CONFERENCE GUIDE

12th International Conference on HIGH TEMPERATURE CERAMIC MATRIX COMPOSITES (HTCMC-12)

COMBINED WITH

Global Forum on ADVANCED MATERIALS AND TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT (GFMAT-3) 2026

Sheraton San Diego Hotel & Marina | San Diego, California, USA

MAY 31 – JUNE 5, 2026

ceramics.org/htcmc12_gfmat3

The American Ceramic Society
ceramics.org

WELCOME

Dear Colleagues, Friends, and Distinguished Guests,

On behalf of the organizing committees, it is our distinct honor and great pleasure to welcome you to the 12th International Conference on High Temperature Ceramic Matrix Composites (HTCMC-12) and the 3rd Global Forum on Advanced Materials and Technologies for Sustainable Development (GFMAT-3), held jointly in the beautiful city of San Diego, California.

HTCMC has long stood as the premier international gathering for researchers, engineers, and industry leaders working at the frontier of high-temperature ceramic matrix composites. These materials are indispensable to aerospace propulsion, hypersonic vehicles, nuclear energy systems, and other extreme-environment applications. This twelfth edition continues that proud tradition while embracing the evolving landscape of our field, from advanced processing and manufacturing to computational modeling, non-destructive evaluation, and the integration of CMCs into next-generation structural systems.

The co-location with GFMAT-3 amplifies the scope and impact of this gathering. GFMAT brings together global perspectives on advanced materials innovations that address humanity's most pressing sustainability challenges, from energy storage and conversion to environmental remediation and beyond. The synergy between these two conferences creates a great environment for cross-disciplinary dialogue, collaborative discovery, and transformative ideas.

This year's program reflects the truly international character of our scientific community. We are proud to welcome participants from across the Americas, Europe, Asia, and beyond, representing universities, national laboratories, and industry organizations at the forefront of materials research. The technical program features plenary lectures from world-leading experts, alongside a rich array of symposia, oral presentations, poster sessions, student events, and a short course on testing materials in extreme environments.

We extend our sincere appreciation to The American Ceramic Society for its organizational support, and to our generous sponsors to include Toyo Tanso, Japan; Composites United, Germany; GE Aerospace, USA; DACC Carbon, South Korea; Wiley, USA; IHI, Japan; Sewon HF, South Korea; Oak Ridge National Lab, USA; and AVSC, USA.

Their financial commitment makes this conference possible. Our heartfelt thanks also go to the members of the HTCMC-12 and GFMAT-3 organizing committees, symposium organizers, reviewers, and all volunteers whose dedication and expertise have shaped this outstanding program.

San Diego, a city renowned for innovation, world-class research institutions, and welcoming spirit, provides a spectacular backdrop for this meeting. We hope that the conversations sparked here, by the waterfront and in the session rooms alike, will inspire new collaborations and discoveries that carry our field forward for years to come.

Welcome. We are delighted you are here.

Mrityunjay (Jay) Singh
Honorary Chair, HTCMC-12 & GFMAT-3
USA

Tatsuki Ohji
General Chair, HTCMC-12 & GFMAT-3
Japan

Amjad Almansour
Lead Chair, HTCMC-12
USA

Palani Balaya
Lead Chair, GFMAT-3
Singapore

Mrityunjay Singh
USA, Honorary Chair

Tatsuki Ohji
Japan, General Chair

Amjad Almansour
USA, Lead Chair

Palani Balaya
SG, Lead Chair

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Cell phones silent

No photography/ recording

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.

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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.

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

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CHAIRS

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Japan, Co-Chair

Surojit Gupta
USA, Co-Chair

Where ‘what ifs’ become ‘what’s next’

GE Aerospace

Open Fan architecture
A step change in jet engine propulsion efficiency

PLENARY SPEAKERS

Christina Back

Vice President, General Atomics Electromagnetic Systems

Modernizing nuclear power with ceramic matrix composites

Nuclear energy is at a crossroads. Aging technology from the 50s and the surging need for sustained, reliable power to feed the growing artificial intelligence demands are driving a reexamination of what it means to be a modern nuclear power plant. Faced with reactor plant retirements, the industry is taking advantage of new materials to extend and enhance the lifetime of current reactors. This path for current and advanced reactors is enabled by the powerful advances in modeling and simulation that are used in conjunction with prototyping and testing to efficiently adopt new materials in this highly regulated industry.

In this plenary we will examine the advances underlying the customization of composites for nuclear energy applications. Using SiC composites for nuclear fuel rods as an example, the presentation will provide an overview of the fabrication methodology, advanced characterization methods, importance of engineered design, and prototypic testing necessary for efficient and informed adoption of ceramic matrix composites. From the harsh environments of a nuclear reactor to those in aerospace, hypersonic and space applications, CMCs can be engineered to play an expanding role because of their resistance to high temperature and high stress.

