1]; J. Bernauer[1]; S. Kredel[1]; R. Riedel[1]; E. Ionescu[2]

1. Technische Universitat Darmstadt Fachbereich Material- und Geowissenschaften, Germany
2. Fraunhofer-Einrichtung fur Wertstoffkreislaufe und Ressourcenstrategie IWKS, Germany

PacRim S10 - Ceramics of Tomorrow for Green Energy and Cleaner Environment

PACRIM Symposium 10 - Ceramics of Tomorrow for Green Energy and Cleaner Environment I

Room: Georgia B

Session Chairs: Eva Hemmer, University of Ottawa; Scott Misture, Alfred University

8:00 AM

(PACRIM-S10-001-2025) Carbon Nanomaterials - A Sustainable Pathway to Green Energy Solutions (Invited)

R. Naccache*[1]

1. Concordia University, Chemistry and Biochemistry, Canada

8:30 AM

(PACRIM-S10-002-2025) Hydrogen Sensors for Hydrogen Economy (Invited)

O. K. Varghese*[2]; D. Waligo[2]; M. Paulose[1]

1. University of Houston, Department of Physics, USA
2. University of Houston, Department of Physics and Texas Center for Superconductivity, USA

9:00 AM

(PACRIM-S10-003-2025) Role of Innovative Materials Engineering for Advancing the Clean Energy and Smart Agriculture Technologies (Invited)

G. Selopal*[1]; S. Madhu[1]; U. Sohail[1]; S. Singh[1]; M. Chinna[1]

1. Dalhousie University, Department of Engineering/ Faculty of Agriculture, Canada

9:30 AM

(PACRIM-S10-004-2025) Enhancement of photocatalytic activity using defect engineering by controlling stoichiometry in $LaTiO_2N$ inverse opal photonic crystal

T. Maekawa*[1]; N. Tateishi[1]; Y. Ikeda[1]; H. Fukuma[1]; G. I. Waterhouse[2]; K. Murai[1]; T. Moriga[1]

1. Tokushima Daigaku, Japan
2. The University of Auckland, New Zealand

9:50 AM

Break

10:10 AM

(PACRIM-S10-005-2025) Functional Nanocomposites of Ceramics and 2D Materials for Water Nanofiltration, Purification and Diagnostics (Invited)

G. Fanchini*[1]

1. University of Western Ontario, Physics and Astronomy, Canada

10:40 AM

(PACRIM-S10-006-2025) Synthesis of mesoporous silica from geothermal water and the application for environmental purification (Invited)

Y. Watanabe*[1]

1. Hosei Daigaku Rikogakubu Daigakuin Rikogaku Kenkyuka, Japan

11:10 AM

(PACRIM-S10-007-2025) Understanding the impact of TiO_2 microstructure on the photocatalytic conversion of polystyrene nanoplastics into valuable organic products

C. Canovi*[1]; C. Siligardi[1]; E. Cedillo-González[1]

1. University of Modena and Reggio Emilia, Department of Engineering "Enzo Ferrari", Italy

11:30 AM

(PACRIM-S10-008-2025) Magnetic-Field-Stimulated Efficient Photocatalytic N_2 Fixation over Defective $BaTiO_3$ Perovskites

M. Feng*[1]

1. Jilin Normal University, Key Laboratory of Functional Materials Physics and Chemistry of the Ministry of Education, China

PacRim S12 - Eng Ceramics and Ceramic Matrix Composites - Processing/Design/ Applications

PACRIM Symposium 12 - Processing-microstructure-mechanical properties correlation I

Room: Plaza B

Session Chairs: Zbigniew Pedzich, AGH University of Krakow; Junichi Tatami, Yokohama National University

8:00 AM

(PACRIM-S12-026-2025) Bending strength and cyclic fatigue of grain boundary in high thermal conductivity silicon nitride ceramics (Invited)

J. Tatami*[1]; K. Matsuura[1]; M. Iijima[1]; K. Matsui[1]; T. Takahashi[2]; T. Yahagi[2]; H. Nakano[3]; T. Ohji[1]

1. Yokohama National University, Japan
2. Kanagawa Institute of Industrial Science and Technology, Japan
3. Toyohashi University of Technology, Japan

8:30 AM

(PACRIM-S12-027-2025) Manufacturing of titanium boride basing UHTC composites by reactive sintering utylizing different titanium precursors (Invited)

Z. Pedzich*[1]; D. Kozien[1]; A. Wilmanski[1]; W. Banas[1]; A. Wojteczko[1]; P. Tatarko[2]; D. Salamon[3]

1. AGH University of Krakow, Department of Ceramics and Refractory Materials, Poland
2. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Department of Ceramics, Slovakia
3. Montanuniversitat Leoben, Austria

9:00 AM

(PACRIM-S12-028-2025) Secondary phases reinforced carbide and boride ceramics: Effect of silicon carbide and graphene platelets on mechanical and tribological properies (Invited)

A. Kovalčíková*[2]; P. Tatarko[1]; R. Sedlák[2]; Z. Chlup[3]; D. Medved[2]; E. Mudra[2]; J. Dusza[2]

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Department of Ceramics, Slovakia
2. Institute of Materials Research, Slovak Academy of Sciences, Division of Ceramic and Non-Metallic Systems, Slovakia
3. Institute of physics of materials Czech Academy of Sciences, Czechia

9:30 AM

(PACRIM-S12-029-2025) Confocal laser fluorescence microscopy for in-situ observation of particle mortion in highly concentrated slurries (Invited)

M. Uematsu*[1]; T. Kimura[1]

1. Japan Fine Ceramics Center, Japan

10:00 AM

Break

10:20 AM

(PACRIM-S12-030-2025) Structure, mechanical properties and thermal stability of TiNbVTaZrHf-N coatings deposited by reactive sputtering

F. Lofaj*[1]; L. Kvetkova[1]; P. Hviscova[1]; M. Mikula[2]; T. Roch[2]; T. Fiantok[2]

1. Institute of Materials Research of SAS, Division of ceramics and non-metallic materials, Slovakia
2. Univerzita Komenskeho v Bratislave Fakulta matematiky fyziky a informatiky, Slovakia

10:40 AM

(PACRIM-S12-031-2025) Processing and properties of damage tolerant reactively sintered high-entropy diboride ceramic composites reinforced with SiC

R. Sedlák*[1]; T. Csanádi[1]; M. Hrubovčáková[1]; I. Shepa[1]; L. Daková[1]; A. Kovalčíková[1]; Z. Chlup[2]; Z. Fogarassy[3]

1. Institute of Materials Research, Slovak Academy of Sciences, Division of Ceramic and Non-Metallic Systems, Slovakia
2. Institute of Physics of Materials, Czech Academy of Sciences, Czechia
3. Institute of Technical Physics and Materials Science, Centre for Energy Research, Hungary

PACRIM Symposium 12 - Processing-microstructure-mechanical properties correlation II

Room: Plaza B

Session Chairs: Zbigniew Pedzich, AGH University of Krakow; Junichi Tatami, Yokohama National University

11:00 AM

(PACRIM-S12-036-2025) Enhanced densification and dielectric properties in $BaTiO_3$ through a cold-sintering pre-treatment, minimizing secondary phases

S. Jeon*[1]; A. Ullah[1]; H. Palneedi[1]

1. Changwon National University, Republic of Korea

PacRim S13 - Functional Defects in Ceramic Materials

PACRIM Symposium 13 - Defect engineering in electrochemical energy materials

Room: Grouse

Session Chair: Eric Gabriel, Boise State University

9:00 AM

(PACRIM-S13-010-2025) Influence of Interlayer Cation Ordering on Na Transport in P2-Type $Na_{0.67-x}Li_y\ Ni_{0.33-z}Mn_{0.67+z}O_2$ for Sodium-Ion Batteries

E. Gabriel*[1]; Z. Wang[2]; V. V. Singh[2]; K. Graff[1]; J. Liu[3]; C. Koroni[1]; D. Hou[1]; D. Schwartz[1]; C. Li[3]; J. Liu[4]; X. Guo[4]; N. C. Osti[3]; S. Ong[2]; H. Xiong[1]

1. Boise State University, Materials Science and Engineering, USA
2. University of California San Diego, Department of NanoEngineering, USA
3. Oak Ridge National Laboratory, Neutron Scattering Division, USA
4. Washington State University, Department of Chemistry, USA

9:20 AM

(PACRIM-S13-011-2025) Copper-Alloy Fluorides as Cathode Active Materials for All-Solid-State Fluoride Batteries

M. Motoyama*[1]; T. Nakagawa[2]; K. Sakurai[2]; T. Nakatani[3]; H. Kiuchi[3]; Z. Ogumi[3]; T. Abe[3]

1. Kyushu University, Kyushu Daigaku, Fukuoka, Fukuoka Prefecture, JP, academic, Kyushu University Platform of Inter-/Transdisciplinary Energy Research, Japan
2. Kabushiki Kaisha Honda Gijutsu Kenkyujo, Japan
3. Kyoto Daigaku, Japan

9:40 AM

(PACRIM-S13-012-2025) Microstructural and Electrochemical Improvements in Garnet Solid Electrolytes Prepared via Reactive Sintering from Doped Pyrochlore Precursors

J. Guo[1]; C. K. Chan*[1]

1. Arizona State University, Materials Science and Engineering; School for Engineering of Matter, Transport and Energy, USA

PacRim S14 - Advanced Structural Ceramics and CMCs for Ultra Extreme Environments

PACRIM Symposium 14 - Advanced Structural Ceramics and CMCs for Ultra Extreme II

Room: Cypress

Session Chairs: Christopher Weinberger, Colorado State University; Yinglu Tang, Technische Universiteit Delft

8:00 AM

(PACRIM-S14-004-2025) A design of UHTCs and refractory compositionally complex ceramics used at above 2000°C by using calculation thermodynamics (Invited)

Y. Arai*[1]; R. Tsuruoka[1]; A. Tada[1]; R. Inoue[1]; Y. Kogo[1]

1. Tokyo University of Science, Japan

8:30 AM

(PACRIM-S14-005-2025) Compositionally complex carbide ceramics: a perspective on irradiation damage (Invited)

B. Cui*[1]; L. Trinh[1]; F. Wang[1]; L. Wadle[1]; Y. Lu[1]; K. Bawane[2]; K. Hattar[3]; Z. Hua[2]; L. Malakkal[2]; L. He[4]

1. University of Nebraska-Lincoln, USA
2. Idaho National Laboratory, USA
3. University of Tennessee, Knoxville, USA
4. NC State University, USA

9:00 AM

(PACRIM-S14-006-2025) Engineering hexagonal shielding materials for radiation tolerance (Invited)

S. A. Humphry-Baker*[1]; M. Harada[1]; K. Bakkar[1]; J. Davidson[1]; S. Uthayasekaran[1]; T. Zagyva[1]

1. Imperial College London, Materials, United Kingdom

9:30 AM

(PACRIM-S14-007-2025) The role of chemistry and processing on the hardness of transition metal carbides and nitrides

B. Watkins[1]; A. Stubbers[2]; G. Thompson[2]; C. R. Weinberger*[1]

1. Colorado State University, Department of Mechanical Engineering, USA
2. University of Alabama, Alabama Materials Institute, USA

9:50 AM

Break

10:50 AM

(PACRIM-S14-009-2025) Paralinear Oxidation Kinetics and Passivation Mechanisms of SPS-Sintered ZrC Ultra-High Temperature Ceramic (UHTC) (Invited)

Y. Lin[1]; H. Brouwer[2]; V. Popovich[2]; Y. Tang*[1]

1. Technische Universiteit Delft, Aerospace Engineering, Netherlands
2. Technische Universiteit Delft Faculteit Mechanical Engineering, Netherlands

11:20 AM

(PACRIM-S14-010-2025) Effect of gaseous environmental conditions on the atomic composition of ceramic materials during heat treatment of organometallic polymer precursors (Invited)

Y. Lee*[1]

1. Korea Institute of Ceramic Engineering and Technology, Republic of Korea

PacRim S15 - Porous Ceramics - From Innovative Processing to Advanced Industrial applications

PACRIM Symposium 15 - Porous Ceramics: From Innovative Processing to Advanced Industrial applications III

Room: Seymour

Session Chairs: Edwyn Wolf, Friedrich-Alexander-Universitat Erlangen-Nurnberg; Isabella Klösel, Friedrich-Alexander-Universitat Erlangen-Nurnberg

8:00 AM

(PACRIM-S15-008-2025) Hierarchical Structured Composites with Multiple Porosity (Invited)

W. Schwieger*[1]; F. Scheffler[2]; M. Hartmann[3]

1. Friedrich-Alexander-Universitat Erlangen-Nurnberg, Chemical and Biochemical Engineering, Germany
2. Lehrstuhl für Technische Chemie Otto-von-Guericke-Universität, Lehrstuhl für Technische Chemie, Germany
3. Friedrich-Alexander-Universitat Erlangen-Nurnberg Technische Fakultat, Erlangen Center for Interface Research and Catalysis (ECRC), Germany

8:30 AM

(PACRIM-S15-009-2025) Surface modification of silica porous materials for environmental purification

M. Inada*[1]

1. Kyushu Daigaku, Japan

8:50 AM

(PACRIM-S15-010-2025) High-temperature stability of aluminosilicate glass particle pellets and its dependence on chemical composition

P. Jensen*[1]; L. Skovby[1]; M. Solvang[2]; L. Belmonte[2]; Q. Zheng[3]; Y. Yue[1]

1. Aalborg Universitet, Department of Chemistry and Bioscience, Denmark
2. ROCKWOOL A/S, Denmark
3. Qilu University of Technology, China

PacRim S16 - Advanced Powder Processing and Manufacturing Technologies

PACRIM Symposium 16 - Novel material recycling and energy-saving process

Room: Stanley

Session Chairs: Satoshi Tanaka, Nagaoka University of Technology; Takuma Takahashi, Chiho Dokuritsu Gyosei Hojin Kanagawa Kenritsu Sangyo Gijutsu Sogo Kenkyujo

8:20 AM

(PACRIM-S16-009-2025) Near-room temperature fabrication of perovskite oxide ceramics via acid-base chemical densification and a recycling process of ceramic components (Invited)

Y. Yamaguchi*[1]; H. Sumi[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

8:50 AM

(PACRIM-S16-010-2025) Selective debonding of polymer adhesives with functional particles by external stimuli (Invited)

M. Inutsuka*[1]; C. Tokoro[1]

1. Waseda University, Japan

9:20 AM

(PACRIM-S16-011-2025) Selective removal of Cr compounds from electric arc furnace slag by air classification

M. Koide*[1]; K. Oyama[2]; Y. Takaya[3]; C. Tokoro[1]

1. Waseda Daigaku, Japan
2. Kyushu Daigaku, Japan
3. Tokyo Daigaku, Japan

9:40 AM

(PACRIM-S16-012-2025) Energizing mechanism through epoxy adhesive by adding conductive Ag nanoparticles for Pulsed discharge

K. Matsuo*[1]; M. Inutsuka[2]; T. Koita[4]; S. Yamashita[5]; Y. Okada[5]; T. Saito[6]; M. Kubo[6]; H. Kamiya[3]; C. Tokoro[3]

1. Waseda University, Waseda Daigaku, Shinjuku, Tokyo, JP, academic, School of Creative Science and Engineering, Japan
2. Waseda Daigaku, Waseda Center for a Carbon Neutral Society, Japan
3. Waseda University, Japan
4. Waseda Daigaku Riko Gakujutsuin, Japan
5. Tokyo Noko Daigaku, Japan
6. Tohoku Daigaku, Japan

PACRIM Symposium 16 - Characterization and evaluation of particle and powder

Room: Stanley

Session Chairs: Jingxian Zhang, Shanghai Institute of Ceramics Chinese Academy of Sciences; Manabu Inutsuka, Waseda university

10:00 AM

Break

10:20 AM

(PACRIM-S16-013-2025) Evaluation of the distribution and origin of process-related large defects in sintered ceramics in multiscale observations (Invited)

S. Tanaka*[1]

1. Nagaoka University of Technology, Materials Science and Technology, Japan

10:50 AM

(PACRIM-S16-014-2025) Visualization of drying behavior of aqueous silica slurries with different organic additives by in-situ OCT observation

H. Kuroda*[1]; J. Tatami[1]; M. Iijima[1]; T. Takahashi[2]

1. Yokohama National University, Japan
2. Chiho Dokuritsu Gyosei Hojin Kanagawa Kenritsu Sangyo Gijutsu Sogo Kenkyujo, Japan

11:10 AM

(PACRIM-S16-015-2025) mmWave/Sub-THz Low Loss Materials Measurement with Latest Commercially Available Fixtures (Invited) *WITHDRAWN*

S. Phommakesone*[1]

1. Keysight Technologies Inc, USA

PacRim S17 - Additive Manufacturing of Ceramics and Composites

PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites II

Room: Prince of Wales

Session Chairs: Shenqiang Ren, University of Maryland; Chang-Jun Bae, Korea Institute of Materials Science

8:00 AM

(PACRIM-S17-005-2025) AI-assisted Parametric Modeling of Extrusion-based Additive Manufacturing for Li-ion battery (Invited)

Y. Li[1]; B. Gao[1]; C. Bae*[1]

1. Korea Institute of Materials Science, Division of Nano Materials Research, Republic of Korea

8:30 AM

(PACRIM-S17-006-2025) Process Investigation and Performance Optimization of Binder Jetting for Complex Ceramics (Invited)

Q. Wei*[1]; W. Zhao[1]

1. Huazhong University of Science and Technology, China

9:00 AM

(PACRIM-S17-007-2025) Robust Thermomechanical Sintering Simulation of 3D-Printed Objects with Various Internal Lattice Filling Structures (Invited)

C. Manière*[1]; J. Diatta[2]; S. Marinel[1]

1. Laboratoire de Cristallographie et Sciences des Materiaux, France
2. Universite Assane SECK de Ziguinchor, Senegal

9:30 AM

(PACRIM-S17-008-2025) Preceramic Molecular Precursor Derived Ceramics For Extreme Environments (Invited)

S. Ren*[1]

1. University of Maryland, USA

10:00 AM

Break

10:20 AM

(PACRIM-S17-009-2025) Fundamental Understanding of Thermal Debinding of 3D Printed Ceramic Body: Numerical Simnulation and Experimental Verification

B. Gao*[1]; Y. Li[1]; H. Son[1]; C. Bae[1]

1. Korea Institute of Materials Science, Republic of Korea

10:40 AM

(PACRIM-S17-010-2025) Magnetically assisted 3D printing of functional materials (Invited)

H. Le Ferrand*[1]

1. Nanyang Technological University, Singapore

11:10 AM

(PACRIM-S17-012-2025) Charge-discharge properties of tin-iron-soda-silicate glass anode for oxide all-solid-state sodium battery prepared by laser irradiation process

F. Sato*[1]; T. Honma[1]

1. Nagaoka Univeristy of Technology, Department of Materials Science and Bioengineering, Japan

PacRim S20 - Advanced Functional Materials for Clean Energy Solutions

PACRIM Symposium 20 - Advanced synthesis and characterization of solar / electric fuel materials I

Room: Georgia A

Session Chairs: Flavio de Souza, Federal University of ABC; Ooman Vargese, University of Houston

8:00 AM

(PACRIM-S20-014-2025) On Efficient Materials & Devices for Solar SeaWater Splitting (Invited)

L. Vayssieres*[1]

1. Xi'an Jiaotong University, IRCRE, China

8:30 AM

(PACRIM-S20-015-2025) Materials Tuning of Visible-light Responsive Peroxo-modified Titanate Nanotube via Ion Doping (Invited)

H. Yasunari[1]; Y. Kondo[2]; H. Park[1]; H. Nishida[1]; Y. Seo[1]; S. Chou[1]; T. Goto[1]; T. Sekino*[1]

1. Osaka University, SANKEN (The Institute of Scientific and Industrial Research), Japan
2. Osaka University, Japan

9:00 AM

(PACRIM-S20-016-2025) Molecular precursor route to heterogeneous nanocatalysts

S. Mishra*[1]

1. University of Lyon1, Institut de Recherches sur l'Environnement et la Catalyse de Lyon (IRCELYON), France

9:30 AM

(PACRIM-S20-017-2025) Splitting of CH_4 and CO_2 Using Advanced Functional Materials (Invited)

O. K. Varghese*[1]; D. Waligo[1]; M. Paulose[2]; L. Schaffer[1]

1. University of Houston, Department of Physics and Texas Center for Superconductivity, USA
2. University of Houston, Department of Physics, USA

PACRIM Symposium 20 - Advanced synthesis and characterization of solar and electric fuel materials II

Room: Georgia A

Session Chairs: Lionel Vayssieres, Xi'an Jiaotong University; Bruce Koel, Princeton University

10:00 AM

Break

10:20 AM

(PACRIM-S20-018-2025) Advanced Architectures for Solar-Driven Water Splitting and CO_2 Reduction (Invited)

R. Solarska*[1]

1. Uniwersytet Warszawski, Centre of New Technology, Poland

10:50 AM

(PACRIM-S20-019-2025) Hematite Photoelectrode Synthesis for Scalable Photoelectrochemical Devices: A Cost-Effective Approach with Improved Performance (Invited)

F. L. de Souza*[1]

1. Centro Nacional de Pesquisa em Energia e Materiais, CNPEM, Brazil

PacRim S28 - Joining and Integration of Ceramics for Enabling Complex Components and Adv Apps

PACRIM Symposium 28 - Joining and Integration of Ceramics for Enabling Complex Components and Adv Apps I

Room: Seymour

Session Chair: Heloisa Ramlow, Swiss Federal Laboratories for Materials Science and Technology

10:20 AM

(PACRIM-S28-001-2025) Enhanced hydrothermal corrosion resistance of SiC/SiC joints with CaO-Modified Y_2O_3-Al_2O_3-SiO_2 Glass Under PWR Conditions

S. Yang*[1]

1. Northwestern Polytechnical University School of Materials Science and Engineering, China

10:40 AM

(PACRIM-S28-002-2025) Low-Temperature Direct Bonding of Silicate Glasses Using NH_3 Plasma Activation

S. Nagai*[1]; K. Nakao[1]; Y. Hayashi[1]

1. AGC Kabushiki Kaisha, Japan

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - Thermodynamic, kinetic, physical, and environmental properties I

Room: Plaza A

Session Chairs: Elizabeth Opila, University of Virginia; Jing Liu, University of Alberta

8:00 AM

(PACRIM-S29-024-2025) Exploring High Entropy Materials for Advanced Technologies (Invited)

Y. Zhang*[1]

1. Queen's University, Mechanical and Materials Engineering, Canada

8:40 AM

(PACRIM-S29-025-2025) Development of High Entropy Ceramic Materials for Nuclear Waste Management (Invited)

M. Lee[1]; H. Seong[1]; S. Lee[1]; H. Ryu*[1]

1. Korea Advanced Institute of Science and Technology, Republic of Korea

9:10 AM

(PACRIM-S29-026-2025) Xenotime Rare Earth Orthophosphates as EBC Candidate Materials (Invited)

I. Hawthorne[1]; W. Riffe[1]; P. E. Hopkins[2]; E. J. Opila*[1]

1. University of Virginia, Materials Science and Engineering, USA
2. University of Virginia, USA

9:40 AM

(PACRIM-S29-027-2025) Exploring Thermally Grown Complex Concentrated Oxides on AlCrTiVNi$_5$ Alloy for Enhanced High-Temperature Performance (Invited)

J. Liu*[1]; H. Sun[1]; H. Zhang[1]

1. University of Alberta, Chemical and Materials Engineering, Canada

10:10 AM

Break

10:30 AM

(PACRIM-S29-028-2025) Novel transparent high-entropy sesquioxide ceramics with high physicochemical plasma etching resistance