Dr. Christina Back is Vice President of Nuclear Technologies and Materials at General Atomics. She is an internationally recognized expert in both fission and fusion energy research, with over 30 years of experience leading research for private industry, U.S. Department of Energy (DOE), and U.S. Department of Defense. She regularly serves on National Academy of Sciences, national laboratory, and university committees. As a technical expert, she has been invited to the 2015 White House Summit on Nuclear Energy and provided testimony to U.S. Congressional Committees. Dr. Back earned a B.S. from Yale University, and a Ph.D. in physics from the University of Florida. She has over one hundred peer-reviewed publications, two patents, and was elected a Fellow of the American Physical Society. At General Atomics, Dr. Back is responsible for all nuclear fission programs and related technology development. Major thrust areas include space and terrestrial advanced reactors, accident-tolerant nuclear fuel, and energy storage solutions. In today's world, space has become accessible to all. She views space nuclear power and propulsion technologies as critically important to explore and protect the space domain.

PLENARY SPEAKERS

Yutaka Kagawa

President of Tokyo University of Technology,
Professor Emeritus of The University of Tokyo

Advances in research and development of Ceramic Matrix Composites: Current Japanese scenario

This presentation provides an overview of recent advancements in the research and development of Ceramic Matrix Composites (CMCs) and Environmental Barrier Coatings (EBCs), with a particular focus on progress achieved in Japan. The discussion will address CMC systems for aircraft engines- such as SiC/SiC and oxide–oxide (Ox/Ox) composites- as well as SiC/SiC composites designed for nuclear applications. Significant developments include the emergence of next generation SiC fibers and thermally robust Ox/Ox composites produced by Japanese manufacturers, which are approaching commercialization.

In the area of manufacturing technologies, major domestic heavy industry companies have adopted distinct strategies to produce high performance CMCs optimized for specific application environments. The presentation will also highlight key achievements from the Center for Ceramic Matrix Composites (CCMC) at Tokyo University of Technology.

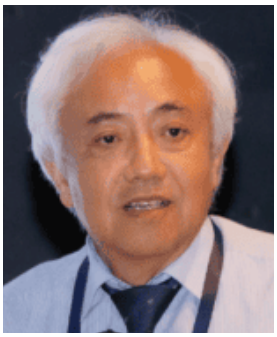
Additionally, the talk will introduce innovative experimental methodologies developed at the CCMC for reliability assessment, including advanced X ray based techniques, and will present new insights derived from their application. The presentation will conclude with an outlook on the future trajectory of CMC and EBC technologies, identifying technical challenges, emerging opportunities, and directions for further practical implementation.

Professor Yutaka Kagawa received his B.S., M.S., and Doctor of Engineering degrees from the School of Science and Engineering at Waseda University. He began his career at Mitsubishi Electric Corporation and subsequently joined the Institute of Industrial Science (IIS), The University of Tokyo. He was appointed Associate Professor in 1989 and promoted to Professor in 1998. He later held a professorship in the Graduate School of Engineering, concurrently serving at the National Institute for Materials Science (NIMS). From 2008 to 2015, he served as Professor at the Research Center for Advanced Science and Technology (RCAST), The University of Tokyo, before returning to the Graduate School of Engineering until 2017. He has been an Invited Researcher at NIMS since 2010 and was subsequently conferred the title of Professor Emeritus at The University of Tokyo.

In 2017, Professor Kagawa joined Tokyo University of Technology as Professor and Director of the Center for Ceramics Matrix Composite (CCMC). He later served as Vice President and has held the position of President since 2023, while continuing to contribute as a Research Advisor at IIS. His research spans structural materials science, with particular emphasis on ceramic matrix composites, thermal and environmental barrier coatings, and interfacial mechanics.

His work integrates fundamental materials science with translational research and industrial applications, supporting the development and implementation of advanced ceramic composite technologies. He remains active in promoting research and education through national outreach and specialized training initiatives.

PLENARY SPEAKERS



Ji Yeon Park

Sewon Hardfacing Co., Ltd.

Progress in the development of SiC CMC composites for extreme environments in Korea

SiC ceramics possess excellent high-temperature strength, chemical stability, and radiation resistance. Therefore, they have emerged as a candidate material for a variety of applications in extreme environments characterized by high temperatures and high radiation. In particular, SiC fibers reinforced composites are expanding their application as structural materials as they can compensate for the catastrophic failure, a shortcoming of monolithic ceramics. SiC fiber composites are composed of fibers, interfaces, matrix, and coating layers, and therefore, various manufacturing processes can be attempted to obtain appropriate properties, which greatly influences the range of applications of the composite. In Korea, the development of SiC composites for use in high-temperature gas turbine engines and nuclear reactor core components has been ongoing for over 20 years, focusing on manufacturing process development. Composite matrix development, including chemical vapor infiltration (CVI), liquid metal infiltration (LM(S)I), polymer impregnation and pyrolysis (PIP), hot press (HP), and hybrid processes, has progressed to the point where it can be applied to actual shapes. The resulting environmental barrier coating (EBC) and thermal barrier coating (TBC) technologies, focusing on material development and coating processes, have also reached the stage of being applied to actual parts. It is expected that third-generation SiC fibers will reach pilot plant-scale production in the near future.

Dr. Ji Yeon Park is a materials scientist with over 35 years of experience in high-temperature structural ceramics and ceramic matrix composites (CMCs) for nuclear and advanced energy systems. He is currently a Technical Advisor at Sewon Hardfacing Co., Ltd. (since January 2025). He served as a Senior and Principal Researcher at the Korea Atomic Energy Research Institute (KAERI) from 1988 to 2024, contributing to and leading national and international R&D programs on advanced materials for Generation IV Very High Temperature Reactors (VHTR). His work focused on fabrication, characterization, and performance evaluation of SiC-based materials under extreme environments. Dr. Park has international research experience as a STA Fellow at the National Institute for Materials Science (Japan) and as a Guest Researcher at the Paul Scherrer Institut (Switzerland), collaborating on nuclear-grade SiC ceramics and composites. His expertise includes SiC-based ceramics and SiCf/SiC composites, with emphasis on CVD, CVI, and Hot Pressing, and on mechanical, thermal, and environmental performance evaluation for nuclear and gas turbine applications. He has held key international advisory roles, including Korean Representative to the GEN-IV VHTR Materials PMB (2007–2016); Expert Group Member, OECD/NEA (2009–2021); and Expert Member, ISO TC206/WG4 (2014–present). He was Conference Chair of HT-CMC 11 (2023).

PLENARY SPEAKERS

Alexander Michaelis

President of Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, Germany
Full Professor for Ceramics at University of Dresden

Advanced Ceramics for stationary storage and CCU (carbon capture and utilization) technology

Advanced ceramic materials offer enormous potential for innovations in the fields of energy conversion and storage as well as decarbonization. To cope with the fluctuation of renewable power (PV and wind) batteries (short term storage for arbitrage) and electrolysis (long term "seasonal storage) for green hydrogen production is needed. We present NaNiCl solid state batteries as a Li-free and safe technology for short term storage and latest results on SOE (solid oxide electrolysis) for green hydrogen production.
Furthermore, SOE can be employed as a powerful technology for highly efficient CCU applications. For this, SOE is used in the co-electrolysis mode for the simultaneous production of H_2 and CO, so called syngas. In the co-electrolysis mode, CO_2 is actively removed from the environment and fed into the SOE system. By the Fischer Tropsch processes this syngas can be transferred to e-fuels (such as SAF: sustainable aviation fuel), higher alcohols, and even waxes. We present a fully integrated co-electrolysis Fischer Tropsch System combined with ceramic gas separation membranes for the extraction of CO_2 from different sources such as exhaust gas from lime industry or biogas. We also present examples using SOE for combined CCU and CDA (carbon direct avoidance) applications in green steel production. Applying this technology, even allows to produce CO_2 "negative" steel.

Prof. Alexander Michaelis studied physics at the University of Düsseldorf where he earned his Ph-D and state doctorate (habil) in materials science. In 1995 he became faculty member at the University of North Carolina at Chapel Hill, USA. In 1996 he switched to Siemens AG working as senior process integration engineer in the field of microelectronics in East Fishkill, New York. In 2000, he started to work for the corporate research department of Bayer AG in Leverkusen and the Bayer subsidiary H.C. Starck GmbH heading the New Business Development department. Since 2004, Prof. Michaelis is president of Fraunhofer IKTS with more than 800 employees and a yearly budget of over 76 Mio €. Additionally, he is full professor for Ceramics at TU Dresden. He filed 42 patent families and published more than 400 papers in peer reviewed journals and books. He received numerous awards. In 2009 he was elected as academician of "World Academy of Ceramics WAC". In 2012 he received the ACerS Bridge Building Award for his contribution in the field of energy and environmental technology. In 2014 he received the Fraunhofer Medal for outstanding achievements in the field of applied materials research. In 2015 he got the LEE HSUN Award on Materials Science of the Chinese Academy of Science. In 2016 he became Fellow of the American Ceramic Society (ACerS) due to his long commitment and outstanding contributions to applied research and development of advanced ceramics. In 2017 he was appointed Fellow of the European Ceramic Society (ECerS) and received the "Medal of Leadership" of ACERS for his outstanding contribution for the Advancement of Ceramics Technology. In 2019, he was elected as President of the German Ceramic Society (DKG e.V.) and the FDKG (Research organization of DKG).

HTCMC 12-GFMAT 3
Global Ceramic Industry Leaders Roundtable

Tuesday, June 2, 2026, 3:30-5:30 p.m.

This high-level forum, held for the first time at HTCMC12-GFMAT 3, the Global Ceramic Industry Leaders Roundtable convenes industry and senior R&D executives and technology experts from diverse industrial sectors and continents to explore urgent challenges, emerging opportunities, and collaborative solutions that are shaping the future of ceramic industries.