Y. Shin[1]; S. Ham[1]; H. Kim[1]; M. Kim[1]; J. Ko[1]; J. Lee[1]; Y. Park[1]; H. Ma*[1]

1. Korea Institute of Materials Science, Republic of Korea

11:00 AM

(PACRIM-S29-029-2025) Design of Novel Materials Using Machine Learning (Invited) ***WITHDRAWN***

S. Fensin*[1]; H. Ozdemir[2]; J. Callanan[1]; M. Htoon[1]; B. Lovato[1]; J. Valdez[1]; J. Cooley[1]

1. Los Alamos National Laboratory, USA
2. Koc Universitesi Muhendislik Fakultesi, Turkey

PacRim S31 - On the design & dev of next generation nanolayered (3D and 2D) structural & func mtls

PACRIM Symposium 31 - Next-generation nanolayered structural/functional materials II

Room: Oxford

Session Chairs: Surojit Gupta, University of North Dakota; Babak Anasori, Purdue University

8:00 AM

(PACRIM-S31-007-2025) Synthesis of Nanoscale Ag-Intercalated Muscovite Mesocrystal

C. Sung*[1]; Y. Chu[2]

1. National Yang Ming Chiao Tung University, Department of Materials Science and Engineering, Taiwan
2. National Tsing Hua University, Department of Materials Science and Engineering, Taiwan

8:20 AM

(PACRIM-S31-008-2025) Synthesis and Oxidation Behavior of MAX Phase-Based Coatings Produced by Magnetron Sputtering for High-Temperature Applications

R. Anton*[2]; K. Beck[1]; E. Wiesner[2]; S. Boubtane[2]; M. Galetz[1]; U. Schulz[2]; N. Laska[2]

1. DECHEMA Forschungsinstitut, Germany
2. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Germany

8:40 AM

(PACRIM-S31-009-2025) On the design and manufacturing of MAX and MAB phases

S. Gupta*[1]

1. University of North Dakota, Mechanical Engineering, USA

9:00 AM

(PACRIM-S31-010-2025) Designing Bio-mimetic Multifunctional Core-shell Fiber aerogels

A. Isari*[1]; M. Arjmand[1]

1. The University of British Columbia, School of Engineering, Canada

9:20 AM

(PACRIM-S31-011-2025) Exotic Photothermal Properties in Ti-based MXenes for Optoelectronics

S. Ippolito*[1]; F. Urban[1]; P. Samori[2]; J. E. Spanier[1]; Y. Gogotsi[1]

1. Drexel University College of Engineering, Materials science and engineering, USA
2. Universite de Strasbourg, France

9:40 AM

(PACRIM-S31-012-2025) Bio-mimetic, knittable Multifunctional Core-shell Fiber aerogels

A. Isari*[1]

1. The University of British Columbia, School of Engineering, Canada

PacRim S1 - Environmental barrier coatings for high-performance ceramics

PACRIM Symposium 1 - Environmental barrier coatings for high-performance ceramics II

Room: Oxford

Session Chair: Anant Setlur, GE Global Research

1:15 PM

(PACRIM-S01-005-2025) Sealing systems in aeroengines and their environmental challenges (Invited)

S. Schruefer*[1]

1. Rolls-Royce Deutschland Ltd und Co KG, Materials Engineering, Germany

1:45 PM

(PACRIM-S01-006-2025) Steam oxidation of ytterbium silicate environmental barrier coatings produced using electrophoretic deposition and air plasma spray (Invited)

P. Xiao*[1]

1. The University of Manchester, Department of Materials, United Kingdom

2:15 PM

(PACRIM-S01-007-2025) Oxidation mechanism of modified silicon/ytterbium disilicate environmental barrier coatings

K. Lee*[1]; J. Stuckner[1]; A. Garg[1]; R. I. Webster[1]; L. Wilson[1] ***WITHDRAWN***

1. NASA Glenn Research Center, USA

2:35 PM

Break

PACRIM Symposium 1 - Environmental barrier coatings for high-performance ceramics III

Room: Oxford

Session Chair: Anant Setlur, GE Global Research

3:30 PM

(PACRIM-S01-008-2025) High temperature coatings for SiC_f/SiC composite (Invited)

J. Wang*[1]

1. Institute of Metal Research Chinese Academy of Sciences, Advanced Ceramics and Composites Division, China

4:00 PM

(PACRIM-S01-009-2025) CMAS degradation of Ytterbium disilicate coatings: Texture evolution of apatite phase with exposure time at high temperature

E. B. Owusu*[1]; A. R. Romero[2]; B. Zhang[1]; O. Gavalda-Diaz[4]; N. Neate[3]; K. Voisey[1]

1. University of Nottingham, Mechanical, Materials and Manufacturing, United Kingdom
2. Tecnalia, Basque Research and Technology Alliance (BRTA), Mikeletegi Pasealekua 2, Spain
3. University of Nottingham Nanoscale and Microscale Research Centre, United Kingdom
4. Department of Materials, Royal School of Mines, Imperial College London, United Kingdom

PacRim S2 - Frontier of modeling and Design of Ceramics and composites

PACRIM Symposium 2 - Modeling insights into physical properties

Room: Balmoral

Session Chairs: Kulbir Ghuman, Institut National de la Recherche Scientifique; Takafumi Ogawa, Japan Fine Ceramics Center

1:15 PM

(PACRIM-S02-008-2025) Unraveling Photoplasticity in ZnS: Enhanced Peierls Stress under Photoexcitation (Invited)

Q. An*[1]

1. Iowa State University, Materials Science and Engineering, USA

1:45 PM

(PACRIM-S02-009-2025) Electronic and Optical Features of 2D and quasi-2D halide Pb-free Perovskites (Invited)

G. Giorgi*[1]; M. Palummo[2]; K. Yamashita[3]

1. The University of Perugia, Department of Civil & Environmental Engineering, Italy
2. Universita degli Studi di Roma Tor Vergata, Department of Physics and INFN, Italy
3. Yokohama Shiritsu Daigaku, Quantum Chemistry Division, Japan

2:15 PM

(PACRIM-S02-010-2025) Oxygen vacancy formation energetics in MgO-based high entropy oxides from DFT and experimental validation (Invited)

O. Opetubo[1]; T. Shen[1]; R. Bordia[1]; D. Aidhy*[1]

1. Clemson University, Materials Science and Engineering, USA

2:45 PM

(PACRIM-S02-011-2025) Designing the ion-exchange process for metastable phases: a case of ternary wurtzite-type-related oxides

I. Suzuki*[1]; M. Kita[2]; K. Washizu[1]; T. Omata[1]

1. Tohoku University, IMRAM, Japan
2. Toyama National College of Technology, Japan

PACRIM Symposium 2 - Modeling mechanical behavior at various scales

Room: Balmoral

Session Chair: Qi An, Iowa State University

3:30 PM

(PACRIM-S02-012-2025) Data Analytics-Enabled Phase Field Modeling of Microstructurally Complex Materials (Invited)

R. Garcia*[1]

1. Purdue University, Materials Engineering, USA

4:00 PM

(PACRIM-S02-013-2025) From Theory to Practice: Modeling Microscopic Chemical and Physical Phenomena using Macroscopic Computational Fluid Dynamics for Glass Manufacturing

K. Kirchner*[1]; J. Lotter[1]; T. van Lier[1]; S. Cooper[1]

1. CelSian, USA

PacRim S3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies

PACRIM Symposium 3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies IV

Room: English Bay

Session Chairs: Kevin Huang, University of South Carolina; Toshio Suzuki, Precision Combustion, Inc.

1:15 PM

(PACRIM-S03-014-2025) Development of high-performance protonic ceramic cells for highly efficient applications (Invited)

H. Shimada*[1]; M. Fujioka[1]; K. Watanabe[1]; S. Aman[1]; M. Momai[1]; Y. Yamaguchi[1]; K. Nomura[1]; Y. Mizutani[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

1:45 PM

(PACRIM-S03-015-2025) Proton solubility in perovskite-type fuel cell air electrodes: a first-principles modeling perspective (Invited)

C. Fisher*[1]; A. Taguchi[1]; T. Ogawa[1]; A. Kuwabara[1]

1. Japan Fine Ceramics Center, Japan

2:15 PM

(PACRIM-S03-016-2025) Oxygen permeability and PCFC cathode perfomance of Ba-Co-Fe-Y based mixed conductive perovskite oxides (Invited)

I. Kagomiya[1]; M. Alam*[1]; T. Kato[1]; K. Watanabe[2]; H. Shimada[2]; H. Sumi[2]; Y. Mizutani[2]

1. Nagoya Kogyo Daigaku, Japan
2. Sangyo Gijutsu Sogo Kenkyujo Chubu Center, Japan

2:45 PM

(PACRIM-S03-017-2025) Processing and Challenges Scaling-up protonic membranes for electrochemical cells (Invited)

L. Kwati*[1]; R. Kunafiev[2]; I. Povstugar[3]; J. Otomo[4]; S. Yamate[4]; W. A. Meulenberg[5]; T. Ishihara[6]; H. Matsumoto[1]

1. Kyushu Daigaku Carbon Neutral Energy Kokusai Kenkyujo, Center for Energy System Design (CESD), Japan
2. Graduate School of Engineering, Kyushu University, Fukuoka, Japan, Japan
3. Central Institute of Engineering, Electronics and Analytics 3 (ZEA 3), Forschungszentrum Jülich, Germany
4. Institute of Science Tokyo, Department of Transdisciplinary Science and Engineering, School of Environment and Society, Japan
5. Forschungszentrum Julich Institut fur Energie- und Klimaforschung, IEK-1 Membranes, Germany
6. Kyushu University, International Institute for Carbon-Neutral Energy Research, Japan

PACRIM Symposium 3 - Solid Oxide Fuel Cells and Green Hydrogen Technologies V

Room: English Bay

Session Chairs: Sebastian Molin, Gdansk University of Technology; Fatih Dogan, Missouri University of Science and Technology

3:30 PM

(PACRIM-S03-019-2025) Advanced, Reversible Solid Oxide Cells

T. Suzuki*[1]; M. Dewa[1]; N. Cameron[1]; C. Junaedi[1]; S. Roychoudhury[1]

1. Precision Combustion, Inc., USA

3:50 PM

(PACRIM-S03-020-2025) Electrochemical reactions of ammonia formation and decomposition in protonic ceramic electrolysis cells

J. Otomo*[1]; M. Okazaki[1]

1. Institute of Science Tokyo, Department of Transdisciplinary Science and Engineering, School of Environment and Society, Japan

4:10 PM

(PACRIM-S03-021-2025) Development of cathode for protonic ceramic fuel cell using Yb-doped barium zirconate

Y. Okuyama*[1]; T. Nishiya[1]

1. Miyazaki Daigaku Kogakubu Daigakuin Kogaku Kenkyuka, Japan

PacRim S5 - Geopolymers - Low Energy and Environmentally Friendly/Scalable Ceramics

PACRIM Symposium 5 - Geopolymers - Low Energy and Environmentally Friendly, Scalable Ceramics

Room: Stanley

Session Chair: Yaman Boluk, University of Alberta

1:15 PM

(PACRIM-S05-001-2025) Production and performance of hybrid copper mine tailings-based geopolymer cement composite (Invited)

E. d. Magdaluyo*[1]; K. Baladad[1]; D. Quinagoran[1]; J. Narvaez[1]; J. Cruz[1]; D. Tungpalan[1]

1. University of the Philippines, Philippines

1:45 PM

(PACRIM-S05-002-2025) Synthesis and Characterization of Waste-Based Geopolymer Binders for Radiation Shielding Applications (Invited)

R. F. Florez*[1]; S. Restrepo-Arcila[2]; C. H. Giraldo[3]; H. A. Colorado L.[2]

1. Canadian Nuclear Laboratories, Advanded Reactors Chemistry and Materials, Canada
2. Universidad de Antioquia, Colombia
3. Missouri University of Science and Technology, Nuclear Engineering, USA

2:15 PM

(PACRIM-S05-003-2025) Pilot Scale Production and Field Testing of Low CO_2 Emission Construction Material at the University of Alberta Campus (Invited)

Y. Boluk*[1]; V. Bindiganavile[1]; J. Goncalves[1]; H. Sajid[1]; M. Gül[2]

1. University of Alberta, Civil and Environmental Engineering, Canada
2. University of Alberta, Canada

2:45 PM

(PACRIM-S05-004-2025) Enhancing Cement Sustainability through the Use of Porous Supplemental Cementitious Materials

J. M. Rimsza*[1]; M. Mills[1]; A. Tuinukuafe[1]

1. Sandia National Laboratories, USA

PacRim S10 - Ceramics of Tomorrow for Green Energy and Cleaner Environment

PACRIM Symposium 10 - Ceramics of Tomorrow for Green Energy and Cleaner Environment II

Room: Georgia B

Session Chairs: Oomman Varghese, University of Houston; Gunnar Westin, Uppsala University

1:15 PM

(PACRIM-S10-012-2025) Microwave-Assisted Synthesis as New Route to Bright Rare-Earth-Based Ceramic Materials (Invited)

E. Hemmer*[1]

1. University of Ottawa, Chemistry and Biomolecular Sciences, Canada

1:45 PM

(PACRIM-S10-010-2025) Complex semiconductor structures built from Ångström to microstructure (Invited)

G. Westin*[1]

1. Uppsala University, Sweden

2:15 PM

(PACRIM-S10-011-2025) From MXene to Oxide: Nanoscale Materials Transformation for Advances in Energy Storage (Invited)

E. Pomerantseva*[1]

1. Drexel University, Materials Science and Engineering, USA

2:45 PM

(PACRIM-S10-009-2025) Catalytic Performance of Magnetic Field-Assisted Chemical Vapor Deposition Synthesized $CoFe_2O_4$ Thin Films: Electrochemical Ammonia Synthesis (Invited)

T. Karimpour[1]; T. Fischer[1]; S. Mathur*[1]

1. Universitat zu Koln, Institute of Inorganic and Materials Chemistry, Germany

3:15 PM

Break

3:30 PM

(PACRIM-S10-013-2025) Tuning nanostructures of 2-D metal oxide nanosheets (Invited)

S. T. Misture*[1]

1. Alfred University, MSE, USA

4:00 PM

(PACRIM-S10-014-2025) Computational Insights into the interfaces and grain boundaries present in LLTO (Invited)

J. C. Madrid[1]; K. K. Ghuman*[1]

1. Institut National de la Recherche Scientifique, Énergie Matériaux Télécommunications, Canada

4:30 PM

(PACRIM-S10-015-2025) Hydrothermal conversion to pollucite and the hydroxyapatite coating for the fixation of radioactive cesium ions

E. Uehara*[1]; L. Tong[1]; A. Maki[1]; M. Iwama[1]; K. Komazawa[1]; K. Tamura[2]; Y. Watanabe[1]

1. Hosei Daigaku Rikogakubu Daigakuin Rikogaku Kenkyuka, Japan
2. Busshitsu Zairyo Kenkyu Kiko, Japan

4:50 PM

(PACRIM-S10-016-2025) Synthesis, dielectric study and energy storage characteristics of Nb_2O_5 added $BaTiO_3$ based electroceramics

S. Ahmad*[1]

1. Islamia College Peshawar, Physics/ Centre for material sciences, Pakistan

5:10 PM

(PACRIM-S10-017-2025) Ceramic Materials for Thermophotovoltaic Optical Emitters (Invited)

M. Leite*[1]

1. UC Davis, Materials Science and Engineering, USA

PacRim S14 - Advanced Structural Ceramics and CMCs for Ultra Extreme Environments

PACRIM Symposium 14 - Advanced Structural Ceramics and CMCs for Ultra Extreme III

Room: Cypress

Session Chairs: Tamás Csanádi, Institute of Materials Research, Slovak Academy of Sciences; Carolina Tallon, Virginia Tech

1:15 PM

(PACRIM-S14-011-2025) Oxidation of Refractory Metal Carbides in Molecular and Atomic Oxygen (Invited)

C. Stephens[1]; S. Donaldson[1]; M. Richwine[1]; C. Recupero[1]; E. J. Opila*[1]

1. University of Virginia, Materials Science and Engineering, USA

1:45 PM

(PACRIM-S14-012-2025) Oxidation resistance of UHTCMCs fabricated by Liquid Silicon Infiltration and Sintering

A. Vinci*[1]; L. Zoli[1]; M. Friess[2]; D. Sciti[1]

1. CNR - ISSMC, Italy
2. DLR - German Aerospace Center, Institute of Structures and Design, Germany

2:05 PM

(PACRIM-S14-013-2025) Prediction and Understanding of Thermal Transport in Crystalline Materials at Ultra-High Temperatures (Invited)

T. Feng*[1]

1. The University of Utah, Mechanical Engineering, USA

2:35 PM

(PACRIM-S14-014-2025) Orientation-dependent reinforcing mechanisms of SiC/carbon nanotube composites: A reactive molecular dynamics simulation study (Invited)

Y. Su*[1]; Y. Wang[2]; Y. Ootani[1]; N. Ozawa[3]; M. Kubo[1]

1. Tohoku University, Institute for Materials Research, Japan
2. Research Institute of Frontier Science, Southwest Jiaotong University, China
3. Tohoku University, New Industry Creation Hatchery Center, Japan

3:05 PM

Break

4:00 PM

(PACRIM-S14-015-2025) Synthesis pathways of $(HfZrTiCe/La/Y)O_{2-x}$ nanoparticles via benzyl alcohol route at critical temperature (Invited)*WITHDRAWN*

F. Guo*[1]

1. Shanghai Jiao Tong University, School of Materials Science and Engineering, China

4:30 PM

(PACRIM-S14-016-2025) Creating anisotropic properties in conductive ceramics by incorporating hBN flakes

H. Liang*[1] *WITHDRAWN*

1. Wuhan University of Technology, China

PacRim S17 - Additive Manufacturing of Ceramics and Composites

PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites III

Room: Prince of Wales

Session Chairs: Florian Bouville, ETH Zürich; Esther Valliant, Himed

1:15 PM

(PACRIM-S17-014-2025) Irradiative Ceramization of Chemically Bound Phosphate Ceramics (CBPCs) to Enable Direct Additive Manufacturing of Ceramic Composites (Invited)

M. D. Losego*[1]

1. Georgia Institute of Technology, School of Materials Science and Engineering, USA

1:45 PM

(PACRIM-S17-015-2025) Inorganic/inorganic composites through emulsion templating (Invited)

T. Jiang[1]; Y. Hong[1]; E. Poloni[1]; S. Zhou[1]; E. Saiz[1]; F. Bouville*[1]

1. Imperial College London, Department of Materials, United Kingdom

2:15 PM

(PACRIM-S17-016-2025) Characterisation and Testing of 3D-printed ceramic and PM-parts with novel Thermo-Optical-Measuring application

A. Diegeler*[1]

1. Fraunhofer ISC, Center of Device Development, Germany

2:35 PM

(PACRIM-S17-017-2025) Accelerating Discovery of Ultra-High-Temperature Ceramics via High-Throughput Methods and Additive Manufacturing (Invited)

K. Min[1]; K. Wojtowicz[1]; I. McCue[2]; C. Hansen*[1]

1. University of Massachusetts Lowell, Mechanical & Industrial Engineering, USA
2. Northwestern University, Materials Science & Engineering, USA

3:05 PM

Break

3:30 PM

(PACRIM-S17-018-2025) UV-assisted and rotational robocasting of ceramic composites for electrical insulation, catalysis and bone tissue engineering (Invited)

A. Gurlo*[1]

1. Technische Universitaet Berlin, Chair of Advanced Ceramic Materials, Germany

4:00 PM

(PACRIM-S17-019-2025) Developing an Hydroxyapatite Ink for DLP 3D Printing: Lessons Learned by a Leading HA Manufacturer (Invited)

E. Valliant*[1]

1. Himed, R+D, USA

4:30 PM

(PACRIM-S17-020-2025) Defect Evaluation and Mitigation in the Material Extrusion of Highly-Loaded Alumina Paste

P. Brune*[1]; M. Tammi[1]; W. Parks[1]; M. C. Patterson[1]

1. Kratos Defense and Security Solutions, Kratos SRE R&D, USA

PacRim S20 - Advanced Functional Materials for Clean Energy Solutions

PACRIM Symposium 20 - Advanced characterization techniques I

Room: Georgia A

Session Chairs: Clemens Heske, University of Nevada Las Vegas; Marc Willinger, Technische Universitat Munchen

1:15 PM

(PACRIM-S20-021-2025) Emerging X-ray spectroscopy for energy materials (Invited)

C. Dong*[1]

1. Tamkang University, Department of Physics, Taiwan

1:45 PM

(PACRIM-S20-022-2025) X-ray spectroscopies for atomic-scale insights in energy materials for clean energy solutions (Invited)

S. Mukherjee*[1]; S. Riva[1]; K. Klementiev[2]; J. Scragg[3]; M. Hahlin[3]; H. Rensmo[3]

1. Uppsala Universitet, Department of Physics and Astronomy, Sweden
2. Lunds Universitet, Sweden
3. Uppsala Universitet, Sweden

2:15 PM

(PACRIM-S20-023-2025) Discovery and Performance of New Electrocatalyst Materials for Energy and Sustainability (Invited)

B. E. Koel*[1]

1. Princeton University, Chemical and Biological Engineering, USA

2:45 PM

(PACRIM-S20-024-2025) Charge carrier dynamics of photo-functional semiconductor films in correlation with their device performance (Invited)

Y. Tachibana*[1]

1. RMIT University, School of Engineering, Australia

PACRIM Symposium 20 - Advanced characterization techniques II

Room: Georgia A

Session Chair: Lars Österlund, Uppsala Universitet

3:30 PM

(PACRIM-S20-025-2025) Material growth, self-organization, and pattern formation: Insights from multi-scale operando electron microscopy (Invited)

M. Willinger*[1]

1. Technische Universitat Munchen, Chemistry, Germany

4:00 PM

(PACRIM-S20-026-2025) Symtheiss and investigation of Eu-doped ZnO nanosponges: Where are the Eu atoms? (Invited)

C. Tai*[1]; S. Feng[1]; S. Naim Katea[2]; M. Ek[2]; G. Westin[2]

1. Stockholms Universitet, Department of Chemistry, Sweden
2. Uppsala Universitet, Department of Chemistry - Ångström, Sweden

4:30 PM

(PACRIM-S20-027-2025) Chemical solution-based fabrication of piezoelectric materials for energy applications (Invited)

M. Einarsrud*[1]

1. Norges teknisk-naturvitenskapelige universitet, Materials Science and Engineering, Norway

5:00 PM

(PACRIM-S20-028-2025) Multiscale modelling of molecules and materials (Invited)

P. Broqvist*[1]

1. Uppsala University, Department of Chemistry- Ångström Laboratory, Sweden

PacRim S26 - Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management

PACRIM Symposium 26 - Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management I

Room: Plaza B

Session Chairs: Xiao-Ying Yu, Oak Ridge National Laboratory; John McCloy, Washington State University; Xiaonan Lu, Pacific Northwest National Lab; William Weber, University of Tennessee; Jim Neeway, Pacific Northwest National Lab

1:15 PM

(PACRIM-S26-001-2025) Use of Ion Beams to Simulate Alpha-Decay Damage in Nuclear Waste Forms (Invited)

W. J. Weber*[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science & Engineering, USA

1:45 PM

(PACRIM-S26-002-2025) Machine Learning in Nuclear Waste Glass Formulation and Property Model Development (Invited)

X. Lu*[1]; J. Vienna[2]

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA
2. Pacific Northwest National Lab, USA

2:15 PM

(PACRIM-S26-003-2025) Evolution of the physico-chemical behaviour of ceramic matrix composites in deep geological disposal