Participants will engage in moderated discussions and Q&A on both the core themes listed below and related strategic topics they bring from their own contexts. The proposed topics are given below:

- **Enabling Materials for Disruptive Technologies**
- **Global Supply Chain Resilience**
- **Circular Economy and Sustainable Processes**
- **Work Force Development**
- **Leadership and Policy Support**
- **Pathways for Stronger Industry–Government-Academia Partnerships**

Throughout the event, attendees will be encouraged to ask questions, share best practices, and propose joint initiatives related to the listed themes or other relevant industry challenges and opportunities.

Dr. Christina Back

Vice President, General Atomics Electromagnetic Systems

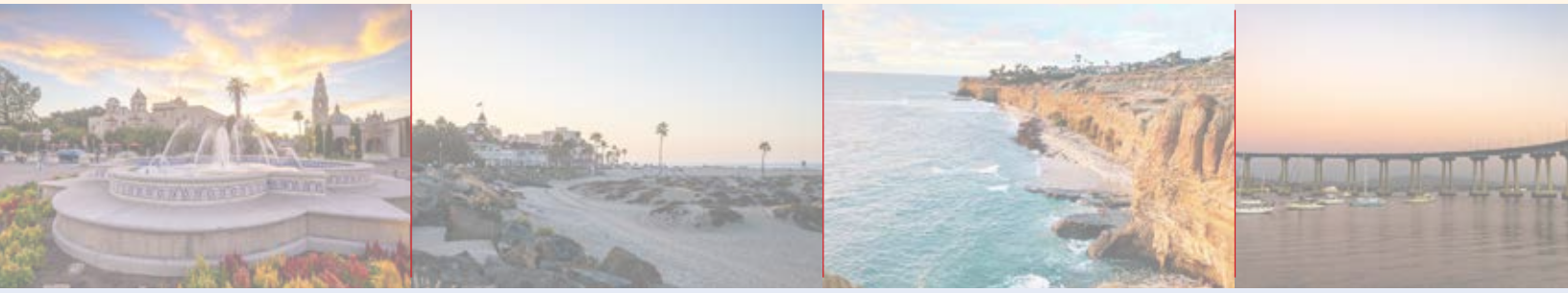
Dr. Christina Back is Vice President of Nuclear Technologies and Materials at General Atomics. She is an internationally recognized expert in both fission and fusion energy research, with over 30 years of experience leading research for private industry, U.S. Department of Energy (DOE), and U.S. Department of Defense. She regularly serves on National Academy of Sciences, national laboratory, and university committees. As a technical expert, she has been invited to the 2015 White House Summit on Nuclear Energy and provided testimony to U.S. Congressional Committees. Dr. Back earned a B.S. from Yale University, and a Ph.D. in physics from the University of Florida. She has over one hundred peer-reviewed publications, two patents, and was elected a Fellow of the American Physical Society. At General Atomics, Dr. Back is responsible for all nuclear fission programs and related technology development. Major thrust areas include space and terrestrial advanced reactors, accident-tolerant nuclear fuel, and energy storage solutions. In today's world, space has become accessible to all. She views space nuclear power and propulsion technologies as critically important to explore and protect the space domain.

Dr. Eric Bouillon

Chief Scientific Officer and Senior Executive Expert for Safran Group, France

Dr. Eric Bouillon is Chief Scientific Officer and Senior Executive Expert for Safran Group, France. He received his Ph.D. in Solid State Chemestry , University of Bordeaux , France and has been involved in the field of CMCs materials since more than twenty years. He has contributed to the development and modeling of multi scale ceramic composite materials for aircraft engines and gas turbines, with a focus on improving their behavior and durability in severe environments. Dr. Bouillon is actively involved in the international CMC community, serving as a session chair and organizer for conferences such as the Ceramic Matrix Composites series and the High Temperature Ceramic Matrix Composites (HTCMC) meetings. He frequently represents Safran Ceramics as an invited speaker on topics ranging from interlocked ceramic components to multi scale studies of composite behavior, and acts as a point of contact for collaborative research and conference symposia.

INDUSTRY LEADERS PANEL



Denny Schüppel

Managing Director, Ceramic Composites Division, Composite United, Augsburg, Germany

Denny Schüppel is a mechanical engineer educated at TU Dresden and INSA Lyon. Specializing in lightweight engineering and textile technology, with a focus on composites, he initially spent four years working alongside his studies at the Fraunhofer IKTS on battery cell development. He then joined the Mercedes-Benz research center, where he worked on fiber-reinforced composites for vehicle exterior components. Since 2014, Denny has been part of Composites United in various roles. He currently serves as Managing Director of the "Ceramic Composites" division.

Hidenori Shirakawa

General Manager, Application Engineering Department, Toyo Tanso Co. Ltd., Japan

Hidenori Shirakawa is a senior executive and engineering leader at Toyo Tanso Co., Ltd., a leading Japanese manufacturer of carbon and graphite products. He holds the position of General Manager of the Application Engineering Department within the Advanced Technology Division at Toyo Tanso. He has held several leadership roles within the company's technical and sales divisions including the General Manager, Application Engineering, where he led the department focused on developing and refining specific applications for Toyo Tanso's advanced carbon materials. He also served as General Manager, Sales Engineering Department. In that role within the Global Sales Division, he was worked on bridging the gap between technical development and international market needs. He has also served as General Manager of Tribology Business Unit, which focuses on the study of friction, wear, and lubrication in mechanical systems.

He has extensive leadership experience in development and application of specialty graphite, C/C composites, and other carbon-based solutions; tribology of engineering components like bearings, seals, and vanes that require high durability and specific frictional properties, and managing technical support and product integration for international clients in industries such as semiconductors, aerospace, and energy.

Dr. Jared Weaver

Technology Leader, GE Aerospace Research Center, NY

Jared Weaver is the Technology Leader for Advanced Materials and Manufacturing at the GE Aerospace Research Center. At GE Research since 2012, his work has included leading the development of repair technologies for GE's commercial melt infiltrated SiC/SiC CMCs, development of CMCs for nuclear applications, and development of next generation, higher temperature capable CMCs for aerospace applications. From 2018-2025, he was the Technology Manager for Ceramics and Composites, leading a large team focused on developing and maturing CMCs and EBCs.

SCHEDULE AT A GLANCE

Sunday, May 31	
Testing of Materials in Extreme Environments Short Course*	8 a.m. - 4:30 p.m.
Exhibitor Set-Up	12 - 4 p.m.
Registration	3 - 6 p.m.
Welcome Reception	5 - 6 p.m.
Exhibit hours	5 - 6 p.m.
Monday, June 1	
Registration	7:30 a.m. - 5:30 p.m.
Exhibit hours	8:30 a.m. - 5 p.m.
Plenary Session	8:20 a.m. - 12 p.m
Technical Programming	1:30 - 5:30 p.m.
Student and Young Professional Reception	5:30 - 7 p.m.
Tuesday, June 2	
Registration	7:30 a.m. - 5:30 p.m.
Exhibit hours	8:30 a.m. - 5 p.m.
Technical Programming	8:30 a.m. - 3 p.m.
Global Industry Leaders' Roundtable	3:30 - 5:30 p.m.
Poster Session and Reception	5:30 - 7 p.m.
Wednesday, June 3	
Registration	7:30 a.m. - Noon
Exhibit hours	8:30 a.m. - Noon
Technical Programming	8:30 a.m. - Noon
Afternoon on own	
Thursday, June 4	
Registration	8 a.m. - 5:30 p.m.
Exhibit hours	8:30 a.m. - 3:30 p.m.
Technical Sessions	8:30 a.m. - 5:30 p.m.
Exhibitor Tear-Down	3:30 - 5:30 p.m.
Conference Dinner	6 - 9 p.m.
Friday, June 5	
Registration	8 a.m. - Noon
Technical Programming	8:30 a.m. - Noon

* requires additional registration

SPECIAL EVENTS

WELCOME RECEPTION

Sunday, May 31 | 5:00 – 6:00 p.m.

Kick off the conference by connecting with fellow attendees at the Welcome Reception! Join colleagues for passed hors d'oeuvres, drinks, and great conversation as you start the week at the conference.

STUDENT AND YOUNG PROFESSIONAL RECEPTION

Monday, June 1| 5:30 – 7:30 p.m.

Students and young professional attendees are invited to join us for a pizza party and networking.

POSTER SESSION

Tuesday, June 2 | 5:30 – 7:00 p.m.

Check out the scientific posters and network with colleagues! Light food and drink will be provided.

AFTERNOON NETWORKING

Wednesday, June 3 | Starts at Noon

You and your colleagues can take advantage of an afternoon off to explore everything San Diego has to offer! Hit the water for surfing, paddleboarding, or kayaking, or stay on land to relax at one of the city's beautiful beaches. Dive into San Diego's vibrant arts and culture scene, wander through scenic parks and gardens, or check out the city's famous attractions. Round out the afternoon with shopping in one of San Diego's lively neighborhoods or unwind at a rooftop bar with food, drinks, and skyline views.

CONFERENCE DINNER

Thursday, June 4 | 6:00 – 9:00 p.m.

Cap off a week of exceptional science and collaboration at the HTCMC-12 & GFMAT-3 Conference Dinner! Join colleagues for an evening outside under the stars with food, drinks, great company, and dancing along to the dueling piano performers to celebrate the conclusion of the conference.

POSTER PREVIEW PITCH

Poster presenters have the opportunity to present a two-minute summary of their research. Thank you to the presenters listed below who will make their Poster Preview Pitch within their specific symposium. Please note, presentation times might have fluctuated due to last-minute cancellations. Refer to the online itinerary planner for the most up to date information.