G. German*[1]; E. Perret[3]; F. Rebillat[1]; A. Debelle[2]; X. Bourbon[2]; J. Roger[1]

1. Universite de Bordeaux, France
2. Agence nationale pour la gestion des dechets radioactifs, France
3. Institut de Recherche Technologique Antoine de Saint-Exupery, France

2:35 PM

(PACRIM-S26-004-2025) Advancements in Predictive Modeling of Refractory Corrosion for Enhanced Longevity of Nuclear Waste Glass Melters

D. P. Guillen*[1]; J. Acierno[1]; T. Jin[2]; J. Amoroso[3]; R. Pokorny[4]; A. A. Kruger[5]

1. Idaho National Laboratory, Materials Science and Manufacturing, USA
2. Pacific Northwest National Laboratory, USA
3. Savannah River National Laboratory, USA
4. University of Chemistry and Technology Prague, Czechia
5. US Department of Energy, Hanford Field Office, USA

2:55 PM

(PACRIM-S26-005-2025) R&D for the Thermal Treatment of Nuclear Waste in the UK

M. T. Harrison*[1]

1. United Kingdom National Nuclear Laboratory, Waste Management and Decommissioning, United Kingdom

3:15 PM

Break

3:30 PM

(PACRIM-S26-006-2025) Effect of Melt Conditions on Phosphate Glass Structure in Mixed Alkali Halide Waste Forms

L. Greiner*[2]; C. Lonergan[1]

1. Missouri University of Science and Technology, USA
2. Missouri University of Science and Technology, Materials Science and Engineering, USA

3:50 PM

(PACRIM-S26-007-2025) Processing Limits of Cermets for Nuclear Waste Form Applications

N. O. Marrero*[1]; K. Matthies[2]; S. K. Sundaram[1]

1. Alfred University, Inamori School of Engineering, USA
2. Alfred University, USA

4:10 PM

(PACRIM-S26-008-2025) Current status of treatment method for HWR resin waste and C-14 recovery technology in resin waste

K. Lee*[1]; H. Park[1]; G. Kim[1]; H. Park[2]

1. Korea Atomic Energy Research Institute, Republic of Korea
2. SKTNS, Republic of Korea

4:30 PM

(PACRIM-S26-009-2025) Geochemical Modeling of Quenched Blast Furnace Slag Alteration in Cementitious Waste Forms

J. Neeway*[1]; S. Kerisit[1]; C. L. Trivelpiece[2]; M. Asmussen[1]

1. Pacific Northwest National Lab, USA
2. Savannah River National Lab, Environmental and Process Control Technology, USA

4:50 PM

(PACRIM-S26-010-2025) Tritium and lithium transport along tritium breeding components

X. Yu*[1]; J. Son[1]; D. Senor[2]

1. Oak Ridge National Laboratory, Materials Science and Technology Division, USA
2. Pacific Northwest National Laboratory, USA

5:10 PM

(PACRIM-S26-011-2025) Bismuth-Induced Modifications in Iodine Solubility of Aluminoborosilicate Glasses Synthesized at High Pressure

S. Soudani*[1]; J. Hamon[3]; M. Paris[3]; Y. Morizet[2]

1. Washington State University, Institute of Materials Research, USA
2. Nantes Universite, Laboratoire de Planétologie et Géosciences, France
3. Institut des Materiaux de Nantes Jean Rouxel, France

PacRim S28 - Joining and Integration of Ceramics for Enabling Complex Components and Adv Apps

PACRIM Symposium 28 - Joining and Integration of Ceramics for Enabling Complex Components and Adv Apps II

Room: Seymour

Session Chair: Heloisa Ramlow, Swiss Federal Laboratories for Materials Science and Technology

1:15 PM

(PACRIM-S28-003-2025) Laser joining of ceramics and metals for manufacturing complex components in molten-salt batteries

H. Ramlow*[1]; H. Ghasemi-Tabasi[2]; M. Harald[3]; A. Burn[2]; G. Blugan[1]

1. Swiss Federal Laboratories for Materials Science and Technology, Laboratory for High Performance Ceramics, Switzerland
2. Switzerland Innovation Park Biel/Bienne AG, Switzerland
3. Battery Consult AG, Switzerland

1:35 PM

(PACRIM-S28-004-2025) Microstructure of hot-pressed ZrC and ZrC-Ti-ZrC diffusion bonded interface

S. Karcher*[1]; J. Tallan[1]; J. McCloy[1]

1. Washington State University, School of Mechanical and Materials Engineering, USA

1:55 PM

(PACRIM-S28-005-2025) Design Strategies for Joining Dissimilar Materials

M. C. Patterson*[1]; P. Brune[1]; R. Amaro[1]; W. Parks[1]; J. Tucker[1]; M. Kuttolamadom[2]; C. Mora Salcedo[2]; H. Nied[3]; A. Bujanda[5]; P. Allison[4]; C. Ritter[4]; R. Swinney[4]; V. Yun[6]; G. Kim[6]; J. Benoit[7]

1. Kratos Defense and Security Solutions, Kratos SRE R&D, USA
2. Texas A&M University, USA
3. Lehigh University, USA
4. Baylor University, USA
5. US Army Combat Capabilities Development Command, USA
6. 3DFlexible, USA
7. Sciperio, USA

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - Thermodynamic, kinetic, physical, and environmental properties II

Room: Plaza A

Session Chairs: Theresa Davey, Bangor University; Shijun Zhao, City University of Hong Kong

1:15 PM

(PACRIM-S29-030-2025) On the role of chemical disorder on the irradiation and oxidation resistance of high-entropy carbide ceramics (Invited)

S. Zhao*[1]

1. City University of Hong Kong, Hong Kong

1:45 PM

(PACRIM-S29-031-2025) Transition Metal Distribution in Dual Phase High Entropy Boride-Carbide Ceramics (Invited)

W. Fahrenholtz*[1]; S. M. Smith[1]; G. Hilmas[1]; S. Curtarolo[2]

1. Missouri University of Science & Technology, Materials Science and Engineering, USA
2. Duke University, Materials Science, Electrical Engineering and Physics, USA

2:15 PM

(PACRIM-S29-032-2025) Oxygen adsorption, absorption, and diffusion in FeCrNi medium entropy alloy: An ab initio study (Invited)

H. Zhang*[1]

1. University of Alberta, Chemical and Materials Engineering, Canada

2:45 PM

(PACRIM-S29-033-2025) Structure and property relationship in high-entropy thermoelectric materials (Invited)

J. He*[1]

1. Southern University of Science and Technology, China

3:15 PM

Break

3:30 PM

(PACRIM-S29-034-2025) Phase stability, structure distortion, and local bonding in multi-principal component UHTC transition metal carbides (Invited)

T. Davey*[1]; Y. Chen[2]

1. Bangor University, Nuclear Futures Institute, United Kingdom
2. Tohoku Daigaku, School of Engineering, Japan

4:00 PM

(PACRIM-S29-035-2025) Order to disorder transition due to entropy in layered MAX phases

B. C. Wyatt*[1]; Y. Yang[2]; P. Michalowski[3]; D. Jiang[2]; B. Anasori[1]

1. Purdue University, Materials Engineering, USA
2. Vanderbilt University, Department of Chemical and Biomolecular Engineering, USA
3. Siec Badawcza Lukasiewicz - Instytut Mikroelektroniki i Fotoniki, Poland

PacRim S33 - Ceramics for Electrochemical Energy Storage

PACRIM Symposium 33 - Ceramics for Electrochemical Energy Storage I

Room: Plaza C

Session Chairs: Michael Naguib, Tulane University; Valerie Pralong, CNRS ENSICAEN

1:15 PM

(PACRIM-S33-001-2025) Advances in next generation sustainable energy storage systems (Invited)

S. Mathur*[1]; D. Patrun[1]

1. University of Cologne, Institute of Inorganic and Materials Chemistry, Germany

1:45 PM

(PACRIM-S33-002-2025) Design of new cathode material for Na and K-ion batteries (Invited)

V. Pralong*[1]

1. CNRS ENSICAEN, France

2:15 PM

(PACRIM-S33-003-2025) Two-dimensional Molybdenum-Based MXene and MBene as Electrode Materials for Electrochemical Energy Storage

K. Eisawi*[1]; E. Loni[1]; A. Majed[1]; M. Naguib[1]

1. Tulane University, Physics and Engineering Physics, USA

2:35 PM

(PACRIM-S33-004-2025) Experimental study of energy harvesting from mechanical load on cement-lead zirconate titanate composites

V. Kumar*[1]

1. Birla Institute of Technology, MECHANICAL ENGINEERING, India

2:55 PM

(PACRIM-S33-005-2025) Metal-Organic Frameworks (MOFs) integrated separators for Li-ion Batteries

B. Saruhan-Brings*[1]; N. Wood[1]; A. Ray[1]

1. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Institute of Materials Research, Germany

3:15 PM

Break

3:30 PM

(PACRIM-S33-006-2025) Evaluation of low crystallinity in Li-rich layered oxide electrode by pair distribution function analysis (Invited)

M. Oishi*[1]; K. Nakatsuka[1]; Y. Otokura[1]; S. Hiroi[2]; K. Ohara[2]

1. Tokushima Daigaku, Department of Science and Technology, Japan
2. Shimane Daigaku, Japan

4:00 PM

(PACRIM-S33-007-2025) Tailored NMC core/shell cathode powder for long cycle life LIB batteries

S. N. Krüger[1]; B. N. Tasdemir[1]; B. Saruhan-Brings*[1]

1. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Institute of Materials Research, Germany

4:20 PM

(PACRIM-S33-008-2025) Optimizing $TiNb_2O_7$: Impact of Particle Size, Defects, and Crystallinity on Accelerated Lithiation

C. Sturgill[2]; I. Milisavljevic[1]; S. Wechsler[2]; M. Muhit[2]; H. zur Loye[2]; S. T. Misture*[1]; M. Stefik[2]

1. Alfred University, USA
2. University of South Carolina, Department of Chemistry and Biochemistry, USA

4:40 PM

(PACRIM-S33-009-2025) Reducing Surface Energy Stress in Nano-$LiCoO_2$ with Lanthanum Doping (Invited)

R. Castro*[1]; S. Dahl[2]; K. Joshi[1]

1. Lehigh University, Material Science & Engineering, USA
2. University of California Davis, USA

PacRim S34 - Carbon based mtls & smart struct for elec/photonics/elec-chemical/MEMS & energy app

PACRIM Symposium 34 - Carbon based materials and smart structures for advanced engineering application I

Room: Grouse

Session Chairs: Richard Fu, Northumbria University; Haitao Ye, University of Leicester

1:15 PM

(PACRIM-S34-001-2025) From diamond/β-SiC composites to porous diamond networks (Invited)

X. Jiang*[1]

1. University of Siegen, Institute of Materials Engineering, Germany

1:45 PM

(PACRIM-S34-002-2025) Diamond High Power and Voltage MOSFETs: Inch-Sized Wafer Growth and Power, Dynamic, RF FET Characteristics (Invited)

M. Kasu*[1]; N. Saha[1]; M. Eguchi[1]

1. Saga University, Electrical and Electronic Engineering, Japan

2:15 PM

(PACRIM-S34-003-2025) Carbon Nanotubes-Localized Surface Plasmon Fiber Optic Sensors for Gases Detection (Invited)

T. Allsop[2]; M. Al Araimi[3]; R. Arif[4]; P. Davey[5]; D. Webb[6]; A. Rozhin*[1]

1. Aston University College of Engineering and Physical Sciences, Nanoscience Research Group, Aston Institute of Photonic Technologies, United Kingdom
2. Grimsby Institute and University Centre Grimsby, Engineering, United Kingdom
3. University of Technology and Applied Sciences, Engineering, Oman
4. University of Sulaimani College of Science, Iraq
5. University of Plymouth, School of Engineering, Computing and Mathematics, United Kingdom
6. Aston University College of Engineering and Physical Sciences, Aston Institute of Photonic Technologies, United Kingdom

2:45 PM

(PACRIM-S34-004-2025) Lithium electrolytes from sustainable mineral sources and their electrochemical performance

J. Rodrigues*[1]; J. Restivo[1]; J. P. Sousa[1]

1. International Iberian Nanotechnology Laboratory, Portugal

3:05 PM

Break

3:30 PM

(PACRIM-S34-005-2025) Vertical 3D Field Effect Transistors With Nanoscale Gate-All-Around (Invited)

C. Gu*[1]

1. Chinese Academy of Sciences Institute of Physics, China

4:00 PM

(PACRIM-S34-006-2025) Polyaniline/Ta_2C MXene nanocomposites for electromagnetic noise reduction

A. Arshad*[1]; A. Elmarakbi[1]; R. Y. Fu[2]

1. Northumbria University, Mechanical and Construction Engineering, United Kingdom
2. Northumbria University, United Kingdom

4:20 PM

(PACRIM-S34-008-2025) Development of MOF-based composites as an efficient approach for CO_2 Capture and Storage

S. P. Fernandes*[1]; J. P. Sousa[1]

1. International Iberian Nanotechnology Laboratory, Portugal

4:40 PM

(PACRIM-S34-009-2025) Embedding Shape Memory Alloys into Carbon Fiber Reinforced Polymer via Embroidery for Improved Energy Absorption and Damping

E. Ghoniem*[1]; H. Ong[1]; J. Manrique[2]; S. Iwan[3]; A. Elmasry[1]; R. Y. Fu[1]; A. Elmarakbi[1]

1. Northumbria University, Mechanical and Construction Engineering, United Kingdom
2. Fundacion para la Investigacion y Desarrollo en Transporte y Energia, Spain
3. thermoPre Engineering GmbH, Germany

Friday, May 9, 2025

PacRim S2 - Frontier of modeling and Design of Ceramics and composites

PACRIM Symposium 2 - Modeling materials structure, stability, formation and degradation

Room: Balmoral

Session Chair: Laurent Karim Béland, Queen's University

8:00 AM

(PACRIM-S02-014-2025) High-Entropy Ceramics for Passive Radiative Cooling Applications: a Theoretical Standpoint (Invited)

C. Borghesi[2]; L. Latterini[4]; A. Pisello[3]; I. Castelli[5]; G. Giorgi*[1]

1. The University of Perugia, Department of Civil & Environmental Engineering, Italy
2. Consiglio Nazionale delle Ricerche, Italy
3. The University of Perugia, Department of Engineering, Italy
4. The University of Perugia, Department of Chemistry, Biology, and Biotechnology, Italy
5. Danmarks Tekniske Universitet, Department of Energy Conversion and Storage, Denmark

8:30 AM

(PACRIM-S02-015-2025) Phase stabilities of perovskite and non-perovskite lanthanide tungsten nitrides from first principles

C. Fisher*[1]; T. Ogawa[1]; H. Moriwake[1]

1. Japan Fine Ceramics Center, Japan

8:50 AM

(PACRIM-S02-016-2025) Atomistic modelling of pyrolsis and material properties of polymer-derived silicon-oxycarbides using novel machine-learning methods (Invited)

J. Rohrer*[1]; N. Leimeroth[1]; L. Erhard[1]; K. Albe[1]

1. Technische Universitat Darmstadt, Institut für Materialwissenschaft, Germany

PacRim S10 - Ceramics of Tomorrow for Green Energy and Cleaner Environment

PACRIM Symposium 10 - Ceramics of Tomorrow for Green Energy and Cleaner Environment III

Room: Georgia B

Session Chairs: Marina Leite, UC Davis; Gurpreet Singh Selopal, Dalhousie University

8:00 AM

(PACRIM-S10-022-2025) Synthesis of hollow nanoparticles and their applications through composite with functional ceramics (Invited)

K. Ishii*[1]; M. Fuji[2]

1. Nagoya Kogyo Daigaku, Advanced Ceramics Research Center, Japan
2. Nagoya Institute of Technology, Japan

8:30 AM

(PACRIM-S10-019-2025) Investigating the Properties of TiO_2 with High-Concentration Nb Doping (Invited)

D. Hao*[1]

1. Shanghai Institute of Ceramics Chinese Academy of Sciences, China

9:00 AM

(PACRIM-S10-020-2025) Self-assembly of metal hydroxide salt monolayer nanoparticles toward efficient electrocatalysts (Invited)

N. Tarutani*[1]

1. Hiroshima University, Graduate School of Advanced Science and Engineering, Japan

9:30 AM

(PACRIM-S10-021-2025) Hybrid multiscale ceramics: enhanced mechanical behavior and energy applications (Invited)

D. Giuntini*[1]

1. Eindhoven University of Technology, Mechanical Engineering, Netherlands

10:00 AM

Break

10:20 AM

(PACRIM-S10-018-2025) Vertically Aligned MXene Nano-ceramics for High-Performance Lithium-Ion Battery Electrodes (Invited)

H. Zarrin*[1]; Y. Liu[1]; D. Hwang[1]

1. Toronto Metropolitan University Faculty of Engineering & Architectural Science, Chemical Engineering, Canada

10:50 AM

(PACRIM-S10-023-2025) Development of photocatalytic filters for the degradation of indoor air pollutants

I. M. Oliveira*[1]; J. P. Sousa[1]

1. International Iberian Nanotechnology Laboratory, Portugal

11:10 AM

(PACRIM-S10-024-2025) Role and functionality of nanocatalysis on hydrogen and energy research: Intermediate States through Synchrotron Based Spectroscopies (Invited)

M. Huttula*[1]

1. University of Oulu, Finland

PacRim S17 - Additive Manufacturing of Ceramics and Composites

PACRIM Symposium 17 - Additive Manufacturing of Ceramics and Composites IV

Room: Prince of Wales

Session Chairs: Zehui Du, Nanyang Technological University; Chang-Jun Bae, Korea Institute of Materials Science

8:00 AM

(PACRIM-S17-023-2025) Vat photopolymerization of SiC with submicron ceramic particles (Invited)

Z. Du*[1]; T. Y. HO[1]; C. Gan[2]

1. Nanyang Technological University, Temasek lab, Singapore
2. Nanyang Technological University, School of Materials Science and Engineering, Singapore

8:30 AM

(PACRIM-S17-025-2025) Vat photopolymerization 3D printing and joining of large-scale and intricate Si_3N_4 structures with UV-thermal dual curable slurry

Z. Koh*[1]; C. Gan[1]; Z. Du[1]

1. Nanyang Technological University, Temasek lab, Singapore

8:50 AM

(PACRIM-S17-026-2025) $NiFe_2O_4$ soft magnets obtained by Direct Ink Writing 3D prinitng

L. Wilk*[1]; J. Marchewka[1]; M. T. Sitarz[1]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Poland

PacRim S18 - Nanostructured Metal Oxides and Metal Chalcogenides for Adv Functional Applications

PACRIM Symposium 18 - Nanostructured Metal Oxides and Metal Chalcogenides for Adv Functional Applications

Room: Seymour

Session Chairs: Joerg Jinschek, Danmarks Tekniske Universitet; Pelagia-Irene Gouma, The Ohio State University

8:00 AM

(PACRIM-S18-001-2025) Chalcogenide-based photonics integrated devices and applications (Invited)

J. Pan[2]; Z. Li*[1]

1. Sun Yat sen University, China
2. South China Normal University, China

8:30 AM

(PACRIM-S18-002-2025) Optimization of Green Quantum Dots–Transforming the Landscape of Next-Generation Optoelectronic Technologies

G. Selopal*[1]; K. Shanmugasundaram[1]; U. Sohail[1]; S. Madhu[1]; M. Chinna[1]

1. Dalhousie University, Department of Engineering/ Faculty of Agriculture, Canada

8:50 AM

(PACRIM-S18-003-2025) A new route for synthesis of GeTe nanoparticles using organometallic precursors

M. Bouska[1]; Y. Milasheuskaya[1]; M. Slouf[2]; P. Knotek[1]; S. Pechev[3]; L. Prokes[4]; L. Pecinka[4]; J. Havel[4]; M. Novak[1]; R. Jambor[1]; P. Nemec*[1]

1. University of Pardubice, Czechia
2. Institute of Macromolecular Chemistry, Czechia
3. Institut de Chimie de la Matière Condensée de Bordeaux – CNRS, France
4. Masarykova univerzita Prirodovedecka fakulta, Czechia

9:10 AM

(PACRIM-S18-004-2025) The effect of process temperature on the properties of ALD TiO_2 films (Invited)

T. Gougousi*[1]

1. University of Maryland Baltimore County, Physics, USA

9:40 AM

(PACRIM-S18-005-2025) The Ferrochromic Nature of ε–WO_3: A True Binary Ferroelectric

M. Rahaman*[1]; J. Flores[2]; M. Noor[3]; M. Rahaman[3]; M. Rahaman[1]; M. Rahaman[1]; M. C. Rahaman[1]; M. Newburger[2]; P. Gouma[1]

1. The Ohio State University, Materials Science and Engineering, USA
2. Air Force Research Laboratory, USA
3. The Ohio State University, USA

10:00 AM

Break

10:20 AM

(PACRIM-S18-006-2025) Hybridizing Laser-Induced Graphene (LIG) and Molybdenum Oxide (MoO_x) Using Metal-Organic Decomposition for VOC Gas Sensing

A. Katsura*[1]; O. Okanishi[1]; Y. Hirose[1]; T. Sugahara[1]

1. Kyoto Kogei Sen'i Daigaku, Japan

10:40 AM

(PACRIM-S18-007-2025) Preparation of complex metal oxide ceramic nanofibers by electrospinning

I. Shepa*[1]; K. Nemesh[1]; E. Mudra[1]; P. Hviscova[1]; R. Smolko[2]; F. Kromka[1]; M. Balaz[3]; M. Lisnichuk[1]; K. Balazsi[4]

1. Institute of Materials Research Slovak Academy of Sciences, Ustav materialoveho vyskumu Slovenskej akademie vied, Košice, Košice Region, SK, academic/eng, Slovakia
2. Ustav experimentalnej fyziky Slovenskej akademie vied, Slovakia
3. Institute of Geotechnics, Slovak Academy of Sciences, Košice 040 01, Slovakia, Slovakia
4. Centre for Energy Research HAS, Thin Film Physics, Hungary

11:00 AM

(PACRIM-S18-008-2025) 3D Self Supported Nanofibrous Visible Light Photocatalysts based on Cu Doped TiO_2

F. Mikaeili*[1]; M. Rahaman[1]; P. Gouma[1]

1. The Ohio State University, Materials Science and Engineering, USA

PacRim S20 - Advanced Functional Materials for Clean Energy Solutions

PACRIM Symposium 20 - Synthesis and characterization of carbon and thermal management materials

Room: Georgia A

Session Chairs: David Patrun, University of Cologne; Lars Österlund, Uppsala University

8:00 AM

(PACRIM-S20-029-2025) Improving Combustion Heating Energy and Emissions in Steel Manufacturing via Retrofit Ceramic Inserts (Invited)

K. Breder*[1]; B. Nakanishi[1]; D. Woolley[1]; E. Buchovecky[1]; F. Mirri[1]; B. Yoon[1]; T. Briselden[2]

1. Saint-Gobain Research North America, USA
2. Saint-Gobain, Performance Ceramics and Refractories, USA

8:30 AM

(PACRIM-S20-030-2025) Multilayer Thin Films with Synergetic Catalytic, Self-Cleaning and Antipathogenic Properties (Invited)

L. Österlund*[1]

1. Uppsala Universitet, Materials Science and Engineering, Sweden

PACRIM Symposium 20 - Advanced synthesis and characterization of metal organic framework materials

Room: Georgia A

Session Chairs: Gunnar Westin, Uppsala University; Peter Broquist, Uppsala University

9:00 AM

(PACRIM-S20-031-2025) Towards Broadband Photocatalysis (Invited)

D. Ma*[1]

1. Institut national de la recherche scientifique Centre energie Materiaux Telecommunications, Canada

9:30 AM

(PACRIM-S20-032-2025) Effect of Hydrophobicity on Porphyrin-Based Zr-MOFs for Photosynthesis of Hydrogen Peroxide