Michael Castro

GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

Tuesday, June 2, 2026 | 2:50 p.m.

Reduced-order modeling of gas-solid flows with heat transfer via a frequency-based approach

Dagmara Brzezinska

GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

Monday, June 1, 2026 | 5:20 p.m.

Dielectric and magnetic properties of the FE-$Y_2DyFe_5O_{12}$ ceramic composites

Dariusz Bochenek

GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

Monday, June 1, 2026 | 5:22 p.m.

Technology and properties of multi-component multiferroic ceramic composites PMN-PT-PS-Ferrite

Jolanta Makowska

GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

Monday, June 1, 2026 | 5:24 p.m.

Influence of rare-earth elements on the functional properties of BZT–BCT ceramics

Beata Wodecka-Dus

GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

Monday, June 1, 2026 | 5:26 p.m.

Synthesis, microstructural evolution and dielectric properties of BLT ceramics modified with a special glass admixture

Md Zawad Hossain

GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications

Tuesday, June 2, 2026 | 3 p.m.

Electrochemical performance of Silicon oxy-carbide (SiOC) in ionic liquids (ILs) for high temperature adaptable Li-ion batteries

Takahiro Saito

GFMAT-3 Sym 10 - Materials Recycling for Energy and Environment Applications

Thursday, June 4, 2026 | 12 p.m.

Grain-scale fracture resistance in silicon nitride ceramics measured using microcantilever specimens

Hyuk Jun Lee

HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites

Tuesday, June 2, 2026 | 1:30 p.m.

The effect of oxygen and excess carbon on the densification behavior of polycrystalline SiC fibers stabilized by electron beam irradiation

Julien Fourcade

HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

Monday, June 1, 2026 | 5:20 p.m.

New alumina matrix for high performance oxide CMC

Mr. Harish

HTCMC-12 Sym 5 - Advanced Thermal and Environmental Barrier Coatings - Processing, Properties, and Applications

Thursday, June 4, 2026 | 11 a.m.

Thermal and radiative heat transport in $Gd_2Zr_2O_7$ for thermal barrier coating applications: A first-principles study

Laura Sandoval

HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates

Tuesday, June 2, 2026 | 2:50 p.m.

Ultra-high temperature (UHT) processing of refractory metal borides and carbides at 2500°C

Chen Zhibo

HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates

Tuesday, June 2, 2026 | 2:52 p.m.

Textured ZrB_2 ceramics self-reinforced by aligned elongated grains via strong magnetic field alignment

Sebin Park

HTCMC-12 Sym 9 - Joining and Integration Technologies for Ceramic Matrix Composites

Thursday, June 4, 2026 | 3 p.m.

Effects of filler composition on the joint properties of SiC joined by Si-C reaction bonding

Taichi Miyagishi

HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems

Tuesday, June 2, 2026 | 3 p.m.

Irradiation-condition dependence of heavy-ion-induced flow for surface damage recovery in oxide ceramics

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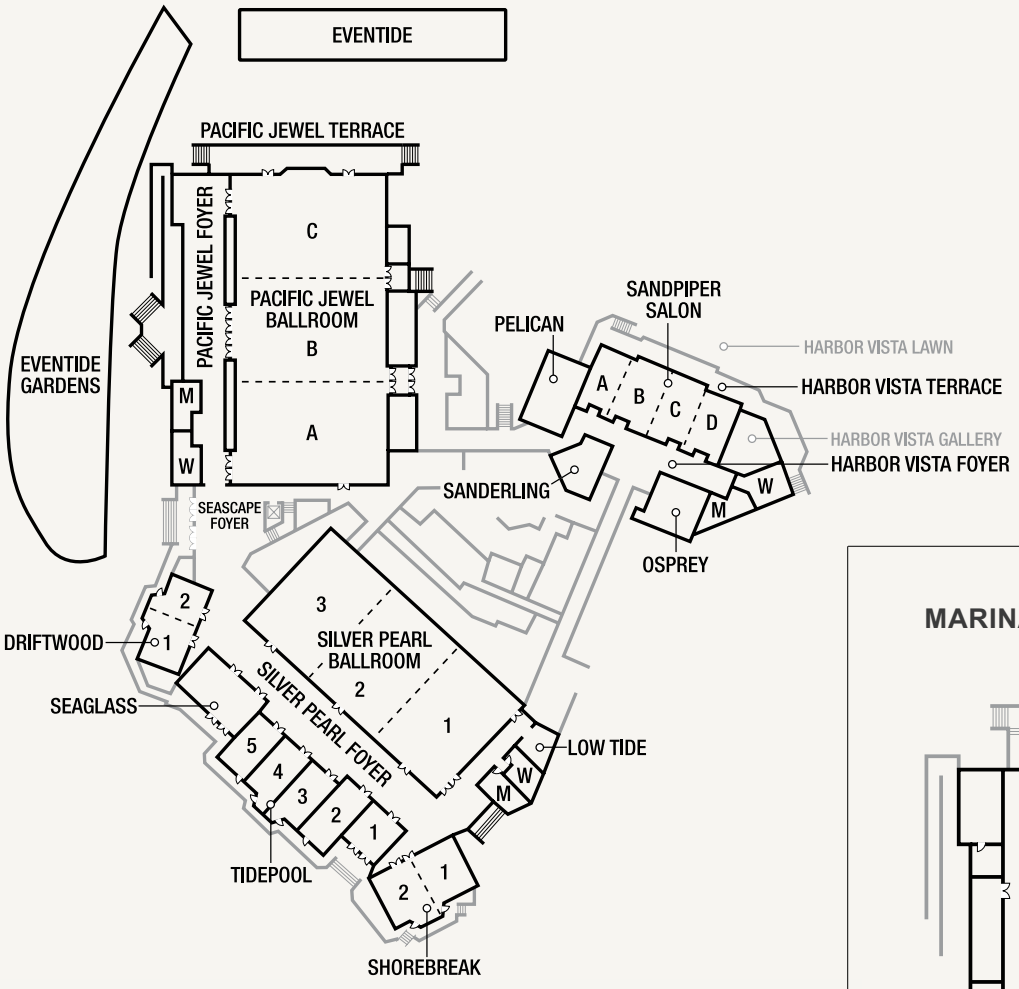
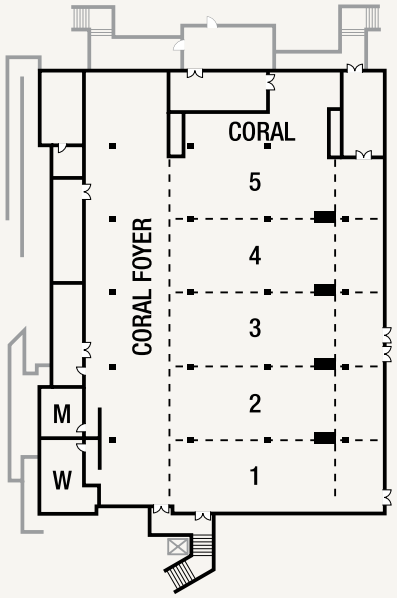
HOTEL FLOORPLAN

MARINA TOWER LOBBY LEVEL



SHERATON
San Diego Hotel & Marina

MARINA TOWER LOWER LEVEL



TABLETOP EXHIBIT LAYOUT AND INFO

Exhibit hours:

Sunday, May 31 | 5 – 6 p.m.
Monday, June 1 | 8:30 a.m. – 5 p.m.
Tuesday, June 2 | 8:30 a.m. – 5 p.m.
Wednesday, June 3 | 8:30 a.m. – Noon
Thursday, June 4 | 8:30 a.m. – 3:30 p.m.

Ceramic Composites – Network of Composites United e. V.

Tabletop #1

The network Ceramic Composites was founded in 2008 as an association of leading research and industry partners to jointly advance the material class of CMC. It is part of the globally active organization Composites United e. V. and steadily enables the establishment of viable technological solutions for energy generation, mobility, defense applications & more through CMC.

denny.schueppel@composites-united.com
http://ceramic-composites.com

TOYO TANSO Co. Ltd.

Tabletop #2

TOYO TANSO Co., Ltd. is a leading manufacturer of advanced carbon materials. Leveraging its pioneering expertise in isotropic graphite, the company develops and supplies high-performance carbon products for a wide range of industries, including semiconductors, energy, aerospace, and industrial machinery.

a_ishikawa@toyotanso.co.jp | https://www.toyotanso.com

Centorr Vacuum Industries

Tabletop #3

Centorr Vacuum Industries has manufactured custom laboratory and production vacuum and controlled atmosphere furnaces since 1954, with over 7,000 units installed worldwide. Specializing in processing metals, ceramics, and materials for nuclear and hypersonic applications, Centorr also offers a dedicated Aftermarket Field Service group and Applied Technology Center.

smurphy@centorr.com | https://vacuum-furnaces.com

Archer Technicoat Ltd.

Tabletop #4

ATL provides solutions to materials problems using advanced coating processes including chemical vapour deposition. We work globally to solve coating and materials challenges across a wide range of industries. With expertise in research, development, systems engineering and consultancy, we can offer the complete solution to your coating requirement.

info@cvd.co.uk | http://www.cvd.co.uk

Free Form Fibers

Tabletop #5

Free Form Fibers is developing and commercializing novel chemistry and stoichiometric purity ceramic fibers for reinforcement of ceramic matrix composites. Compositions include Silicon Carbide (SiC), Silicon Nitride (Si3N4), and select UHT compositions from transition metal carbides, borides and nitrides, in fibers, veil, fiber coatings, and powder forms.

jvervlied@fffibers.com | https://www.fffibers.com

RATH Group

Tabletop #6

RATH, a specialist in refractory technology, offers materials for applications up to 1800 °C and manufactures innovative products at its plants in Austria, Germany, Hungary, India, and the USA. Introducing ALTRA FLEX®: our new oxide ceramic continuous fiber engineered for highly flexible ceramics and advanced composite structures — temperature-resistant up to 1200 °C.

info@rath-group.com | https://www.rath-group.com

Ragan Technologies, Inc.