Y. Kondo*[1]; S. Mizutani[2]; Y. Kuwahara[2]; K. Mori[2]; T. Sekino[1]; H. Yamashita[2]

1. Osaka University, SANKEN, Japan
2. Osaka University, Graduate School of Engineering, Japan

9:50 AM

Break

10:10 AM

(PACRIM-S20-033-2025) Driving Sustainable and Clean Energy Solutions using Carbon Nanomaterials (Invited)

R. Naccache*[1]

1. Concordia University, Chemistry and Biochemistry, Canada

10:40 AM

(PACRIM-S20-034-2025) Photo-fenton degradation of carbon nanotubes in water: enhanced kinetics with pre-treated commercial materials

J. P. Sousa*[1]

1. International Iberian Nanotechnology Laboratory, Portugal

PacRim S26 - Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management

PACRIM Symposium 26 - Materials for Advanced Nuclear Energy Systems and Nuclear Waste Management II

Room: Plaza B

Session Chairs: Tyler Gerczak, ORNL; Xiao-Ying Yu, Oak Ridge National Laboratory; Tomas Grejtak, Oak Ridge National Laboratory

8:00 AM

(PACRIM-S26-012-2025) Insights into graphite–salt interactions via a multidisciplinary approach (Invited)

T. Grejtak*[1]; J. Qu[1]; J. Braatz[2]; W. Li[3]; J. D. Arregui-Mena[1]; N. C. Gallego[3]

1. Oak Ridge National Laboratory, Materials Science and Technology Division, USA
2. Oak Ridge National Laboratory, Radioisotope Science and Technology Division, USA
3. Oak Ridge National Laboratory, Chemical Sciences Division, USA

8:30 AM

(PACRIM-S26-013-2025) Waste management considerations for advanced fission and fusion reactors (Invited)

J. McCloy*[3]; A. Goel[2]; J. Vienna[1]; B. J. Riley[1]; X. Guo[3]

1. Pacific Northwest National Laboratory, USA
2. Rutgers The State University of New Jersey, USA
3. Washington State University, USA

9:00 AM

(PACRIM-S26-014-2025) Sorbents for mercury and iodine capture

K. Carlson*[1]; L. Sharpless[1]

1. University of Nevada Reno, USA

9:20 AM

(PACRIM-S26-015-2025) Structural Studies of Phosphate-based Electrorefiner Salt Waste Stream using X-ray Diffraction and Raman Analysis

I. C. Ajoku*[1]; H. Werth[2]; K. Carlson[2]; P. Murray[2]; B. J. Riley[3]; C. Lonergan[1]

1. Missouri University of Science and Technology, Materials Science and Engineering, USA
2. University of Nevada Reno, Chemical and Materials Engineering, USA
3. Pacific Northwest National Laboratory, Nuclear Science Division, Radiological Materials Group, USA

9:40 AM

(PACRIM-S26-016-2025) Structural analysis of the thorutite ($ThTi_2O_6$) and aeschynite ($LaTiNbO_6$) systems

M. C. Dixon Wilkins*[1]; N. S. Yaw[2]; X. Guo[2]; N. C. Hyatt[4]; J. McCloy[3]

1. Washington State University, Institute of Materials Research, USA
2. Washington State University, Department of Chemistry, USA
3. Washington State University, School of Mechanical and Materials Engineering, USA
4. University of Bristol, School of Earth Sciences, United Kingdom

10:00 AM

Break

10:20 AM

(PACRIM-S26-017-2025) The challenges facing adoption of coated particle fuel for the next generation of nuclear reactors (Invited)

T. J. Gerczak*[1]; E. Lopez Honorato[1]; G. Helmreich[1]

1. Oak Ridge National Laboratory, USA

10:50 AM

(PACRIM-S26-018-2025) Microwave-Assisted Recovery of Carbon-14 from Spent Ion Exchange Resins

G. Kim*[1]; K. Lee[1]; H. Park[1]

1. Korea Atomic Energy Research Institute, Republic of Korea

11:10 AM

(PACRIM-S26-019-2025) Sintering behavior of buffered UO_2 fuel doped with niobium oxides

S. Gobert[2]; F. Audubert[2]; J. Heintz*[1]

1. ENSMAC-Bordeaux INP, ICMCB, France
2. CEA, DES, IRESNE, DEC, Cadarache, France

PacRim S29 - Progress in High-Entropy Materials

PACRIM Symposium 29 - Manufacturing and characterization

Room: Plaza A

Session Chairs: Yongho Sohn, University of Central Florida; William Weber, University of Tennessee

8:00 AM

(PACRIM-S29-036-2025) New Alloy Development Need for Additive Manufacturing (Invited)

Y. Sohn*[1]

1. University of Central Florida, Materials Science and Engineering, USA

8:30 AM

(PACRIM-S29-037-2025) Novel Refractory High-Entropy Metal-Ceramic Composites (Invited)

B. Cui*[1]; X. Chen[1]; F. Wang[1]; S. Hu[2]; X. Liu[2]; S. Humphry-Baker[3]; M. Gao[4]

1. University of Nebraska-Lincoln, USA
2. West Virginia University, USA
3. Imperial College London, United Kingdom
4. National Energy Technology Laboratory, USA

9:00 AM

(PACRIM-S29-038-2025) Synthesis and Characterization of High Entropy Nitrides (Invited)

Z. Cheng*[1]; S. Das[2]; V. Drozd[2]; A. Durygin[2]; M. Sozal[2]; W. Li[2]; X. Bai[3]; Y. Ding[4]; Y. Guan[5]; Z. Mao[5]; M. Cinibulk[6]

1. Colorado State University, Mechanical Engineering, USA
2. Florida International University, Mechanical and Materials Engineering, USA
3. Virginia Tech, Materials Science and Engineering, USA
4. Georgia Institute of Technology, USA
5. The Pennsylvania State University - University Park Campus, USA
6. Air Force Research Laboratory, USA

9:30 AM

(PACRIM-S29-039-2025) Precursor-derived high-entropy carbides and oxides: from synthesis to additive manufacturing of customized parts (Invited)

H. Yang[1]; A. Gurlo*[1]

1. Technische Universitaet Berlin, Chair of Advanced Ceramic Materials, Germany

10:00 AM

Break

10:20 AM

(PACRIM-S29-040-2025) Properties and Ion Beam Modification of High-Entropy Oxides (Invited)

W. J. Weber*[1]; R. Tanveer[1]; V. Keppens[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science & Engineering, USA

PacRim S33 - Ceramics for Electrochemical Energy Storage

PACRIM Symposium 33 - Ceramics for Electrochemical Energy Storage II

Room: Plaza C

Session Chairs: Michael Naguib, Tulane University

8:00 AM

(PACRIM-S33-011-2025) Investigation of LiPON and LiSiPON amorphous electrolytes using high-throughput experiments

W. Berthou[2]; M. Legallais[2]; V. Motto-Ros[3]; S. Sorieul[4]; G. Yildirim[2]; F. Le Cras*[1]

1. CEA, LITEN, France
2. Commissariat à l'Energie Atomique et aux Energies Alternatives, CEA Tech Nouvelle Aquitaine, France
3. Universite Claude Bernard Lyon 1, Institut Lumière Matière, CNRS, UMR5306, France
4. Universite de Bordeaux, LP2iB, CNRS, UMR5797, France

8:20 AM

(PACRIM-S33-012-2025) TEM observations of the SnB_2O_4 glass electrode in all-solid-state lithium-ion batteries

S. Mori*[1]

1. Osaka Metropolitan University, Materials Science, Japan

8:40 AM

(PACRIM-S33-013-2025) Understanding grain boundary processes to improve the performance of oxide solid-state batteries (Invited)

C. Roitzheim*[1]; D. Fattakhova-Rohlfing[1]

1. Forschungszentrum Julich GmbH, Institute of Energy Materials and Devices IMD-2: Materials Synthesis and Processing, Germany

9:10 AM

(PACRIM-S33-014-2025) Development of fluoride ion conductors based on LaF_3

K. Kawahara*[1]; R. Ishikawa[1]; S. Sasano[1]; N. Shibata[1]; Y. Ikuhara[1]

1. Tokyo Daigaku, Japan

9:30 AM

(PACRIM-S33-015-2025) Electrochemical characteristics of oxyhalide glass-ceramic electrolytes according to crystallization for all-solid-state batteries

J. Lee*[1]; T. Kang[1]; Y. Park[1]; S. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology, Republic of Korea

9:50 AM

Break

10:10 AM

(PACRIM-S33-016-2025) Development of LAGP-based glass/powder composite solid electrolyte sheet for all solid-state batteries

Y. Park*[1]; T. Kang[2]; S. Kim[2]

1. Korea Institute of Ceramic Engineering and Technology, Display Materials center, Republic of Korea
2. Korea Institute of Ceramic Engineering and Technology (KICET), Republic of Korea

10:30 AM

(PACRIM-S33-017-2025) Enhancing Lithium Ion Conduction in LLZO-Based Solid Electrolytes through Anion Doping for Advanced Energy Storage: Insights from MD Simulations

C. Lopez Puga*[1]; J. Du[1]

1. University of North Texas, Material Science and Engineering, USA

PacRim S34 - Carbon based mtls & smart struct for elec/photonics/elec-chemical/MEMS & energy app

PACRIM Symposium 34 - Carbon based materials and smart structures for advanced engineering application II

Room: Grouse

Session Chair: Changzhi Gu, Chinese Academy of Sciences Institute of Physics

8:00 AM

(PACRIM-S34-010-2025) Surface functionalised diamond for antimicrobial applications (Invited)

R. Zhang[1]; N. Peng[2]; M. Sims[3]; H. Ye*[1]

1. University of Leicester, School of Engineering, United Kingdom
2. University of Surrey, United Kingdom
3. University of Leicester Space Research Centre, United Kingdom

8:30 AM

(PACRIM-S34-011-2025) Diamond and diamond like carbon for ultrasonic and acoustic wave applications (Invited)

R. Y. Fu*[1]

1. Northumbria University, United Kingdom

9:00 AM

(PACRIM-S34-012-2025) Plasma Jet Printing and in Situ oxidation of Mxene surfaces (Invited)

S. Krishnamurthy*[1]

1. University of Surrey, Surrey Ion Beam Centre, United Kingdom

Monday, May 5, 2025

GOMD S1 - Fundamentals of the glassy state

GOMD S1 S3 - Structural characterizations of glasses and melts I

Room: Saltspring C

Session Chairs: Daniel Neuville, IPGP-CNRS-UPC; Dominique de Ligny, University Erlangen-Nürnberg; Ashutosh Goel, Rutgers University

1:15 PM

(GOMD-S1-S3-001-2025) Thin-Film Glassy Solid Electrolytes as a New Functionality for Glass Enabling High Energy Density Li and Na All Solid State Batteries (Invited)

S. W. Martin*[1]

1. Iowa State University, Materials Science & Engineering, USA

1:45 PM

(GOMD-S1-S3-003-2025) NMR study of alkali segregation in the aluminophosphate-silicate system

P. Polette*[1]; L. Montagne[1]; F. Alousque[2]; F. O. Mear[1]

1. University of Lille - UCCS, France
2. Safran Landing System, France

2:05 PM

(GOMD-S1-S3-004-2025) Influence of Strontium and Calcium Oxide Replacement on the Structure of Bioactive and biocompatible Glasses

B. M. AlHasni*[1]

1. University of Technology and Applied Sciences, Oman

2:25 PM

(GOMD-S1-S3-005-2025) Development and Testing of a Mercury-Free Drop Calorimeter to Measure Heat Capacity of Molten Glass

H. Tokunaga*[1]; T. Sugawara[2]; S. Yoshida[1]

1. AGC Inc., Japan
2. Akita University, Japan

GOMD S1 S3 - Structural characterizations of glasses and melts II

Room: Saltspring C

Session Chair: Laurent Cormier, Sorbonne University - CNRS

3:30 PM

(GOMD-S1-S3-006-2025) Formation of a zirconium oxide crystal nucleus in the initial nucleation stage in aluminosilicate glass investigated by X-ray multiscale analysis (Invited)

Y. Onodera*[2]; Y. Takimoto[1]; H. Hijiya[1]; Q. Li[1]; H. Tajiri[3]; T. Ina[3]; S. Kohara[2]

1. AGC Inc., Japan
2. National Institute for Materials Science, Center for Basic Research on Materials, Japan
3. Japan Synchrotron Radiation Research Institute, Japan

4:00 PM

(GOMD-S1-S3-007-2025) Impact of Fe_2O_3 and P_2O_5 on Structure, Rheology, and Crystallization in Na_2O–Al_2O_3–B_2O_3–SiO_2 Glasses (Invited)

A. Goel*[1]; Y. Zhang[2]; N. Balasubramanya[2]; N. Stone-Weiss[3]; S. Kamali[4]; R. Youngman[5]; P. Florian[6]

1. Rutgers University, USA
2. Rutgers-The State University of New Jersey, Materials Science and Engineering, USA
3. Corning Incorporated, Science and Technology, USA
4. University of Tennessee Space Institute, Department of Mechanical, Aerospace and Biomedical Engineering, USA
5. Corning Incorporated, Science & Technology Division, USA
6. CEMHTI-CNRS, France

4:30 PM

(GOMD-S1-S3-008-2025) Atomic Structures of Ti-Bearing Multi-Component Silicate Glasses Using High-Resolution NMR

E. El Ghazaoui*[1]; S. Lee[2]

1. Seoul National University, Earth and Environmental Science, Republic of Korea
2. Seoul National University, Republic of Korea

4:50 PM

(GOMD-S1-S3-010-2025) Evaluation of the cooling rate during aerodynamic levitation glass processing using glass memory effect

D. de Ligny*[1]; M. Cicconi[1]; H. Reinfelder[1]; B. Moulton[2]; S. K. Wilke[4]; R. Weber[3]

1. FAU - Friedrich-Alexander-Universität Erlangen-Nürnberg, Lehrstuhl für Glas und Keramik (WW3), Germany
2. Alfred University, Glass Science and Engineering, USA
3. MDI, USA
4. Materials Development, Inc., USA

GOMD S1 S5 - Data-driven modeling and machine learning for glass science I

Room: Moresby

Session Chairs: N M Anoop Krishnan, Indian Institute of Technology Delhi; Xiaonan Lu, Pacific Northwest National Lab

1:15 PM

(GOMD-S1-S5-001-2025) Vitrification Modeling and Machine Learning for Nuclear Waste Glass Design (Invited)

K. D. Miller*[1]; J. E. Saal[1]

1. Citrine Informatics Inc, External Research, USA

1:45 PM

(GOMD-S1-S5-002-2025) Machine Learning with Gradient-Based Optimization of Nuclear Waste Vitrification with Uncertainties and Constraints

L. Gunnell*[1]; K. Manwaring[1]; X. Lu[2]; J. Reynolds[3]; J. Vienna[4]; J. Hedengren[1]

1. Brigham Young University, Chemical Engineering, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. Washington River Protection Solutions LLC, USA
4. Pacific Northwest National Lab, USA

2:05 PM

(GOMD-S1-S5-003-2025) Leveraging machine learning to predict nepheline crystallization in high level waste glasses

N. D. Joseph*[1]; S. Mannan[3]; V. Badoni[2]; N. Krishnan[3]; A. Goel[1]

1. Rutgers University, Materials Science and Engineering, USA
2. Princeton University, USA
3. Indian Institute of Technology Delhi, Civil Engineering, India

2:25 PM

(GOMD-S1-S5-004-2025) Leveraging Textual and Numerical Features for Advanced Glass Dissolution Rate Prediction

S. Mannan*[1]; I. Mandal[2]; N. Gosvami[3]; N. Krishnan[1]

1. Indian Institute of Technology Delhi, Department of Civil Engineering, India
2. Indian Institute of Technology Delhi, School of Interdisciplinary Research, India
3. Indian Institute of Technology Delhi, Department of Materials Science and Engineering, India

2:45 PM

(GOMD-S1-S5-009-2025) Discovering Symbolic Laws Directly from Trajectories with Hamiltonian Graph Neural Networks

S. Bishnoi*[1]; R. Bhattoo[1]; J. Jayadeva[2]; S. Ranu[3]; N. Krishnan[1]

1. Indian Institute of Technology, India
2. Department of Electrical Engineering, Indian Institute of Technology Delhi, India
3. Indian Institute of Technology Delhi Department of Computer Science and Engineering, India

GOMD S1 S5 - Data-driven modeling and machine learning for glass science II

Room: Moresby

Session Chairs: N M Anoop Krishnan, Indian Institute of Technology Delhi; Xiaonan Lu, Pacific Northwest National Lab

3:30 PM

(GOMD-S1-S5-005-2025) Harnessing Machine Learning Potentials for Glass Science: From Oxide Glasses to Sodium-based Solid Electrolytes (Invited)

A. Pedone*[1]

1. University of Modena and Reggio Emilia, Italy

4:00 PM

(GOMD-S1-S5-006-2025) Enhancing Sodium Ion Diffusion in NaPSO Glassy Solid-State Electrolytes via Oxygen Doping: A Molecular Dynamics Study (Invited)

K. Luo[1]; R. Zhou[1]; S. W. Martin[1]; Q. An*[1]

1. Iowa State University, Materials Science and Engineering, USA

4:30 PM

(GOMD-S1-S5-007-2025) Machine Learning-Based Boron Coordination Prediction in Glass System: Unveiling Structural Insights

A. Jose*[1]; S. Mannan[2]; N. Krishnan[2]; A. Goel[3]

1. Rutgers University, Material Science and Engineering, USA
2. Indian Institute of Technology Delhi, Department of Civil Engineering, India
3. Rutgers University, USA

4:50 PM

(GOMD-S1-S5-008-2025) Uncertainty Propagation Methods for Nuclear Waste Vitrification and Constrained Optimization

L. Gunnell*[1]; X. Lu[2]; J. Vienna[3]; D. Kim[3]; B. J. Riley[3]; J. Hedengren[4]

1. Brigham Young University, Chemical Engineering, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. Pacific Northwest National Lab, USA
4. Brigham Young University, Chemical Engineering, USA

GOMD S1 S6 - Mechanical properties of glasses I - Indentation responses

Room: Pender

Session Chair: Yueh-Ting Shih, National Taipei University of Technology

1:15 PM

(GOMD-S1-S6-001-2025) Deformation and Cracking Behavior of Glass under Sharp Contact Loading: Role of Densification (Invited)

L. Huang*[1]; H. Liu[2]; Y. Shi[2]

1. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA
2. Rensselaer Polytechnic Institute, USA

1:45 PM

(GOMD-S1-S6-003-2025) Size Dependence of Indentation Modulus in Silicate glasses

P. Shrestha[2]; M. Kazembeyki[3]; M. Bauchy[1]; C. G. Hoover*[2]

1. University of California, Los Angeles, Civil and Environmental Engineering Department, USA
2. Arizona State University, School of Sustainable Engineering and the Built Environment, USA
3. Keysight Technologies Inc, USA

2:05 PM

(GOMD-S1-S6-004-2025) Strain Rate Sensitivity in Indentation Size Effect of a Glassy ZIF-62, a Zeolitic Imidazolate Framework

P. Shrestha*[3]; F. Cao[1]; M. M. Smedskjaer[1]; M. Bauchy[2]; C. G. Hoover[3]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. University of California, Los Angeles, Civil and Environmental Engineering Department, USA
3. Arizona State University, School of Sustainable Engineering and the Built Environment, USA

2:25 PM

(GOMD-S1-S6-005-2025) Enhancing Mechanical and Tribological Properties of Sodium Alumino-Phosphosilicate Glass Through Ion-Exchange Treatments

K. S*[2]; S. Mannan[1]; A. Amarnath Reddy[3]; N. Gosvami[2]; N. Krishnan[1]

1. Indian Institute of Technology Delhi, Department of Civil Engineering, India
2. Indian Institute of Technology Delhi, Department of Materials Science and Engineering, India
3. CSIR-Central Glass and Ceramic Research Institute, Energy Materials and Devices Division, India

GOMD S1 S6 - Mechanical properties of glasses II - Characterization techniques

Room: Pender

Session Chair: Liping Huang, Rensselaer Polytechnic Institute

3:30 PM

(GOMD-S1-S6-006-2025) In situ characterization of glasses during sharp contact loading by X-ray nano diffraction (Invited)

M. M. Smedskjaer*[1]; J. Christensen[1]; M. Jalaludeen[1]; X. Ge[1]; S. S. Sørensen[1]; A. K. Christensen[1]; A. Davydok[2]; S. Kalbfleisch[3]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. Helmholtz-Zentrum Hereon, Institute of Materials Physics, Germany
3. MAX IV-laboratoriet, Sweden

4:00 PM

(GOMD-S1-S6-007-2025) Visualizing invisible subsurface defects in glass made by physical contact

S. H. Kim*[1]

1. Pennsylvania State University, Chemical Engineering & Materials Science, USA

4:20 PM

(GOMD-S1-S6-008-2025) Crack initiation load of silica glass surfaces formed during sub-critical crack growth

J. Endo*[1]; T. Sekine[2]; S. Shimizu[2]; S. Yoshida[1]

1. AGC Inc., Materials Integration Laboratories, Japan
2. AGC Inc., Innovative Technology Laboratories, Japan

4:40 PM

(GOMD-S1-S6-009-2025) Local brittle-ductile-transition and activation of viscous flow via electron irradiation in oxide glasses

S. Bruns*[1]; D. de Ligny[2]; K. Durst[1]

1. Technische Universitat Darmstadt, Physical Metallurgy, Germany
2. Friedrich-Alexander-Universitat Erlangen-Nurnberg, Materials Sciences and Engineering, Germany

GOMD S2 - Glass and interactions with its environment - Fundamentals and applications

GOMD S2 S3 - Materials for waste immobilization I

Room: Cortes

Session Chairs: Jessica Rigby, PNNL; Richard Pokorny, University of Chemistry and Technology Prague

1:15 PM

(GOMD-S2-S3-001-2025) Investigation into the processing parameters of phosphate-based dehalogenation for chloride-based waste salt (Invited)

K. Carlson*[1]

1. University of Nevada Reno, USA

1:45 PM

(GOMD-S2-S3-002-2025) Lessons in Iodine Capture from Offgas of Nuclear Waste Vitrification

D. Dixon*[1]; J. Lang[1]; M. Hall[1]; J. C. Rigby[2]; J. Marcial[2]; R. K. Brown[1]; W. C. Eaton[1]

1. Pacific Northwest National Lab, USA
2. PNNL, Radiological Materials Group, USA

2:05 PM

(GOMD-S2-S3-004-2025) Effect of Solids Loading on Simulated Melter Feed Rheology

J. Zaengle*[1]; J. C. Rigby[1]; J. Marcial[1]; J. Chun[1]; N. Bohrmann[1]; S. K. Sundaram[2]; M. Hall[1]; W. C. Eaton[1]; A. A. Kruger[3]

1. Pacific Northwest National Laboratory, USA
2. Alfred University, Inamori School of Engineering, USA
3. US Department of Energy, Office of River Protection, USA

2:25 PM

(GOMD-S2-S3-005-2025) Aggregation and Settling of Solids in Continuous Melters Processing Radioactive Waste Glass

P. Hrma*[1]

1. Hanford Field Office, USA

2:45 PM

(GOMD-S2-S3-007-2025) Alternative Reductants for Vitrifying Radioactive Waste: Fundamental Structural Evolution to Scaled Melter Tests

J. C. Rigby*[1]; J. Marcial[2]; J. Lang[3]; D. Dixon[3]; R. K. Brown[3]; M. Hall[3]; A. A. Kruger[4]

1. PNNL, Radiological Materials Group, USA
2. University of Chemistry and Technology, Prague, Laboratory of Inorganic Materials, USA
3. Pacific Northwest National Lab, USA
4. US Department of Energy, Office of River Protection, USA

3:05 PM

Break

3:30 PM

(GOMD-S2-S3-006-2025) Structural origins of high MoO_3 solubility in peraluminous alkali aluminoborosilcate glasses

N. D. Joseph*[1]; H. Kamat[2]; R. Saini[3]; G. Tricot[4]; K. Wang[5]; R. Youngman[6]; A. Goel[1]

1. Rutgers University, Materials Science and Engineering, USA
2. James R. Glidewell Dental Ceramics, Glass & Glass-ceramics, USA
3. Rutgers University, USA
4. Universite de Lille, France
5. Alfred University, USA
6. Corning Incorporated, Science & Technology Division, USA

3:50 PM

(GOMD-S2-S3-008-2025) Effect of Alternative Reductants BN and Coke on Redox Chemistry in Hanford Low Activity Waste Feeds

J. George*[1]; J. C. Rigby[1]

1. Pacific Northwest National Lab, USA

4:10 PM

(GOMD-S2-S3-009-2025) Increasing Tc/Re retention during nuclear waste vitrification by selection of alumina source and silica particle size

R. Pokorny*[1]; J. Klouzek[1]; P. Cincibusova[1]; L. Lowy[1]; M. Eret[1]; J. George[2]; P. Hrma[3]; A. A. Kruger[4]

1. University of Chemistry and Technology Prague, Czechia
2. Pacific Northwest National Lab, USA
3. AttainX, USA
4. DOE Hanford Field Office, USA

GOMD S5 - Glass manufacturing

GOMD S5 S1 - Manufacturing I

Room: Saturna Island Ballroom

Session Chairs: Lisa Lamberson, Corning Incorporated; Katelyn Kirchner, Celsian Glass USA

1:15 PM

(GOMD-S5-S1-001-2025) Our efforts to recycling of waste glass from end-of-life vehicles (Invited)

T. Kuzuya*[1]; T. Naganuma[2]; H. Matsushima[2]; K. Sawada[1]; N. Sawaguchi[1]; A. Sato[3]; K. Deguchi[4]; H. Inano[5]

1. Muroran Kogyo Daigaku, Japan
2. Hokkaido Daigaku, Japan
3. MATEC Inc., Japan
4. Fukagawaglass, Japan
5. Chiho Dokuritsu Gyosei Hojin Hokkaidoritsu Sogo Kenkyu Kiko, Japan

1:45 PM

(GOMD-S5-S1-002-2025) Reducing Energy Consumption and Carbon Dioxide Emissions from Glass Manufacture

E. Ahizi*[1]; D. Deng[2]; D. Kabir[1]; P. A. Bingham[2]

1. Sheffield Hallam University, Engineering and Maths, United Kingdom
2. Sheffield Hallam University, Materials and Engineering Research Institute, United Kingdom

2:05 PM

(GOMD-S5-S1-003-2025) Development of a sustainable, high-quality Ba-, Sb- and B-free art glass

C. H. Roos*[1]

1. Rheinisch-Westfalische Technische Hochschule Aachen, Glass and Glass Ceramic, Germany

2:25 PM

(GOMD-S5-S1-004-2025) New Pathways to Reduce the Carbon Footprint of Glass?

D. R. Neuville*[1]; T. Arnal[1]; L. Cormier[2]; N. Schibille[3]

1. IPGP, Geomat, France
2. Sorbonne University - CNRS, IMPMC, France
3. Institut de Recherche sur les Archeomateriaux, France

2:45 PM

(GOMD-S5-S1-005-2025) ZeroCO_2 Glass: Advancing the Path to Carbon-Neutral Container Manufacturing

D. K. Orzol*[1]; S. Thiele[1]; S. Pietsch[1]

1. IPGR - International Partners in Glass Research e.V., Germany

GOMD S5 S1 - Manufacturing II

Room: Saturna Island Ballroom

Session Chairs: Irene Peterson, Corning Incorporated; Luiz Pereira, Université de Munich (LMU)

3:30 PM

(GOMD-S5-S1-006-2025) Sustainable Manufacturing: Ideas to Overcome Technical Barriers to Wider Adoption of Electric Melting

S. Cooper[1]; K. Kirchner*[1]; E. Muskovin[1]; J. Lang[3]; J. Blevins[4]; B. Naveken[4]; S. Rutkowski[2]

1. CelSian, USA
2. RoMan Manufacturing, USA
3. Pacific Northwest National Laboratory, USA
4. Toledo Engineering Co., USA

3:50 PM

(GOMD-S5-S1-007-2025) Shaping the Future of Glass: Advances in Modeling and Measurements for Sodium-Reduced Glasses

M. Bay*[1]; S. Thiele[2]; C. H. Roos[1]

1. Rheinisch-Westfalische Technische Hochschule Aachen, Institute of Mineral Engineering - Chair of Glass and Glass-ceramic, Germany
2. International Partners in Glass Research (IPGR) e.V., Germany

4:10 PM

(GOMD-S5-S1-008-2025) From differential equations to melting furnace design (Invited)

W. Kuhn*[1]

1. Fives Stein, Glass division, France

4:40 PM

(GOMD-S5-S1-009-2025) The effects of high water vapor atmosphere on float glass and its production process (Invited)

T. Maehara*[1]; H. Tokunaga[2]; T. Miura[1]

1. AGC Inc., Innovative Technology Laboratories, Japan
2. AGC Inc., Materials Integration Laboratories, Japan

5:10 PM

(GOMD-S5-S1-010-2025) Thermodynamic analysis of the chemical reactions in the float bath: Development of the SnO-SnO_2-SiO_2-Al_2O_3 thermodynamic database and its applications

J. Lee*[1]; I. Jung[1]

1. Seoul National University, Material Science and Engineering, Republic of Korea

GOMD S6 - Jonathan Stebbins Honorary Symposium

GOMD S6 - Jonathan Stebbins Honorary Symposium I

Room: Saltspring AB

Session Chair: Jingshi Wu, Corning Incorporated

1:15 PM

(GOMD-S6-001-2025) Oxide Glasses and Liquids: Intriguing Journeys Past, Present and Future (Invited)

J. Stebbins*[1]

1. Stanford University, USA

2:05 PM

(GOMD-S6-002-2025) Aluminium Local Environment and Dynamics in Aluminosilicate Melts: in-situ High-Temperature Nuclear Magnetic Resonance Approach

P. Florian*[2]; D. R. Neuville[1]; D. Massiot[2]

1. Institut de Physique du Globe de Paris, France
2. Conditions Extremes et Materiaux Haute Temperature et Irradiation, France

2:25 PM

(GOMD-S6-003-2025) Application of High-resolution ^{95}Mo Solid State NMR in structural studies of alkali molybdate crystals and glasses

S. Sen*[1]; I. Hung[2]; Z. Gan[2]

1. University of California, Davis, Department of Material Science and Engineering, USA
2. National High Magnetic Field Laboratory, USA

2:45 PM

(GOMD-S6-004-2025) An advanced NMR protocol for the structural characterization of transition metals in oxide glasses (Invited)

H. Eckert*[1]; H. Bradtmüller[1]; L. Hernandez[1]; M. de Oliveira[1]; R. B. Pena[1]

1. University of Sao Paulo, Sao Carlos Institute of Physics, Brazil

GOMD S6 - Jonathan Stebbins Honorary Symposium II

Room: Saltspring AB

Session Chair: Sabyasachi Sen, University of California, Davis

3:15 PM

Break

3:30 PM

(GOMD-S6-005-2025) Stebbins and Silicate Melts (Invited)

A. Navrotsky*[1]

1. Arizona State University, USA

4:00 PM

(GOMD-S6-006-2025) Composition and pressure effects on the structure, elastic properties and hardness of calcium-aluminoborosilicate glass

J. Wu*[1]

1. Corning Incorporated, Science & Technology, USA

4:20 PM

(GOMD-S6-007-2025) Structure, composition, and reactivity of less ordered phases in cementitious systems from solid-state NMR

J. Skibsted*[1]

1. Aarhus Universitet, Denmark

4:40 PM

(GOMD-S6-008-2025) Structures of Glasses at High Pressure: Our Journey to the Megabars

S. Lee*[1]

1. Seoul National University, Republic of Korea

5:00 PM

(GOMD-S6-009-2025) The glass transition: adding a material parameter to geosciences & emergent technologies (Invited)

D. B. Dingwell*[1]

1. Ludwig-Maximilians-Universitat Munchen, Earth and Environment, Germany

Tuesday, May 6, 2025

GOMD Award Lectures

GOMD - George W. Morey Award

Room: Saturna Island Ballroom

Session Chairs: Collin Wilkinson, Alfred University; Madoka Ono, Hokkaido University

8:00 AM

(GOMD-Awards-001-2025) The Properties of Glass and Melt

D. R. Neuville*[1]

1. IPGP-CNRS-UPC, Geomat Lab, France

GOMD S1 - Fundamentals of the glassy state

GOMD S1 S3 - Structural characterizations of glasses and melts III

Room: Saltspring C

Session Chair: Dominique de Ligny, University Erlangen-Nürnberg

9:20 AM

(GOMD-S1-S3-011-2025) Structure of rare earth aluminum garnet melts, $RE_3Al_5O_{12}$, and influence of ionic radii

S. K. Wilke*[1]; A. Al-Rubkhi[1]; C. J. Benmore[2]; J. Neuefeind[4]; R. Youngman[3]; C. Koyama[5]; T. Ishikawa[5]; R. Shimonishi[5]; R. Weber[1]

1. Materials Development, Inc., USA
2. Argonne National Lab, X-ray Science Division, USA
3. Corning Incorporated, Science & Technology Division, USA
4. Oak Ridge National Laboratory, USA
5. Japanese Aerospace Exploration Agency, Japan

9:40 AM

(GOMD-S1-S3-012-2025) Achieving structural determination in glasses via first-principles molecular dynamics

C. Massobrio*[1]

1. Laboratoire des Sciences de l'Ingenieur de l'Informatique et de l'Imagerie, France

10:00 AM

(GOMD-S1-S3-013-2025) Crystal-Like Atomic Arrangement and Optical Properties of R_2O_3–MoO_3 Binary Glasses Composed of Isolated MoO_4^{2-}

A. Masuno*[1]; S. Munakata[2]

1. Kyoto University, Graduate School of Engineering, Japan
2. Hirosaki Univerrsity, Graduate School of Science and Technology, Japan

10:20 AM

(GOMD-S1-S3-014-2025) Oxide melt density measurements in an aero-acoustic levitation instrument

S. K. Wilke*[1]; J. Rafferty[1]; A. Al-Rubkhi[1]; R. Weber[1]

1. Materials Development, Inc., USA

10:40 AM

(GOMD-S1-S3-015-2025) Structures of mixed (Li,Na) silicates from MD simulations

A. Cormack*[1]; D. Neuville[2]

1. Alfred University, USA
2. CNRS - Institut de physique du globe de Paris, France

11:00 AM

(GOMD-S1-S3-016-2025) Structure of vanadium-containing sodium aluminoborosilicate glasses

P. Malviya*[1]; R. Youngman[2]; J. Kaewkhao[3]; C. Sarumaha[3]; W. Busayaporn[5]; A. Yaremchenko[6]; A. Pedone[4]; M. Bertani[4]; A. Goel[1]

1. Rutgers The State University of New Jersey, material science and engineering, USA
2. Corning Incorporated, USA
3. Nakhon Ratchasima Rajabhat University, Thailand
4. Universita degli Studi di Modena e Reggio Emilia, Italy
5. Synchrotron Light Research Institute, Thailand
6. Universidade de Aveiro CICECO, Portugal

11:20 AM

(GOMD-S1-S3-017-2025) Nature of Mixing of Modifier Cations in Phosphate Glasses: Results from ^{17}O Solid-State NMR Spectroscopy

S. Chuang*[1]; S. Sen[1]

1. University of California, Davis, Department of Material Science and Engineering, USA

11:40 AM

(GOMD-S1-S3-018-2025) Enhancing Nb Solubility in Aluminosilicate Glasses via Phosphorus Addition

V. Kerling*[1]; D. de Ligny[1]; M. Cicconi[1]

1. Friedrich-Alexander-Universitat Erlangen-Nurnberg, Institute of Glass and Ceramics, Germany

GOMD S1 S6 - Mechanical properties of glasses III - Designing high-strength glass

Room: Pender

Session Chair: Jun Endo, AGC Inc.

9:20 AM

(GOMD-S1-S6-010-2025) Structural design of a hard and crack-resistant glass (Invited)

A. Goel*[1]; A. Yadav[1]; A. Rebecca[1]; S. Kapoor[4]; Y. Shih[3]; L. Huang[2]

1. Rutgers University, USA
2. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA
3. National Taipei University of Technology, Department of Materials and Mineral Resources Engineering, Taiwan
4. Sterlite Technologies Limited, India

9:50 AM

(GOMD-S1-S6-011-2025) Effects of Ion Exchange on Lithium Disilicate Glass-Ceramics

Y. Shih*[1]; C. Chang[1]; H. Yeh[1]

1. National Taipei University of Technology, Department of Materials and Mineral Resources Engineering, Taiwan

10:10 AM

(GOMD-S1-S6-012-2025) Effect of Al_2O_3/SiO_2 and MgO/CaO ratio on the mechanical properties and chemical strengthening of sodium aluminosilicate glasses

J. Cho*[1]; J. Chung[1]; J. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology, Republic of Korea

10:30 AM

(GOMD-S1-S6-014-2025) Biaxial strength testing of special glass samples

R. Bermejo*[1]; F. Maurer[2]; R. Danzer[1]; P. Supancic[1]

1. Montanuniversitat Leoben, Materials Science, Austria
2. Schott AG, Germany

10:50 AM

(GOMD-S1-S6-015-2025) Evaluation of brittle properties in silicate glasses through a combination of phase-field method and single-notch microbeam test

G. A. Rosales-Sosa*[1]; Y. Kato[1]; G. Molnár[3]; T. Ohmura[4]; T. Nakashima[1]; E. Barthel[2]; G. Kermouche[5]; S. Nakane[1]; H. Yamazaki[1]

1. Nippon Electric Glass, Fundamental Technology Division, Japan
2. CNRS/ESPCI, SIMM, France
3. University of Lyon, INSA-Lyon, LaMCoS, France
4. Busshitsu Zairyo Kenkyu Kiko, Research Center for Structural Materials, Japan
5. Ecole des Mines de Saint-Etienne, Physique et Mécanique des Matériaux (PMM), France

11:10 AM

(GOMD-S1-S6-016-2025) Modeling the effects of thermal residual stresses on fracture of microstructured glasses

E. Barros de Moraes*[1]; X. Xu[1]; J. Harris[1]; C. Smith[1]

1. Corning Incorporated, USA

GOMD S2 - Glass and interactions with its environment - Fundamentals and applications

GOMD S2 S3 - Materials for waste immobilization II

Room: Cortes

Session Chairs: Jaime George, Pacific Northwest National Lab; John Zaengle, Pacific Northwest National Laboratory

9:20 AM

(GOMD-S2-S3-010-2025) A Kinetic Model of the Long-Term Corrosion of Multiphase Waste Forms

S. Kerisit*[1]; B. Parruzot[1]; J. Neeway[1]; J. T. Reiser[1]; J. M. Westman[1]; P. D. Sutton[2]; D. Gregg[2]; M. Asmussen[1]; G. L. Smith[1]

1. Pacific Northwest National Lab, USA
2. Australian Nuclear Science and Technology Organisation, Australia

9:40 AM

(GOMD-S2-S3-011-2025) Glass Dissolution at Different Surface-Area-to-Volume (S/V) Ratios: An Approach to More Realistic Disposal Conditions

J. Neeway*[1]; S. Kerisit[1]; J. V. Crum[1]; I. Burch[1]; J. M. Westman[1]; J. Ferrer[1]; S. Choi[1]; J. T. Reiser[1]; B. Parruzot[1]; M. Asmussen[1]; G. L. Smith[1]; D. Swanberg[2]; R. Skeen[2]

1. Pacific Northwest National Lab, USA
2. Washington River Protection Solutions LLC, USA

10:00 AM

(GOMD-S2-S3-012-2025) Effect of in-situ γ dose rate on the alteration of nuclear glass

M. Taron*[1]; H. Arena[2]; F. Chupin[2]; K. Ressayre[2]; R. Podor[1]; M. Tribet[2]; S. Peuget[2]

1. Institut de Chimie Separative de Marcoule, France
2. CEA, France

10:20 AM

(GOMD-S2-S3-013-2025) Self-irradiation of nuclear glasses simulated by external beams: recovery effect induced by electronic interactions

M. Taron[1]; H. Arena*[1]; S. Miro[1]; C. Gillet[1]; R. Podor[2]; S. Peuget[1]

1. CEA, France
2. ICSM, Microscopy, France

10:40 AM

(GOMD-S2-S3-014-2025) Elemental releases from enhanced low-activity waste glasses tested by 48-hour room temperature methods

J. Marcial*[1]; S. Choi[2]; N. Bohrmann[2]; A. Kennedy[2]; J. Hager[2]; L. Brown[5]; J. Neeway[2]; C. L. Thorpe[3]; R. J. Hand[3]; C. Pearce[2]; D. Kosson[5]; A. A. Kruger[4]

1. Pacific Northwest National Laboratory, Materials Testing and Development team, USA
2. Pacific Northwest National Lab, USA
3. University of Sheffield, Materials Science and Engineering, United Kingdom
4. US Department of Energy, Office of River Protection, USA
5. Vanderbilt University, USA

11:00 AM

(GOMD-S2-S3-015-2025) Accounting for Alteration Layer Formation in Simulation of the Long-Term Corrosion of Nuclear Waste Glass

S. Kerisit*[1]; J. V. Crum[1]; B. Parruzot[1]; J. Neeway[1]; G. L. Smith[1]; M. Asmussen[1]

1. Pacific Northwest National Lab, USA

11:20 AM

(GOMD-S2-S3-016-2025) Investigation of alkali and alkaline-earth phases in crystallized LAW glasses

A. J. Lere-Adams*[1]; J. McCloy[1]

1. Washington State University, Mechanical and Materials Engineering, USA

11:40 AM

(GOMD-S2-S3-017-2025) Solubility of uranium oxide in aluminosilicate glass melts

O. Podda[1]; L. Tissandier[2]; M. Hunault[3]; E. Deloule[2]; A. F. Laplace*[1]

1. CEA, University of Montpellier, Marcoule, France
2. CNRS, CRPG, University of Lorraine, France
3. Synchrotron SOLEIL, France

GOMD S3 - Optical and electronic materials and devices - Fundamentals and applications

GOMD S3 S4 - Rare-earth and transition metal-doped glasses and ceramics for photonic applications I

Room: Moresby

Session Chair: Brian Topper, Clemson University

9:20 AM

(GOMD-S3-S4-001-2025) Pushing the Limits: Stabilizing Unusual High Oxidation States of Transition Metals in Glasses (Invited)

D. Möncke*[2]; B. Topper[1]; A. Ashjari[2]; L. H. Hess[3]

1. Clemson University, USA
2. New York State College of Ceramics at Alfred University, USA
3. Northvolt AB, Sweden

9:50 AM

(GOMD-S3-S4-002-2025) Characteristic luminescence properties of Eu^{3+} ions in mixed-anion coordination environment (Invited)

Y. Kitagawa*[1]

1. Sangyo Gijutsu Sogo Kenkyujo Kansai Center, Japan

10:20 AM

(GOMD-S3-S4-003-2025) Rare Earth Doped Titanate Glass Disks and Fibers for Optical Device Applications

R. Weber*[1]; J. Tolliver[4]; A. Neumann[4]; S. K. Wilke[3]; A. Al-Rubkhi[1]; B. Topper[2]

1. MDI, USA
2. Clemson University, USA
3. Materials Development, Inc., USA
4. University of New Mexico, USA

10:40 AM

(GOMD-S3-S4-004-2025) Magneto-optical effect of rare-earth-rich borate glasses prepared using a levitation technique

S. Sasaki*[1]; K. Tanaka[1]; A. Masuno[1]

1. Kyoto University, Department of Material Chemistry, Japan

11:00 AM

(GOMD-S3-S4-005-2025) Development of new radiophotoluminescence materials and applications of real-time radiation measurements

G. Okada*[1]; M. Koshimizu[2]; M. Sakai[6]; K. Shinsho[3]; H. Tanaka[7]; W. Kada[4]; K. Watanabe[5]; G. Wakabayashi[8]; H. Nanto[1]

1. Kanazawa Institute of Technology, Japan
2. Shizuoka University, Japan
3. Tokyo Metropolitan University, Japan
4. Tohoku University, Japan
5. Kyushu University, Japan
6. Gunma University, Japan
7. Kyoto University, Japan
8. Kindai University, Japan

11:20 AM

(GOMD-S3-S4-006-2025) Effect of the reduction of water and thulium doping concentration on the lifetime of thulium and other properties of the thulium - TZN system

L. J. Henry*[1]; M. Klopfer[2]

1. Air Force Research Laboratory, Directed Energy Directorate, USA
2. Leidos, USA

11:40 AM

(GOMD-S3-S4-007-2025) Broad NIR luminescence of Cr^{3+}/Cr^{4+} doped silicate and germanate garnets

Y. Shigemura[1]; J. Xu[2]; T. Nakanishi[3]; J. Ueda*[1]

1. Hokuriku Sentan Kagaku Gijutsu Daigakuin Daigaku, Japan
2. Kyoto University, Graduate School of Human and Environmental Studies, Japan
3. Busshitsu Zairyo Kenkyu Kiko, Japan

GOMD S5 - Glass manufacturing

GOMD S5 S1 - Manufacturing III

Room: Saturna Island Ballroom

Session Chairs: Terutaka Maehara, AGC Inc.; Madeleine Schmidlin, Corning Incorporated

9:20 AM

(GOMD-S5-S1-011-2025) Environmental conditions affecting the solidification behavior of natural basaltic melts (Invited)

S. Kolzenburg*[1]

1. University at Buffalo, Geology, USA

9:50 AM

(GOMD-S5-S1-012-2025) Development of the Na_2O-Al_2O_3-ZrO_2-SiO_2 thermodynamic database and its application to the glass melting furnace

J. Lee*[1]; I. Jung[1]

1. Seoul National University, Material Science and Engineering, Republic of Korea

10:10 AM

(GOMD-S5-S1-013-2025) Redox in glass production: impact, challenge, measurement (Invited)

P. Georges*[1]

1. Corning SAS, Characterization Science, France

10:40 AM

(GOMD-S5-S1-014-2025) Redox and gas release control for waste vitrification process (Invited)

A. F. Laplace*[2]; L. Pereira[1]; O. Pinet[2]; F. Pigeonneau[3]; C. Laurin[2]; J. Agullo[2]

1. Université de Munich (LMU), Germany
2. CEA, France
3. MINES Paris, CEMEF, France

11:10 AM

(GOMD-S5-S1-015-2025) Oxygen-related Bubbles and Pt Inclusions in Glass Melt (Invited)

J. Lee*[1]

1. KCC Glass Corporation, R & D Center, Republic of Korea

11:40 AM

(GOMD-S5-S1-016-2025) The effect of iron redox state on viscosity of phonolitic magmas

L. Pereira*[1]; K. Hess[1]; D. B. Dingwell[1]

1. Ludwig-Maximilians-Universitat Munchen, Germany

GOMD S6 - Jonathan Stebbins Honorary Symposium

GOMD S6 - Jonathan Stebbins Honorary Symposium III

Room: Saltspring AB

Session Chair: Scott Kroeker, University of Manitoba

9:20 AM

(GOMD-S6-010-2025) Investigating the Role of Phosphorus in the Structure of Aluminosilicate Glasses Using Inverse Methods for Two-Dimensional NMR Spectra (Invited)

Z. Boothe[1]; R. Cowen[1]; L. McCarthy-Carney[1]; D. Srivastava[1]; J. Wu[2]; P. J. Grandinetti*[1]

1. Ohio State University, Chemistry, USA
2. Corning Incorporated, Glass Research, USA

9:50 AM

(GOMD-S6-011-2025) Lone electron pairs on lead in glass: their effect on a atomic and electronic structure, and optical response

J. Zwanziger*[1]

1. Dalhousie University, Chemistry, Canada

10:10 AM

(GOMD-S6-012-2025) Understanding the dissolution behaviour of borophosphate glasses through their network connectivity: an NMR approach

M. Abbasi*[1]; A. Krishnamurthy[1]; H. Eckert[2]; S. Kroeker[1]

1. University of Manitoba, Department of Chemistry, Canada
2. Instituto Federal de Educacao Ciencia e Tecnologia de Santa Catarina, Brazil

10:30 AM

(GOMD-S6-013-2025) Water in nominally anhydrous mantle minerals: Insights from comprehensive spectroscopic measurements and first-principles calculations (Invited)

X. Xue*[1]; M. Kanzaki[1]

1. Okayama University, Institute for Planetary Materials, Japan

11:00 AM

(GOMD-S6-014-2025) NMR spectroscopy of strontium immobilization in vitrified zeolites

T. R. Elumalai*[1]; S. Kroeker[1]

1. University of Manitoba, Chemistry, Canada

11:20 AM

(GOMD-S6-015-2025) Dose rates, ordering and amorphisation in highly radioactive oxides observed by high-resolution NMR (Invited)

I. Farnan*[1]

1. University of Cambridge, Earth Sciences, United Kingdom

GOMD Award Lectures

GOMD Norbert J. Kreidl Award

Room: Saturna Island Ballroom

Session Chairs: Collin Wilkinson, Alfred University; Madoka Ono, Hokkaido University

12:00 PM

(GOMD-Award-002-2025) The Structure-Property Relationships of Iron Phosphate Nuclear Waste Glasses: A Combined MD Simulation and QSPR Approach

J. Kalahe*[1]; T. S. Mahadevan[1]; X. Lu[2]; J. Vienna[3]; B. J. Riley[3]; J. Du[1]

1. University of North Texas, Materials Science and Engineering, USA
2. Pacific Northwest National Lab, Energy and Environment Directorate, USA
3. Pacific Northwest National Lab, USA

GOMD S1 - Fundamentals of the glassy state

GOMD S1 S2 Glass Crystallization and Glass-Ceramics I

Room: Pender

Session Chair: Kenji Shinozaki, AIST

3:30 PM

(GOMD-S1-S2-001-2025) Vitrification of sodium ion conductive $Na_3Zr_2Si_2PO_{12}$ via laser-induced powder bed fusion technology (Invited)

T. Honma*[1]; C. Fujii[1]; E. Tamura[1]; M. Affatigato[2]

1. Nagaoka Univeristy of Technology, Department of Materials Science and Bioengineering, Japan
2. Coe College, Physics, USA

4:00 PM

(GOMD-S1-S2-002-2025) Precipitate Chiral $LiGa_5O_8$ Crystals from Glass under CO_2 Laser Irradiation

J. Zhao*[1]; K. Kizaki[1]; T. Omatsu[2]; M. Ono[1]

1. Tohoku Daigaku, Department of Applied Physics, Japan
2. Chiba Daigaku, Graduate School of Science and Engineering, Japan

4:20 PM

(GOMD-S1-S2-004-2025) Thermal Expansion of Gillespite Glass-Ceramics

L. Moore*[2]; M. Walllen[2]; E. Stapleton[1]; B. Wheaton[1]; G. H. Beall[2]

1. Corning Incorporated, Characterization Sciences, USA
2. Corning Incorporated, Glass Research, USA

4:40 PM

(GOMD-S1-S2-005-2025) Unraveling origin of crystal rotation during crystal growth: a simulation approach

R. Thapa*[1]; M. E. McKenzie[2]; E. J. Musterman[1]; V. Dierolf[3]; H. Jain[4]

1. Lehigh University, Material Science and Engineering, USA
2. Corning Incorporated, Science & Technology, USA
3. Lehigh University, Physics, USA
4. Lehigh University, International Materials Institute for New Functionality in Glass, USA

GOMD S1 S3 - Structural characterizations of glasses and melts IV

Room: Saltspring C

Session Chair: Yohei Onodera, Busshitsu Zairyo Kenkyu Kiko

1:15 PM

(GOMD-S1-S3-019-2025) What is the Role of Zinc in Silicate Glasses and Melts?

D. R. Neuville*[1]; D. S. Brauer[2]

1. IPGP-CNRS-UPC, Geomat Lab, France
2. Friedrich-Schiller-Universität, Otto-Schott-Institut, Germany

1:35 PM

(GOMD-S1-S3-020-2025) Influence of redox equilibria and multivalent element interactions on coloration and properties of silicate glasses

L. Cormier*[1]

1. Sorbonne University - CNRS, IMPMC, France

1:55 PM

(GOMD-S1-S3-022-2025) Structure-Property Correlations in the Bi_2O_3-ZnO-B_2O_3 Pyroborate Glass System and the Effects of Crucible Dissolution

L. Haight-Stott*[1]; N. Tagiara[3]; R. Youngman[2]; E. I. Kamitsos[3]; D. Möncke[4]

1. New York State College of Ceramics at Alfred University, Glass Science, USA
2. Corning Incorporated, Science & Technology Division, USA
3. National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute (TPCI), Greece
4. Alfred University, Hall of Glass Science, Rm 100, USA

GOMD S1 S4 - Vibration properties

Room: Pender

Session Chairs: Shingo Urata, AGC Inc.; Alfonso Pedone, University of Modena and Reggio Emilia

1:15 PM

(GOMD-S1-S4-001-2025) Understanding Phonon Modes in Glasses Through Hybrid Models

L. McClanahan[2]; E. Akirmak-Yamac[1]; R. Welch[1]; C. Wilkinson*[1]

1. Alfred University, Inamori School of Engineering, USA
2. Coe College, USA

1:35 PM

(GOMD-S1-S4-002-2025) Semi-phenomenological Model of Glass Dynamics: Effect of Spatial Heterogeneity in Glass and Supercooled Liquid

W. Takeda*[1]; P. Lucas[1]

1. The University of Arizona, Department of Materials Science and Engineering, USA

1:55 PM

(GOMD-S1-S4-003-2025) Effect of three-body interaction on structural features of phosphate glasses from molecular dynamics simulations

J. Du*[1]; N. Marchin[1]; S. Urata[2]

1. University of North Texas, Materials Science and Engineering, USA
2. AGC Inc., Japan

2:15 PM

(GOMD-S1-S4-004-2025) Comparing the Vibrational Properties of Common Glass Interatomic Potentials

E. Akirmak-Yamac*[1]; S. S. Sørensen[2]; R. Welch[1]; M. M. Smedskjaer[2]; C. Wilkinson[1]

1. Alfred University, Inamori School of Engineering, USA
2. Aalborg University, Department of Chemistry and Bioscience, Denmark

2:35 PM

(GOMD-S1-S4-005-2025) Impact of Long-Range Coulombic Interactions and Dynamical Heterogeneities on Ionic Conductivity within Metaphosphate Glass Systems

W. L. Kiff*[1]; C. Wilkinson[1]

1. Alfred University, Glass Science, USA

2:55 PM

(GOMD-S1-S4-006-2025) Atomistic Simulation of Subcritical Crack Growth in Glass in Vacuum

S. Gupta*[1]; M. Wilson[2]; S. Grutzik[3]; D. Warner[4]

1. Cornell University, USA
2. Sandia National Laboratories, Computational Materials and Data Science, USA
3. Sandia National Laboratories, Materials and Failure Modeling, USA
4. University of Canterbury, New Zealand

GOMD S1 S4 - Dynamics/Mechanical

Room: Saltspring AB

Session Chairs: Jincheng Du, University of North Texas; Shingo Urata, AGC Inc.

3:30 PM

(GOMD-S1-S4-007-2025) Thermal conductivity of disordered nanomaterials by first-principles molecular dynamics (Invited)

E. Martin*[1]

1. Laboratoire des Sciences de l'Ingenieur de l'Informatique et de l'Imagerie, France

4:00 PM

(GOMD-S1-S4-008-2025) Exploring Structural and Mechanical Properties of Glass-Crystal Interfaces via Molecular Dynamics

F. Lodesani*[1]; S. Urata[1]; Y. Takato[1]

1. AGC, Innovative Technology Laboratories, Japan

4:20 PM

(GOMD-S1-S4-009-2025) Prediction of Nepheline crystallization in aluminoborosilicates combining molecular dynamics and machine learning

M. Benassi*[1]; M. Bertani[1]; L. Gottardi[1]; A. Pedone[2]; A. Goel[3]

1. University of Modena and Reggio Emilia, Departement of Chemical and Geological Sciences, Italy
2. University of Modena and Reggio Emilia, Italy
3. Rutgers University, USA

4:40 PM

(GOMD-S1-S4-010-2025) Structure and Fracture Behavior of Hydrated Sodium Aluminosilicate Glasses

E. J. Pedersen*[1]; J. Christensen[1]; T. Du[1]; S. S. Sørensen[1]; R. Christensen[1]; M. M. Smedskjaer[1]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark

5:00 PM

(GOMD-S1-S4-011-2025) Decoding Hardness: Nano-Indentation Insights into the Albite-Anorthite Glass Series

A. Pallini*[1]; A. Pedone[2]; L. Talirz[3]; W. Mannstadt[3]

1. University of Modena and Reggio Emilia, Chemical and Geological Sciences (DSCG), Italy
2. University of Modena and Reggio Emilia, Italy
3. SCHOTT, Germany

GOMD S3 - Optical and electronic materials and devices - Fundamentals and applications

GOMD S3 S3 - Optical fibers and waveguides, optoelectronic glass-based devices I

Room: Cortes

Session Chair: Xianghua Zhang, University of Rennes/CNRS

1:15 PM

(GOMD-S3-S3-001-2025) Pixelated Electrically Tunable Phase-Change Metasurface Array for Multifunctional Applications (Invited)

Y. Li*[1]; Z. Li[1]

1. Sun Yat-Sen University, China

1:45 PM

(GOMD-S3-S3-002-2025) The Subtle and Functional Role of Glass Substrates and Surfaces in Modern Electronics (Invited)

R. G. Manley*[1]

1. Corning Incorporated, Thin Films and Coatings, USA

2:15 PM

(GOMD-S3-S3-003-2025) Characterization of potassium niobium germanate core - borosilicate clad glass optical fiber fabricated via the molten core method

B. Topper*[1]; B. Baldus[1]; K. Chapman[1]; M. Walton[1]; L. Dong[1]; T. Hawkins[1]; J. Ballato[1]

1. Clemson University, USA

2:35 PM

(GOMD-S3-S3-004-2025) Who put the β in photodarkening?

B. Poletto Rodrigues*[1]; S. Kuhn[1]; N. Haarlammert[1]; T. Schreiber[1]

1. Fraunhofer-Institut fur Angewandte Optik und Feinmechanik IOF, Germany

2:55 PM

(GOMD-S3-S3-005-2025) Elaboration of tapered chalcogenide glass fibers for in operando monitoring of chemical reactions in Li-ion batteries

S. Coudray*[1]; C. Boussard-Pledel[1]; C. Leau[2]; A. Gautier[1]; T. Jouan[1]; Y. Wang[2]; T. Safarik[2]; J. Tarascon[2]; X. Zhang[1]

1. Universite de Rennes, France
2. College de France, France

3:15 PM

Break

3:30 PM

(GOMD-S3-S3-006-2025) Exploring and extending the limit of vapor deposition fabrication for silicate optical fibers (Invited)

Y. Messaddeq[1]; T. Meyneng*[2]; K. Sanggon[1]; R. Kashyap[3]

1. Université Laval, Optic-Photonic Pavillion, Canada
2. Universite Laval, COPL, Canada
3. Chemin de Polytechnique, Canada

4:00 PM

(GOMD-S3-S3-007-2025) Optical and Structural Characterization of Reactively Sputtered SnO_x-SiO_x Binary Thin Films

M. S. Dailey*[1]; B. G. Potter[1]; K. Simmons-Potter[2]; P. Thelen[3]

1. The University of Arizona, Dept. of Materials Science and Engineering, USA
2. The University of Arizona, Dept. of Electrical and Computer Engineering, USA
3. Sandia National Laboratories, USA

4:20 PM

(GOMD-S3-S3-008-2025) In-situ photodegradation monitoring from ultra-sensitive SERS fiber probes based on Ag nanoparticle and Ag_3PO_4 nanocube composite

T. Hu*[1]; X. Han[1]; J. Zhang[1]; J. Xie[1]

1. Wuhan University of Technology, China

4:40 PM

(GOMD-S3-S3-009-2025) Characterization of Calcium Germano-Aluminate Glasses for Mid-Infrared Applications

A. Shearer*[1]; J. C. Mauro[1]

1. Pennsylvania State University, Materials Science and Engineering, USA

5:00 PM

(GOMD-S3-S3-010-2025) Quantitative Assessment of Hinge Creases in Folding Devices

J. Banerjee*[1]; K. Lindberg[1]; D. Pikula[1]

1. Corning Incorporated, USA

GOMD S3 S4 - Rare-earth and transition metal-doped glasses and ceramics for photonic applications II

Room: Moresby

Session Chair: Jumpei Ueda, Hokuriku Sentan Kagaku Gijutsu Daigakuin Daigaku

1:15 PM

(GOMD-S3-S4-008-2025) Optical and geometrical functionality of active glass-based materials: 3D display chamber and tissue mimicking phantom (Invited)

Y. Wei*[1]; H. Ebendorff-Heidepriem[1]

1. The University of Adelaide, Australia

1:45 PM

(GOMD-S3-S4-009-2025) $CsPbBr_3$ Perovskite Nanocrystal Embedded Borosilicate Glasses as a Robust Green Color Converter

W. Chung*[1]; D. Gelija[1]; T. T. Pham[1]

1. Kongju National University, Division of Advanced Materials Engineering, Republic of Korea

2:05 PM

(GOMD-S3-S4-010-2025) Effect of soda alumino germanate glass composition and bismuth source valence on the optical properties of the bismuth dopant and matrix

L. J. Henry*[1]; M. Klopfer[1]; K. Richardson[2]

1. Air Force Research Laboratory, Directed Energy Directorate, USA
2. University of Central Florida, CREOL, USA

2:25 PM

(GOMD-S3-S4-011-2025) Evolution of Pore Structure During Annealing of Fine-Grained Yttrium Based Transparent Ceramics

J. M. Tallan*[1]; J. Bussey[3]; S. Karcher[2]; J. McCloy[2]

1. Washington State University, Materials Science & Engineering, USA
2. Washington State University, School of Mechanical and Materials Engineering, USA
3. Washington State University, USA

2:45 PM

(GOMD-S3-S4-012-2025) Spectroscopic properties of Cr^{2+}/Fe^{2+} doped ZnS hot-pressed transparent ceramics

M. Poitou*[1]; K. Eremeev[2]; S. Mauree[1]; G. R. Durand[1]; P. Loiko[2]; A. Le Coz[1]; F. Starecki[2]; V. Nazabal[1]; P. Camy[2]; A. Braud[2]; O. Merdrignac[1]

1. Universite de Rennes, France
2. Universite de Caen Normandie, France

GOMD S5 - Glass manufacturing

GOMD S5 S1 - Manufacturing IV

Room: Saturna Island Ballroom

Session Chairs: Luiz Pereira, Université de Munich (LMU); Irene Peterson, Corning Incorporated

1:15 PM

(GOMD-S5-S1-017-2025) Advances in Studying Silicate and Carbonate Melts through Flash DSC (Invited)

K. Hess*[1]

1. Ludwig-Maximilians-Universitat Munchen, Earth Sciences, Germany

1:45 PM

(GOMD-S5-S1-018-2025) Radiative properties of waste glasses and their implications on glass production rate

P. Ferkl*[1]; J. Marcial[1]; J. C. Rigby[1]; P. Hrma[2]; A. A. Kruger[3]; R. Pokorny[4]

1. Pacific Northwest National Lab, USA
2. AttainX, USA
3. U.S. DOE, Hanford Field Office, USA
4. University of Chemistry and Technology Prague, Czechia

2:05 PM

(GOMD-S5-S1-019-2025) Evolved gas analysis studies of melter feeds for Hanford nuclear waste vitrification

J. Marcial*[1]; W. Choi[2]; J. Seo[3]; J. C. Rigby[2]; M. Hall[2]

1. Pacific Northwest National Laboratory, Materials Testing and Development team, USA
2. PNNL, Radiological Materials Group, USA
3. Pacific Northwest National Laboratory, USA

2:25 PM

(GOMD-S5-S1-020-2025) Investigations on the Wetting and Spreading Behavior of Silicate Glass Melts on Metals and their Oxides

P. Engelmann*[1]; C. H. Roos[1]

1. Rheinisch-Westfalische Technische Hochschule Aachen, Institute of Mineral Engineering - Chair of Glass and Glass-ceramic, Germany

2:45 PM

(GOMD-S5-S1-021-2025) Modelling Refractory Corrosion During Industrial and Waste Glass Melting

J. Klouzek*[1]; R. Pezl[1]; P. Cincibusova[1]; D. P. Guillen[2]; P. Hrma[3]; A. A. Kruger[4]; R. Pokorny[5]

1. University of Chemistry and Technology, Prague, Laboratory of Inorganic Materials, Czechia
2. Idaho National Laboratory, Materials Science and Engineering, USA
3. AttainX, USA
4. US Department of Energy, Office of River Protection, USA
5. University of Chemistry and Technology Prague, Czechia

GOMD S5 S1 - Manufacturing V

Room: Saturna Island Ballroom

Session Chairs: Terutaka Maehara, AGC Inc.; Irene Peterson, Corning Incorporated

3:30 PM

(GOMD-S5-S1-022-2025) Measurement of the dispersion of the stress-optic coefficient in ion-exchanged sodium aluminosilicate glass

J. Hunt*[1]

1. Corning Incorporated, Optical Physics and Materials, USA

3:50 PM

(GOMD-S5-S1-023-2025) Silica viscosity measurement via the elongation method

C. Nie*[1]; G. Calkins[1]; J. McCarthy[1]; A. Sarafian[1]

1. Corning Incorporated, USA

4:10 PM

(GOMD-S5-S1-024-2025) The Impact of Glass Waste Filler on Density and Flame Retardancy in Sawdust-Reinforced Composite Ceiling Boards*WITHDRAWN*

K. J. Jomboh*[1]; A. O. Adejo[2]; A. D. Garkida[3]

1. University of Maiduguri, University of Maiduguri, Nigeria
2. Federal University Lafia, Nigeria
3. Ahmadu Bello University, Nigeria

GOMD S5 S2 - Additive manufacturing of glass

Room: Saltspring C

Session Chair: Beck Walton, Lawrence Livermore National Lab

3:30 PM

(GOMD-S5-S2-001-2025) Additive Manufacturing of Lattices Using Digital Glass Forming (Invited)

M. Azad[1]; N. Khadka[1]; R. Landers[1]; E. Kinzel*[1]

1. University of Notre Dame, USA

4:00 PM

(GOMD-S5-S2-002-2025) Novel Colloidal Materials for Additively Manufacturing Optical Glasses (Invited)

J. F. Destino*[1]; M. Murthi[1]; N. Tobin[1]; J. Chou[1]; A. R. Carr[1]; R. M. Wayne[1]; A. Fernandes[1]; L. O'Keefe[1]; S. Garapati[1]; A. Kayton[1]; F. Lopez[1]; J. Varguez[1]

1. Creighton University, Chemistry & Biochemistry, USA

4:30 PM

(GOMD-S5-S2-003-2025) A New Method to Guide the Processing of Additively Manufactured Glass

R. J. Pao*[1]

1. Alfred University, Inamori School of Engineering, USA

4:50 PM

(GOMD-S5-S2-004-2025) 3D printing glass via UV-DIW

T. Yee*[1]; B. Walton[2]; A. Browar[2]; V. Vuppuluri[2]; D. Nguyen[2]; R. J. Dylla-Spears[3]; N. Dudukovic[2]

1. Lawrence Livermore National Laboratory, Materials Science Division, USA
2. Lawrence Livermore National Laboratory, USA
3. Lawrence Livermore National Laboratory, Optics and Materials Science & Technology, USA

GOMD S6 - Jonathan Stebbins Honorary Symposium

GOMD S6 - Jonathan Stebbins Honorary Symposium IV

Room: Saltspring AB

Session Chair: Sung Keun Lee, Seoul National University

1:15 PM

(GOMD-S6-016-2025) Exploring the Surface Structure and Chemistry of Oxide Catalysts with ^{17}O Solid-State NMR Spectroscopy (Invited)

L. Peng*[1]

1. Nanjing University, Chemistry, China

1:45 PM

(GOMD-S6-017-2025) NMR studies of borosilicate glass alteration in aqueous environments: Implications for nuclear waste immobilization

S. Kroeker*[1]; M. Brytskyi[1]; K. Penner[1]; A. Krishnamurthy[3]; A. Farrant[2]

1. University of Manitoba, Chemistry, Canada
2. Dalhousie University, Chemistry, Canada
3. Purity-IQ Inc, Canada

2:05 PM

(GOMD-S6-018-2025) Chemical strengthening of float glasses: effect of composition and structure

V. M. Sglavo*[1]; S. Dire[1]; E. Callone[1]

1. University of Trento, Italy

2:25 PM

(GOMD-S6-019-2025) A study of sub-Tg relaxation in aluminosilicate glasses and its link to total pitch variation in high performance display manufacturing (Invited)

T. Kiczenski*[1]; O. Gulbiten[2]; S. Koseba[1]; G. G. Moore[3]; M. E. DeRosa[2]; B. M. Guy[2]; L. Moore[4]; A. Sarafian[5]; A. J. Ellison[2]

1. Corning Incorporated, Inorganic Materials, USA
2. Corning Incorporated, Science & Technology Division, USA
3. Corning Incorporated, Characterization Sciences, USA
4. Corning Incorporated, Glass Research, USA
5. Corning Incorporated, USA

GOMD S7 - Emerging frontiers - Glasses in new technology

GOMD S7 - Emerging frontiers - Glasses in new technology I

Room: Moresby

Session Chairs: Madoka Ono, Hokkaido University; Collin Wilkinson, Alfred University

3:30 PM

(GOMD-S7-001-2025) Virtual Center for Nuclear Waste Glass Science (Invited)

M. Singh[1]; X. Lu[4]; E. M. Tsekrekas[2]; C. Wilkinson[3]; C. L. Trivelpiece[2]; D. Aidhy*[1]

1. Clemson University, Materials Science and Engineering, USA
2. Savannah River National Lab, Environmental and Process Control Technology, USA
3. Alfred University, Glass Science, USA
4. Pacific Northwest National Lab, Energy and Environment Directorate, USA

4:00 PM

(GOMD-S7-002-2025) Digitalization of Glass Development (Invited)

U. G. Fotheringham*[1]; F. Teepe[11]; L. Pfeifer[10]; M. to Baben[2]; A. de Camargo[9]; T. Hickel[9]; L. Wondraczek[5]; M. Sierka[5]; K. Thurow[6]; A. Vu[8]; R. Müller[7]; J. Janssen[3]; P. Dolabella Portella[4]

1. Schott AG, Germany
2. GTT-Technologies, Germany
3. Max-Planck-Institut fur Nachhaltige Materialien GmbH, Germany
4. Fraunhofer-Institut fur Werkstoffmechanik IWM, Germany
5. Friedrich-Schiller-Universitat Jena, Germany
6. Universitat Rostock Fakultat fur Informatik und Elektrotechnik, Germany
7. Technische Universitat Clausthal, Germany
8. Fraunhofer-Institut fur Produktionstechnologie IPT, Germany
9. Bundesanstalt fur Materialforschung und -prufung, Germany
10. LTB Lasertechnik Berlin GmbH, Germany
11. PRALL-TEC GmbH, Germany

4:30 PM

(GOMD-S7-003-2025) Process Digital Twin for Optimizing High-Precision Laser Glass Machining (Invited)

S. Tani*[1]

1. Rikagaku Kenkyujo, RIKEN Center for Advanced Photonics, Japan

Wednesday, May 7, 2025

GOMD Award Lectures

GOMD Stookey Lecture of Discovery

Room: Saturna Island Ballroom

Session Chairs: Collin Wilkinson, Alfred University; Madoka Ono, Hokkaido University

8:00 AM

(GOMD-Awards-003-2025) Discovery of strong and damage-resistant glasses through indentation studies

T. M. Gross*[1]

1. Corning Incorporated, Physical Properties, USA

GOMD S1 - Fundamentals of the glassy state

GOMD S1 S2 Glass Crystallization and Glass-Ceramics II

Room: Pender

Session Chairs: Laurent Cormier, Sorbonne University - CNRS; Tsuyoshi Honma, Nagaoka Univeristy of Technology

9:20 AM

(GOMD-S1-S2-006-2025) Controlling crystallization in perovskite glass-ceramics (Invited)

M. Cicconi*[1]

1. Friedrich-Alexander-Universitat Erlangen-Nurnberg, Department of Materials Science and Engineering, Germany

9:50 AM

(GOMD-S1-S2-008-2025) Vanado-tellurite glass-ceramics containing copper oxide: effect of chemical composition on microstructural-electrical properties

C. Sgarlata*[1]; A. Iannuzzi[1]; M. Affatigato[2]; C. Siligardi[1]

1. Universita degli Studi di Modena e Reggio Emilia, Engineering "Enzo Ferrari", Italy
2. Coe College, Physics Department, USA

10:10 AM

(GOMD-S1-S2-009-2025) Lithium Alumino-silicate glass-ceramic: Salient properties and thermal characteristics

P. Barick*[1]; P. Biswas[1]; M. Suresh[1]; D. C. Jana[1]; B. P. Saha[1]; P. Jain[1]; R. Vijay[1]

1. International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) Hyderabad India, Centre for Advanced Ceramic Materials, India

10:30 AM

(GOMD-S1-S2-010-2025) Crystallization enables suppressing thermal conduction in oxide glasses

M. B. Østergaard*[1]; L. Thomsen[1]; H. Johra[2]; Y. Yue[1]

1. Aalborg University, Chemistry and Bioscience, Denmark
2. SINTEF Community, Architectural Engineering, Norway

10:50 AM

(GOMD-S1-S2-011-2025) Chiral crystallization of glass using optical vortex laser

K. Kizaki*[1]; J. Zhao[1]; T. Omatsu[2]; M. Ono[1]

1. Tohoku Daigaku, Department of Applied Physics, Japan
2. Chiba Daigaku, Graduate School of Engineering, Japan

GOMD S1 S4 - AIMD/ML potentials

Room: Saltspring AB

Session Chairs: Alfonso Pedone, University of Modena and Reggio Emilia; Jincheng Du, University of North Texas

9:30 AM

(GOMD-S1-S4-012-2025) Ab Initio Molecular Dynamics Study of Trivalent Rare Earth Rich Borate Glasses (Invited)

T. Ohkubo*[1]

1. Chiba University, Faculty of Engineering, Japan

10:00 AM

(GOMD-S1-S4-013-2025) Structural features of glasses through first-principles molecular dynamics: meeting the million-atom challenge

C. Massobrio*[1]

1. Laboratoire des Sciences de l'Ingenieur de l'Informatique et de l'Imagerie, France

10:20 AM

(GOMD-S1-S4-014-2025) Million-atom models of amorphous silicon simulated using machine-learned interatomic potentials

S. Elliott*[1]

1. University of Oxford, United Kingdom

10:40 AM

(GOMD-S1-S4-015-2025) Li diffusion in oxygen-chlorine mixed anion borosilicate glasses using a machine-learning simulation

S. Urata*[1]

1. AGC Inc., Innovative Technology Laboratories, Japan

11:00 AM

(GOMD-S1-S4-016-2025) Computational study of oxy-thiophosphate glassy solid electrolytes for sodium-based batteries in the framework of the EcosistER project

M. Bertani*[1]; A. Pedone[1]

1. University of Modena and Reggio Emilia, Italy

11:20 AM

(GOMD-S1-S4-017-2025) Developing Machine Learning Potentials for Local Structure Analysis of Multicomponent Glasses

T. Nishiyama*[1]; A. Tanaka[1]; A. Saito[1]; T. Murata[1]

1. Nippon Electric Glass, Research Division, Japan

11:40 PM

(GOMD-S1-S4-019-2025) New generalized classical force-field for superionic chalcogenide-like materials

L. Poitras*[1]; M. Micoulaut[1]

1. Sorbonne Universite, Physics, France

GOMD S1 S8 - Chalcogenide glasses and amorphous materials

Room: Cortes

Session Chairs: Pierre Lucas, University of Arizona; Changgui Lin, Laboratory of Infrared Materials and Devices

9:20 AM

(GOMD-S1-S8-001-2025) Advanced Chalcogenide Glasses and Their Applications in Multifunctional Sensing (Invited)

S. Kang*[1]; C. Lin[2]

1. Ningbo University, Laboratory of Infrared Materials and Devices, China
2. Laboratory of Infrared Materials and Devices, Research Institute of Advanced Technology, Ningbo University, China

9:50 AM

(GOMD-S1-S8-002-2025) Chalcogenide exposed core fiber made by additive manufacturing - Application to Mid-IR spectroscopy (Invited)

J. Troles*[1]; R. Cheneviere[1]; S. Coudray[1]; L. Szymczyk[2]; A. Gautier[1]; T. Jouan[1]; C. Boussard-Pledel[1]; F. Charpentier[2]; Y. Guimond[2]; G. Renversez[3]; F. Chevire[1]

1. University of Rennes, France
2. UMICORE IR Glass, France
3. Aix-Marseille Universite, France

10:20 AM

(GOMD-S1-S8-003-2025) Atomistic simulations of the crystallization kinetics of $Ge_2Sb_2Te_5$ in confined geometries

D. Acharya[1]; O. Abou El Kheir[1]; S. Marcorini[1]; M. Bernasconi*[1]

1. Universita degli Studi di Milano-Bicocca, Materials Science, Italy

10:40 AM

(GOMD-S1-S8-004-2025) Sensing devices based on chalcogenide glasses / silicon platform

W. Zhang*[1]

1. Ningbo University, China

11:00 AM

(GOMD-S1-S8-005-2025) Glasses in the Ga_2S_3 – La_2S_3 Pseudo-Binary Prepared by Mechano-Chemical Milling

D. P. Bayko*[1]; P. Lucas[1]

1. University of Arizona, USA

11:20 AM

(GOMD-S1-S8-006-2025) Chalcogenide glass solid state electrolyte and interface modification

C. Gao*[1]; C. Lin[2]

1. Ningbo University, China
2. Laboratory of Infrared Materials and Devices, Research Institute of Advanced Technology, Ningbo University, China

11:40 AM

(GOMD-S1-S8-007-2025) Solution-Processed Chalcogenide Glass towards Functional Flexibility and Integration

L. Tan*[1]; C. Lin[1]

1. Ningbo University, China

GOMD S2 - Glass and interactions with its environment - Fundamentals and applications

GOMD S2 S2 - Glass Surfaces and Functional Coatings

Room: Saltspring C

Session Chairs: Joy Banerjee, Corning Incorporated; Nicholas Smith, Corning Incorporated

9:20 AM

(GOMD-S2-S2-001-2025) Functional Glass Surface (Invited)

P. Mazumder*[1]; W. Senaratne[1]; A. Mezzadrelli[2]; J. Chillon[2]; I. Karadzhov[2]; C. Graham[2]; V. Pruneri[2]

1. Corning Research and Development Corporation, USA
2. ICFO-Institut de Ciències Fotòniques, Spain

9:50 AM

(GOMD-S2-S2-002-2025) Surface chemistry, water adsorption, and electrostatic charging of display glass panel

S. H. Kim*[1]

1. Pennsylvania State University, Chemical Engineering & Materials Science, USA

10:10 AM

(GOMD-S2-S2-003-2025) Electrical characterization of glass surfaces via Kelvin Probe Force Microscopy (KPFM) analysis

G. Agnello*[1]; D. Thelen[1]; A. Antony[1]; A. Nayyar[2]; J. Liu[2]

1. Corning Incorporated, USA
2. University at Buffalo, USA

10:30 AM

(GOMD-S2-S2-004-2025) Positron annihilation spectroscopy to probe surfaces of glassy materials

J. Bussey*[1]; M. Weber[1]; N. J. Smith[2]; C. V. Cushman[2]; J. McCloy[1]

1. Washington State University, USA
2. Corning Incorporated, USA

10:50 AM

(GOMD-S2-S2-005-2025) Probing Surface Reactions on Multicomponent Glass using Reflection-Absorption Infrared Spectroscopy

M. Link*[1]; Y. Lin[1]; J. Banerjee[2]; N. J. Smith[2]; A. L. Ogrinc[1]; Y. Guo[1]; Y. Li[1]; S. Yoo[3]; K. Oh[3]; J. Choi[3]; S. H. Kim[4]

1. The Pennsylvania State University, Chemical Engineering, USA
2. Corning Incorporated, USA
3. Korea Institute of Science and Technology, Republic of Korea
4. Pennsylvania State University, Chemical Engineering & Materials Science, USA

11:10 AM

(GOMD-S2-S2-006-2025) Oxynitride Thin Films for Glass Surface Modification (Invited)

S. Ali*[1]

1. Linnæus University, Department of Built Environment and Energy Technology, Sweden

GOMD S3 - Optical and electronic materials and devices - Fundamentals and applications

GOMD S3 S1 - Optical and electronic materials and devices - Fundamentals and applications

Room: Saturna Island Ballroom

Session Chairs: Casey Schwarz, Ursinus College

9:20 AM

(GOMD-S3-S1-001-2025) Laser Ionization Time of Flight Mass Spectrometry Studies of Oxide Glasses (Invited)

M. Affatigato*[1]

1. Coe College, Physics, USA

9:50 AM

(GOMD-S3-S1-002-2025) Spatial Fidelity of Laser-Written Three-Dimensional Glass Structures and their Optical Functionalization (Invited)

M. Kang*[1]; B. Triplett[2]; M. Shalaginov[3]; M. Truman[4]; E. Shirshneva-Vashchenko[5]; T. Karnik[3]; C. Schwarz[4]; M. C. Richardson[5]; A. M. Agarwal[3]; C. R. Baleine[2]; J. Hu[3]; T. Gu[3]; K. Richardson[5]

1. Alfred University, USA
2. Lockheed Martin Corporation, USA
3. Massachusetts Institute of Technology, USA
4. Ursinus College, USA
5. University of Central Florida, USA

10:20 AM

(GOMD-S3-S1-003-2025) The nature of the interface between fs laser formed single crystal and surrounding glass

R. W. Antonio*[1]; C. O'Shaughnessy[2]; V. Dierolf[3]; H. Jain[4]

1. Lehigh University, Materials Science & Engineering, USA
2. Corning Incorporated, USA
3. Lehigh University, Physics, USA
4. Lehigh University, International Materials Institute for New Functionality in Glass, USA

10:40 AM

Break

10:50 AM

(GOMD-S3-S1-004-2025) Development of solution processing protocols for optical phase change materials (Invited)

R. Sharma*[1]; D. Wiedeman[2]; E. Bissell[2]; G. Mullapudi[2]; P. Banerjee[2]; C. Schwarz[3]; B. Mills[4]; J. Hu[5]; K. Richardson[6]

1. University of Central Florida, College of Optics and Photonics, USA
2. University of Central Florida, Material Science and Engineering, USA
3. Ursinus College, Physics & Astronomy, USA
4. Massachusetts Institute of Technology, Materials Science and Engineering, USA
5. Massachusetts Institute of Technology, USA
6. University of Central Florida, CREOL, USA

11:20 AM

(GOMD-S3-S1-005-2025) Probing the Mechanisms of Ge Nanoparticle Formation in Glass Induced by Femtosecond Laser Irradiation

A. Tsekrekas*[1]; H. Jain[1]; V. Dierolf[1]; S. Garner[2]

1. Lehigh University, Institute for Functional Materials and Devices, USA
2. Corning Research and Development Corporation, USA

GOMD S7 - Emerging frontiers - Glasses in new technology

GOMD S7 - Emerging frontiers - Glasses in new technology II

Room: Moresby

Session Chairs: Madoka Ono, Hokkaido University; Collin Wilkinson, Alfred University

9:20 AM

(GOMD-S7-004-2025) Advancements in Long-Haul Communication Fibers: A Detailed Discussion on Silica Core and its Comparisons with HCF and MCF (Invited)

S. Goyal*[1]

1. Corning Incorporated, USA

9:50 AM

(GOMD-S7-005-2025) Nanocrystal-doped Silica Optical Fibers: a Step Towards a New Generation of Optical Fibers (Invited)

V. Fuertes de la Llave*[1]; J. Fernandez Lozano[1]; S. LaRochelle[2]; Y. Messaddeq[2]

1. Consejo Superior de Investigaciones Cientificas, The institute of ceramics and glass, Spain
2. Universite Laval, Centre for Optics, Photonics and Lasers (COPL), Canada

10:20 AM

(GOMD-S7-006-2025) Optical nanofibers for cavity quantum electrodynamics (Invited)

T. Aoki*[1]

1. Waseda Daigaku, Japan

Thursday, May 8, 2025

GOMD Award Lectures

Darshana and Arun Varshneya Frontiers of Glass Lectures - Glass Technology Award

Room: Saturna Island Ballroom

Session Chairs: Collin Wilkinson, Alfred University; Madoka Ono, Hokkaido University

8:00 AM

Introduction and Award Presentation

8:05 AM

(GOMD-Awards-004-2025) Glass for a Sustainable Future

J. C. Mauro*[1]

1. Pennsylvania State University, Materials Science & Engineering, USA

Darshana and Arun Varshneya Frontiers of Glass Lectures - Glass Science Award

Room: Saturna Island Ballroom

Session Chairs: Collin Wilkinson, Alfred University; Madoka Ono, Hokkaido University

9:00 AM

Introduction and Award Presentation

9:05 AM

(GOMD-Awards-005-2025) What use is a really bad glass?

S. Elliott*[1]

1. University of Cambridge, Chemistry, United Kingdom

GOMD S1 - Fundamentals of the glassy state

GOMD S1 S2 Glass Crystallization and Glass-Ceramics III

Room: Pender

Session Chair: Maria Rita Cicconi, FAU - Friedrich-Alexander-Universität Erlangen-Nürnberg

10:20 AM

(GOMD-S1-S2-012-2025) Enhanced upconversion luminescence from oxyfluoride glass ceramic microspheres utilizing rapid crystallization under rapid cooling

K. Shinozaki*[1]; Y. Kitagawa[1]

1. Sangyo Gijutsu Sogo Kenkyujo Kansai Center, Japan

10:40 AM

(GOMD-S1-S2-013-2025) The crystallization behaviors and mechanical performance evolutions of alkali earth modified Li_2O-Al_2O_3-SiO_2 glass

J. Zhang*[1]; C. Zheng[1]; J. Xie[1]

1. Wuhan University of Technology, China

11:00 AM

(GOMD-S1-S2-014-2025) Simulation of seeded crystal growth with multiple seeds: effects of seed misorientation, separation and crystal growth temperature

R. Thapa*[1]; M. E. McKenzie[2]; V. Dierolf[3]; H. Jain[4]

1. Lehigh University, Material Science and Engineering, USA
2. Corning Incorporated, Science & Technology, USA
3. Lehigh University, Physics, USA
4. Lehigh University, International Materials Institute for New Functionality in Glass, USA

11:20 AM

(GOMD-S1-S2-015-2025) SiO_2-rich glasses from the system CaO-Al_2O_3-SiO_2 - Crystallization behavior and thermal stability of beta-cristobalite

C. Thieme*[1]; K. Thieme[1]; S. Selle[1]; L. Ortmann[2]; R. Hahn[2]; S. Begand[3]

1. Fraunhofer-Institut fur Mikrostruktur von Werkstoffen und Systemen IMWS, Germany
2. Qsil GmbH Quarzschmelze Ilmenau, Germany
3. Fraunhofer-Institut fur Keramische Technologien und Systeme IKTS - Standort Hermsdorf, Germany

GOMD S1 S4 - Structures-property relation

Room: Saltspring AB

Session Chairs: Jincheng Du, University of North Texas; Shingo Urata, AGC Inc.

10:20 AM

(GOMD-S1-S4-022-2025) Computational study on an anomalous density change between crystalline β-Eucryptite and its glass phase

K. Umemoto*[1]; S. Nakane[2]

1. Nippon Electric Glass, Fundamental Technology Division, Japan
2. Nippon Electric Glass, Japan

10:40 AM

(GOMD-S1-S4-023-2025) Criticality of Amorphous-Amorphous Transitions in Compressed Silica Glasses

J. Perradin*[1]; S. Ispas[1]; A. Hasmy[1]; B. Hehlen[1]

1. University of Montpellier, Lab. Charles Coulomb, France

11:00 AM

(GOMD-S1-S4-024-2025) Medium-Range Order Structure of Alkali Silicate Glasses *WITHDRAWN*

A. Fadavi Firooz*[1]; R. Christensen[1]; C. Biscio[2]; M. M. Smedskjaer[1]

1. Aalborg Universitet, Department of Chemistry and Bioscience, Denmark
2. Aalborg Universitet, Department of Mathematical Sciences, Denmark

11:20 AM

(GOMD-S1-S4-025-2025) Atomistic Simulations of Lithium Ion Exchanged Glass

S. Chowdhury*[1]; S. Goyal[1]; C. O'Shaughnessy[1]; J. Harris[1]; C. Smith[1]

1. Corning Incorporated, USA

11:40 PM

(GOMD-S1-S4-026-2025) Understanding the Role of Fracture Pathways on the Mechanics of Glasses

V. D. Maksimov*[1]; A. Potter[3]; C. Wilkinson[2]

1. Alfred University, Inamori School of Engineering, USA
2. Alfred University, Glass Science, USA
3. New York State College of Ceramics at Alfred University, Glass Science and Engineering, USA

GOMD S1 S7 - Glass under non-ambient conditions I

Room: Moresby

Session Chair: Lawrence Gammond, Corning Incorporated

10:20 AM

(GOMD-S1-S7-001-2025) Structural properties of MgO–SiO_2 liquid and glasses (Invited)

Y. Shuseki*[1]

1. Kyoto Daigaku, Japan

10:50 AM

(GOMD-S1-S7-002-2025) Hot and steamy: The corrosion of transition metal phosphates in steam (Invited)

C. O'Shaughnessy*[1]; K. T. Hufziger[2]; N. Stone-Weiss[3]

1. Corning Incorporated, Inorganic Materials, USA
2. Corning Incorporated, Characterization Science, USA
3. Corning Incorporated, Science and Technology, USA

11:20 AM

(GOMD-S1-S7-003-2025) Effect of physical and chemical pressure onto glasses

M. Ono*[1]

1. Tohoku Daigaku, Applied Physics, Japan

11:40 AM

(GOMD-S1-S7-004-2025) High Pressure Viscosity of Silica glasses

A. Sarafian*[1]

1. Corning Incorporated, USA

GOMD S2 - Glass and interactions with its environment - Fundamentals and applications

GOMD S2 S2 - Glass Dissolution and Interfacial Reactions I

Room: Saltspring C

Session Chairs: Stephane Gin, CEA; Seong Hyeon Kim, Kongju National University

10:20 AM

(GOMD-S2-S2-008-2025) Incorporating Textual Information for Accurate Prediction of Glass Dissolution (Invited)

N. Krishnan*[1]

1. Indian Institute of Technology Delhi, Civil Engineering, India

10:50 AM

(GOMD-S2-S2-009-2025) Revisiting the concentration dependent diffusion coefficient (Invited)

A. L. Ogrinc*[1]; A. Borhan[1]; S. H. Kim[2]

1. Pennsylvania State University, Chemical Engineering, USA
2. Pennsylvania State University, Chemical Engineering & Materials Science, USA

11:20 AM

(GOMD-S2-S2-010-2025) Room-temperature aging of bottle glass in solutions of moderate acidity

A. Potter*[1]; R. J. Pao[2]; G. Gaustad[3]; C. Wilkinson[4]

1. New York State College of Ceramics at Alfred University, Glass Science and Engineering, USA
2. Alfred University, Inamori School of Engineering, USA
3. NYS College of Ceramics, Alfred University, Inamori School of Engineering, USA
4. Alfred University, Glass Science, USA

11:40 AM

(GOMD-S2-S2-011-2025) Effects of Weathering on the Failure Characteristics of Ion Exchanged Glasses

R. Grodsky*[1]; R. Brow[1]; J. Kim[2]; T. Stone[2]; J. Fenton[3]

1. Missouri S&T, Materials Sci & Engrg, USA
2. National Nuclear Security Administration Kansas City National Security Campus, Mod/Sim, USA
3. National Nuclear Security Administration Kansas City National Security Campus, Analytical Sciences, USA

GOMD S3 - Optical and electronic materials and devices- Fundamentals and applications

GOMD S3 S3 - Optical fibers and waveguides, optoelectronic glass-based devices II

Room: Cortes

Session Chairs: Johann Troles, University of Rennes 1; Thomas Meyneng, Universite Laval

10:20 AM

(GOMD-S3-S3-011-2025) Toward a low-cost SERS probe by ion-exchanged processed optical fibers

D. Kaur*[1]; D. Farnesi[1]; M. De Angelis[1]; C. D'Andrea[1]; N. G. Boetti[1]; D. Janner[1]; G. Nunzi Conti[1]; S. Berneschi[1]; S. Pelli[1]

1. Istituto di fisica applicata Nello Carrara Consiglio Nazionale delle Ricerche, Italy

10:40 AM

(GOMD-S3-S3-013-2025) The Effects of BaO on the Thermal, Structural and Optical Properties of Bismuth-Gallo-Germanate Glasses

H. Camici*[1]; T. Guérineau[1]; S. LaRochelle[1]; Y. Messaddeq[1]

1. Universite Laval, Centre d'optique, photonique et laser, Canada

GOMD S5 - Glass manufacturing

GOMD S5 S1 - Manufacturing VI

Room: Saturna Island Ballroom

Session Chairs: Luiz Pereira, Université de Munich (LMU); Katelyn Kirchner, CelSian

10:20 AM

(GOMD-S5-S1-025-2025) A generic physical model for an accurate prediction of the viscosity of multicomponent glasses

R. Conradt*[1]

1. uniglassAC GmbH, Germany

10:40 AM

(GOMD-S5-S1-026-2025) Viscosity and structure of transition metal oxide containing silicate melts (Invited)

S. Sukenaga*[1]; R. Uchida[4]; I. Takahashi[4]; Y. Onodera[2]; K. Shinoda[1]; D. Neuville[3]; H. Shibata[1]

1. Tohoku University, Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Japan
2. National Institute for Materials Science, Japan
3. Institut de Physique du Globe de Paris, France
4. Tohoku University, Graduate School of Engineering, Japan

11:10 AM

(GOMD-S5-S1-027-2025) Pressure Dependence of Viscosity of Geological Melts: A Review & Way Forward (Invited)

J. K. Russell*[1]; K. Hess[2]; A. Anzulovic[3]; D. B. Dingwell[2]

1. University of British Columbia, Earth, Ocean and Atmospheric Sciences, Canada
2. Ludwig-Maximilians-Universitat Munchen, Earth and Environmental Sciences, Germany
3. Universitetet i Oslo, Norway

GOMD S1 - Fundamentals of the glassy state

GOMD S1 S1 - Glass Formation and Structural Relaxation

Room: Cortes

Session Chairs: Katelyn Kirchner, CelSian; Roger Loucks, Alfred University

1:15 PM

(GOMD-S1-S1-001-2025) Connecting mechanical properties of glasses to their topological defects (Invited)

W. Kob*[1]; Z. Wu[2]; J. Barrat[3]

1. University of Montpellier, France
2. Beijing Normal University, China
3. Universite Grenoble Alpes, France

1:45 PM

(GOMD-S1-S1-002-2025) Trends in dynamical heterogeneity in Supercooled Liquids (Invited)

S. Sen*[1]

1. University of California, Davis, Department of Material Science and Engineering, USA

2:15 PM

(GOMD-S1-S1-003-2025) Dynamic Light Scattering in Network-forming Glass Melts (Invited)

D. Sidebottom*[1]; J. McCown[1]; J. Kevil[1]; D. Olabode[1]; D. White[1]

1. Creighton University, Physics, USA

2:45 PM

(GOMD-S1-S1-004-2025) On the Origins of Fragility in Sodium Borosilicate Glass and its Influence on Structural Relaxation

A. Bossen*[1]; J. C. Mauro[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA

3:05 PM

Break

3:30 PM

(GOMD-S1-S1-005-2025) Compositional and temperature dependence of viscosity in model borosilicate-based nuclear waste glasses: An augmented Adam-Gibbs Model Approach

P. Malviya*[1]; P. Ferkl[2]; P. Hrma[3]; A. A. Kruger[3]; A. Goel[1]

1. Rutgers The State University of New Jersey, Material Science and Engineering, USA
2. Pacific Northwest National Laboratory, USA
3. US Department of Energy, USA

3:50 PM

(GOMD-S1-S1-006-2025) Accelerated Low-Temperature Relaxation of Glasses via Thermo-Ultrasonication

L. Tran*[1]; P. Lynch[1]; E. Akirmak-Yamac[1]; G. Sop Tagne[1]; C. Cano[2]; P. Marrero[2]; A. Phillips[2]; R. Welch[1]; D. Wiedeman[3]; R. Sharma[3]; K. Richardson[3]; S. Feller[2]; W. LaCourse[1]; S. Yaniger[1]; C. Wilkinson[1]; M. Kang[1]

1. Alfred University, USA
2. Coe College, USA
3. University of Central Florida, USA

4:10 PM

(GOMD-S1-S1-007-2025) Critical-like slowdown in thermal soft-sphere glasses via energy minimization

R. S. Hoy*[1]; K. A. Interiano-Alberto[1]; P. K. Morse[2]

1. University of South Florida, Physics, USA
2. Seton Hall University, Physics, USA

4:30 PM

(GOMD-S1-S1-008-2025) Revealing the nature of the boson peak using metal-organic framework polymorphs

S. S. Sørensen*[1]; F. Cao[1]; P. Rasmussen[1]; J. A. Finkler[1]; M. H. Henningsen[1]; M. Aouane[2]; D. Bessas[3]; J. Bulled[3]; A. Bossak[3]; G. Monaco[4]; M. M. Smedskjaer[1]

1. Aalborg University, Department of Chemistry and Bioscience, Denmark
2. ISIS Facility, Rutherford Appleton Laboratory, United Kingdom
3. European Synchrotron Radiation Facility, France
4. University of Padova, Department of Physics and Astronomy 'Galileo Galilei', Italy

GOMD S1 S7 - Glass under non-ambient conditions II

Room: Moresby

Session Chair: Lawrence Gammond, Corning Incorporated

1:15 PM

(GOMD-S1-S7-005-2025) Structure, properties, and chemical strengthening of sodium aluminoborosilicate glasses

L. V. Gammond*[1]; J. Wu[1]

1. Corning Incorporated, USA

1:35 PM

(GOMD-S1-S7-006-2025) Investigation into the impact of pressure-induced densification upon the structure and properties of metaluminous sodium aluminoborosilicate glasses

N. Stone-Weiss*[4]; S. Kapoor[1]; B. Siboczy[1]; R. Sun[2]; F. Lodesani[3]; R. Youngman[4]; M. Bockowski[5]; A. Pedone[3]; L. Huang[2]; A. Goel[1]

1. Rutgers The State University of New Jersey, Materials Science and Engineering, USA
2. Rensselaer Polytechnic Institute, Materials Science and Engineering, USA
3. Universita degli Studi di Modena e Reggio Emilia, Department of Chemical and Geological Sciences, Italy
4. Corning Incorporated, Science & Technology Division, USA
5. Instytut Wysokich Cisnien Polskiej Akademii Nauk, Poland

GOMD S2 - Glass and interactions with its environment - Fundamentals and applications

GOMD S2 S1 - Glasses, glass-ceramics and glass-based biomaterials

Room: Pender

Session Chairs: Maziar Montazerian, The Pennsylvania State University Department of Materials Science and Engineering; Leena Hupa, Åbo Akademi University

1:15 PM

(GOMD-S2-S1-001-2025) Glass for Healthcare: From Research, Invention to Industrialization (Invited)

Q. Fu*[1]

1. Corning Incorporated, USA

1:45 PM

(GOMD-S2-S1-002-2025) Frontiers of Amorphous Materials: Fabrication of metallic glass thin films, microfibers and bulk systems for biomedical applications (Invited)

E. Sharifikolouei*[1]; B. Sarac[2]; E. Yuece[3]; A. Rezvan[3]; F. Sourani[3]; D. Singh[3]; A. Calogero Scalia[1]; Z. Najmi[1]; A. Cochis[1]; L. Rimondini[1]; J. Eckert[3]

1. Universita degli Studi del Piemonte Orientale Amedeo Avogadro, Health Sciences, Italy
2. ZKW, Austria
3. Erich Schmid Institut fur Materialwissenschaft, Austria

2:15 PM

(GOMD-S2-S1-003-2025) The Reaction of Na-Ca-Borophosphate Glasses in Simulated Body Fluids Under Dynamic Flow Conditions

R. L. Blatt*[1]; R. Brow[1]

1. Missouri S&T, Materials Sci & Engrg, USA

2:35 PM

(GOMD-S2-S1-004-2025) The effect of fluorine on the structure and antibacterial property of CaF_2-CaO-ZnO-B_2O_3-SiO_2 glasses

J. Chung*[1]; m. Hwang[1]; J. Kim[1]

1. Korea Institute of Ceramic Engineering and Technology, Republic of Korea

2:55 PM

(GOMD-S2-S1-005-2025) Manganese-Doped 85S Mesoporous Bioactive Glasses (MBGs)

E. Luna[2]; M. Fook[2]; M. Montazerian*[1]

1. The Pennsylvania State University - University Park Campus, USA
2. Universidade Federal de Campina Grande, Brazil

3:15 PM

Break

3:30 PM

(GOMD-S2-S1-006-2025) Preferred Cation-Anion Pairs in Mixed-Cation Sulfate and Sulfophosphate Glasses, as Elucidated by Raman and O-17 SSNMR

C. Calahoo*[1]; P. Zhang[2]; L. Wondraczek[2]; J. Zwanziger[3]; U. Werner-Zwanziger[3]

1. Genics, R&D Glass Division, Canada
2. Friedrich Schiller University, Germany
3. Dalhousie University, Chemistry, Canada

3:50 PM

(GOMD-S2-S1-007-2025) Structural, luminescent and in vitro studies of europium-doped soda lime phosphate glasses

D. Kaur*[1]; R. Priya[2]; O. Pandey[3]; K. Attri[3]; D. Choudhury[3]

1. Istituto di fisica applicata Nello Carrara Consiglio Nazionale delle Ricerche, Physics, Italy
2. Chandigarh University, Physics, India
3. Thapar Institute of Engineering and Technology (Deemed to be University), School of Chemistry and Biochemistry, India

GOMD S2 S2 - Glass Dissolution and Interfacial Reactions II

Room: Saltspring C

Session Chairs: Nicholas Stone-Weiss, Corning Incorporated; Seong Kim, Pennsylvania State University

1:15 PM

(GOMD-S2-S2-012-2025) Corroded Glass Microstructures: From Historical Perspectives to Modern Insights (Invited)

A. Mir*[1]

1. University of Huddersfield, Electron Microscopy and materials Analysis, United Kingdom

1:45 PM

(GOMD-S2-S2-013-2025) Alteration of a borosilicate glass between a few minutes and 27 years - discussion on rate-limiting mechanisms

S. Gin*[1]; S. Narayanasamy[1]; S. Tiwari[1]; J. Delaye[1]

1. CEA, DPME/SEME/LEMC, France

2:05 PM

(GOMD-S2-S2-014-2025) Effect of Heavy-Ion Irradiation on Glass Dissolution Rates and Surface Alteration Layer Formation studied by Fluid-Cell Raman Spectroscopy

M. I. Lönartz*[1]; L. Stausberg[1]; C. Trautmann[2]; T. Geisler[1]

1. Rheinische Friedrich-Wilhelms-Universitat Bonn, Geochemistry/Petrology, Germany
2. GSI Helmholtzzentrum fur Schwerionenforschung GmbH, Germany

2:25 PM

(GOMD-S2-S2-015-2025) Static Dissolution Testing for the Long-Term Performance Evaluation of 24 LAW Glasses

B. Parruzot*[1]; J. Neeway[1]; S. Kerisit[2]; J. M. Westman[1]; I. Burch[1]; J. T. Reiser[1]; J. V. Crum[1]; G. L. Smith[1]; M. Asmussen[1]

1. Pacific Northwest National Lab, Energy and Environment Directorate, USA
2. Pacific Northwest National Lab, USA

2:45 PM

(GOMD-S2-S2-016-2025) Impact of the aluminum coordination on the dissolution kinetics of magnesium aluminoborosilicate glasses

A. Jose*[1]; M. Bertani[2]; R. Youngman[7]; G. Tricot[3]; S. Gin[4]; A. Pedone[5]; A. Goel[6]

1. Rutgers University, Material Science and Engineering, USA
2. University of Modena and Reggio Emilia, Departement of Chemical and Geological Sciences, Italy
3. Universite de Lille, France
4. CEA, DE2D, France
5. University of Modena and Reggio Emilia, Italy
6. Rutgers University, USA
7. Corning Incorporated, USA

3:05 PM

Break

3:30 PM

(GOMD-S2-S2-017-2025) Extension of corrosion kinetic models from simple glasses toward complex multicomponent glasses

N. J. Smith*[1]; E. Barros de Moraes[1]; E. Bakowska[1]; N. Stone-Weiss[2]

1. Corning Incorporated, USA
2. Corning Incorporated, Science and Technology, USA

3:50 PM

(GOMD-S2-S2-018-2025) Influence of glass composition on its dissolution rate in simulated physiological fluids (SPF)

S. Gandon*[1]; Q. Hérault[1]; M. Jacquemin[1]; S. Gin[2]; F. Angeli[3]

1. Saint-Gobain Recherche, France
2. CEA, DPME, France
3. CEA, France

4:10 PM

(GOMD-S2-S2-019-2025) Corrosion Behavior of Sodium Aluminophosphate Glasses under Aqueous Conditions

M. Watanabe*[1]; R. Sakai[2]; T. Kawasaki[1]; K. Miyatani[2]; K. Hayashi[1]

1. AGC Inc., Materials Integration Laboratories, Japan
2. AGC Inc., Innovative Technology Laboratories, Japan

4:30 PM

(GOMD-S2-S2-020-2025) Dissolvable Phosphate and Nitrate-based Glasses for Growing Media and Fertilizer

C. Calahoo*[1]; W. Hammer[1]; D. Stiling[2]; A. Patel[2]; W. Wall[1]

1. Genics, R&D Glass Division, Canada
2. University of Regina Faculty of Engineering & Applied Science, Industrial Systems Engineering, Canada

GOMD S3 - Optical and electronic materials and devices - Fundamentals and applications

GOMD S3 S2 - Glasses for energy applications

Room: Saturna Island Ballroom

Session Chair: Caio Bragatto, Alfred University

1:15 PM

(GOMD-S3-S2-001-2025) Balancing the mechanical and electrochemical properties in glassy solid-state electrolytes (Invited)

S. S. Sørensen*[2]; M. Micoulaut[1]; M. M. Smedskjaer[2]

1. Sorbonne Université, France
2. Aalborg University, Department of Chemistry and Bioscience, Denmark

1:45 PM

(GOMD-S3-S2-002-2025) The development of a lithium mixed-oxy-sulfide silico-borate glassy solid electrolyte

S. J. Leland*[1]; H. Cochran[1]; S. W. Martin[1]

1. Iowa State University, Materials Science and Engineering, USA

2:05 PM

(GOMD-S3-S2-004-2025) Development and Characterization of Sodium Mixed Oxy-Sulfide Glassy Solid Electrolytes for Improved Electrochemical Stability

A. G. Wakefield*[1]; N. Riley[1]; K. M. Maier[1]; S. W. Martin[1]

1. Iowa State University, Materials Science and Engineering, USA

2:25 PM

(GOMD-S3-S2-005-2025) Mixed network former effect on the ion-dynamics of Sodium Alumino-Phospho-Silicate glasses

S. R. Keshri*[1]; I. Mandal[2]; A. Gaddam[3]; S. Ganisetti[4]; A. R. Allu[5]; N. Gosvami[1]; N. Krishnan[6]

1. Indian Institute of Technology Delhi, Materials Science & Engineering, India
2. Indian Institute of Technology Delhi, School of Interdisciplinary Research, India
3. University of Aveiro, Materials and Ceramics Engineering, Portugal
4. Aalborg Universitet, Department of Chemistry and Bioscience, Denmark
5. CSIR- Central Glass and Ceramic Research Institute, Kolkata, Energy Materials & Devices, India
6. Indian Institute of Technology Delhi, Civil Engineering, India

2:45 PM

(GOMD-S3-S2-006-2025) Highly Temperable Glass for Bifacial Solar Panels (Invited)

A. Mitchell*[1]; Z. Zheng[1]

1. Corning Incorporated, USA

3:05 PM

Break

3:30 PM

(GOMD-S3-S2-007-2025) Intermediate Temperature Electrochemical Devices Utilizing Proton Conducting Phosphate Glass for Energy Conversion Toward Carbon Neutrality (Invited)

T. Ishiyama*[1]; H. Arai[1]; H. Nagashima[1]; H. Miyamura[1]; T. Yamaguchi[1]; T. Omata[2]

1. National Institute of Advanced Industrial Science and Technology, Japan
2. Tohoku University, IMRAM, Japan

4:00 PM

(GOMD-S3-S2-008-2025) Quantification of chemical replacement zones by means of ToF-SIMS, NRA and nanoindentation (Invited)

K. Rein[1]; K. Weitzel*[1]

1. Philipps-Universitat Marburg, Chemistry Department, Germany

4:30 PM

(GOMD-S3-S2-009-2025) Impact of heteroatom cross-linking in phosphoric acid chains on proton transport in phosphate glasses

T. Omata*[1]; J. Nishii[2]; T. Ishiyama[3]

1. Tohoku University, IMRAM, Japan
2. Hokkaido University, RIES, Japan
3. National Institute of Advanced Industrial Science and Technology, Japan

4:50 PM

(GOMD-S3-S2-010-2025) Solid-state cation/H^+ ion exchange of phosphate glasses for an intermediate temperature fuel cell

Y. Daiko*[1]

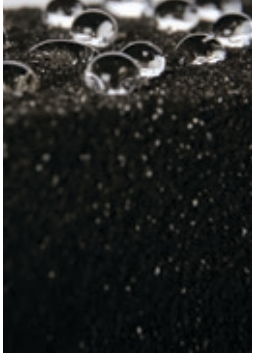
1. Nagoya Institute of Technology, Japan

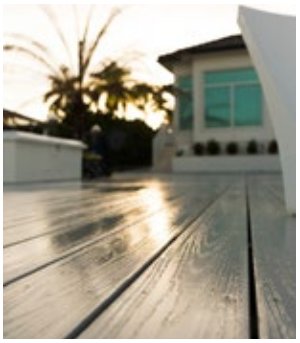
NOTES

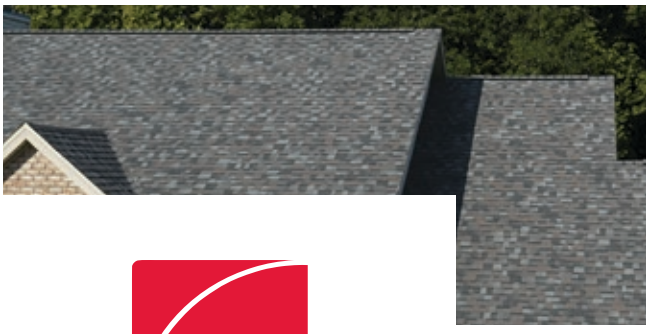
NOTES


The American Ceramic Society
ceramics.org
SUBMIT YOUR ABSTRACT
ACERS SPRING MEETING
APRIL 12-16, 2026
BELLEVUE, WASHINGTON, USA
ceramics.org/ACERSSPRING






OWENS CORNING®

BUILDING A MORE SUSTAINABLE FUTURE THROUGH MATERIAL INNOVATION

Learn more about our residential and commercial building products at www.owenscorning.com.

AMERICAN ELEMENTS

THE MATERIALS SCIENCE MANUFACTURER®

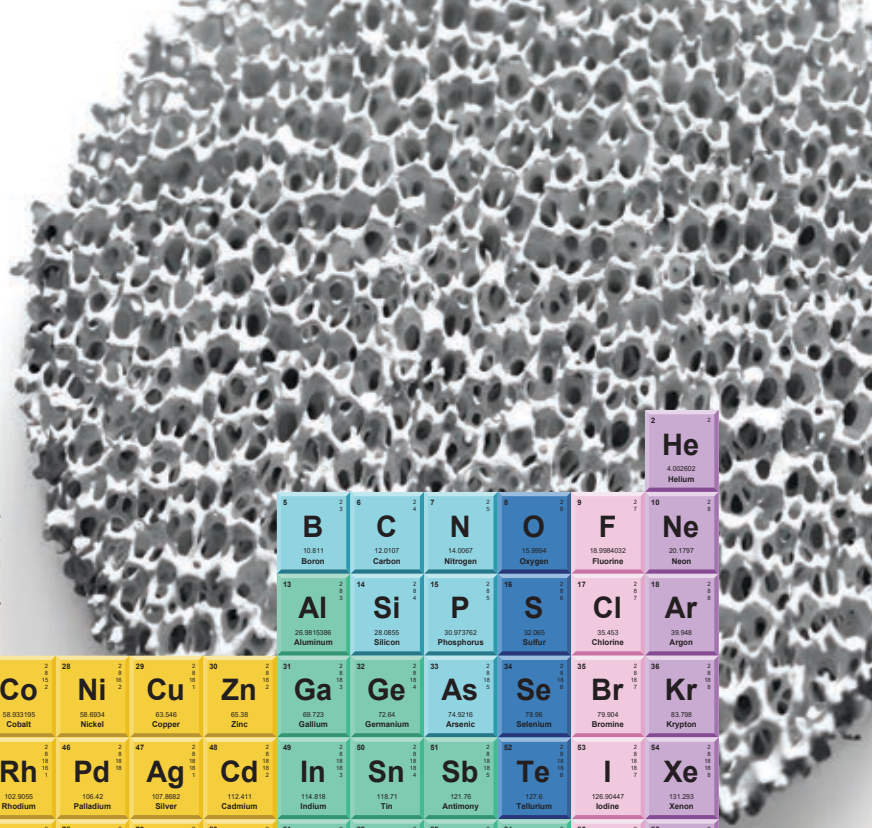
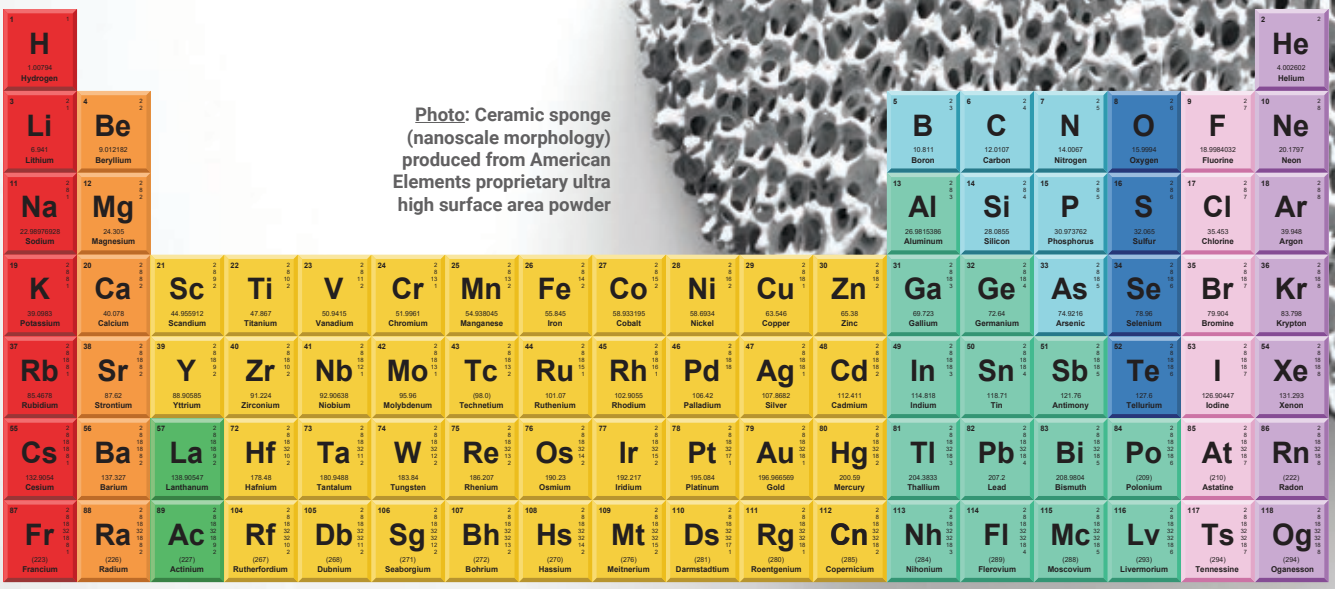
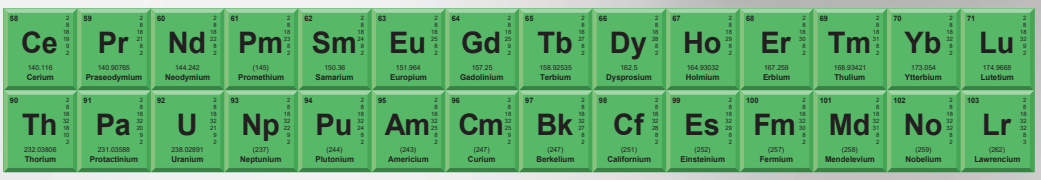


Photo: Ceramic sponge (nanoscale morphology) produced from American Elements proprietary ultra high surface area powder





Now Invent.™

THE NEXT GENERATION OF ADVANCED MATERIALS MANUFACTURERS

Bulk & lab scale manufacturers of over 35,000 certified high purity compounds, metals, and nanoparticles, including a wide range of materials with applications in industries such as aerospace, automotive, military, pharmaceutical, and electronics, all engineered to meet the most rigorous quality standards.

American Elements Opens a World of Possibilities...Now Invent!

www.americanelements.com