Tabletop #7

Ragan Technologies (RTI) specializes in processing technology for forming tapes of ceramic or metal powders. Besides tape casting, RTI offers the High Shear Compaction (HSC) process for forming thicker tapes in the range from .010" to 0.5" or 250um to 12mm. RTI manufactures the equipment and offers turn key systems. Development and toll manufacturing are available.

wcbelko@me.com | http://ragantech.com

Precision Control Systems & Research Inc.

Tabletop #8

Precision Control Systems Inc. (PCS) designs and manufactures high heat flux infrared heating systems for advanced materials processing and testing. Our systems provide rapid, localized, repeatable thermal loading of CMCs and high temperature materials for hypersonic, aerospace, and extreme environment applications.

tbaldwin@pcscontrols.com | https://pcscontrols.com

Bullen Ultrasonics

Tabletop #9

Bullen Ultrasonics is a trusted, global leader in the precision machining of advanced ceramics, glass, silicon, and specialty materials. Bullen's vertically integrated operations and automation capabilities support customers from prototype to high-volume production, delivering scalable solutions. With over 50 years of experience, the company serves some of world's most demanding industries, offering proprietary ultrasonic and laser-based machining processes that enable micron-level precision in hard, brittle materials while preserving material integrity.

sales@bullentech.com | https://www.bullentech.com

PVA TePla America LLC

Tabletop #10

PVA MPA Industrie SAS — A Global Leader in CVD & CVI Ceramic Processing.

We set the standard in Chemical Vapor Deposition and Chemical Vapor Infiltration — delivering precision, innovation, and reliability to the world's most demanding industries. From semiconductors to aerospace, our systems empower breakthroughs.

Engineering the future. One layer at a time.

sales-pta@pvatepla.com | http://pvateplaamerica.com

Total solution provider! **DACC CARBON**

Established in 2002 by spinning off from KAI*, DACC CARBON has been developing and manufacturing ultra high temperature resistant carbon composite and CMC** products. DACC deliver total solutions for carbon composite materials based on its cutting-edge technology, from design, analysis, manufacturing to test and evaluation.

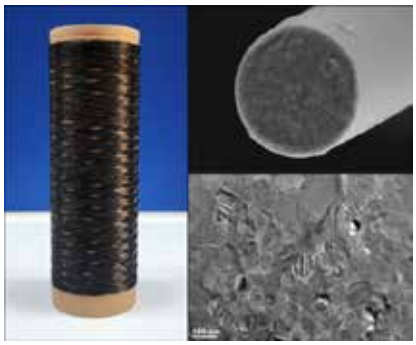
*KAI: Korea Aerospace Industries, LTD.
**CMC: Ceramic Matrix Composites

Main Products

SiC Fiber Reinforced CMC

Applied as SiC composite reinforcements, it exhibits excellent heat resistance and erosion resistance in ultra-high temperature environments. (~1800℃)

Application
- Aircraft & Gas turbin engine
- Radar absorbing material



Carbon-Ceramic Brake Discs

Based on Carbon composites technologies, we developed of Ceramic brake discs for premium automobiles.

- 50% lighter than cast iron, 4 times more durable life
- Reliable and excellent braking performance at high temperatures
- High thermal shock resistance at high temperature(~1,300℃)

- **Application**
  - Global OEM, After Market

Carbon-Carbon Brake Discs

DACC CARBON has successfully localized carbon-carbon brake discs for aircraft and they have been applied to several ROKAF's (Republic of Korea Air Force) fighter jets since 1999.

- **Application**
  F-16, T/A-50, Business jet CL601/604
- **Export**
  Air force of Turkey, USA, Norway, Greece, Indonesia, Thailand and Pakistan

HQ : 4th Floor, 112-16, Nonhyeon-dong, Gangnam-gu, Seoul, Korea 06059
Factory : 30, Unam-ro, Deokjin-gu, Jeonju, Jeonbuk, Korea 54853 www.dacc21.com
TEL: +82 63 715 2507 FAX: +82 715 2510 EMAIL: logankim@dacc21.com

SYMPOSIA ORGANIZERS

HTCMC-12 Symposium 1: Computational Modeling and Design of New Materials and Processes

Symposium Organizers

- Gerard Vignoles, LCTS, University of Bordeaux, CNRS, France
- Jingyang Wang, Institute of Metal Research, Chinese Academy of Sciences, China
- Sathiskumar Anusuya Ponnusami, City St George's, University of London, UK
- Ghatu Subhash, University of Florida, USA
- Guillaume Couégnat, LCTS, University of Bordeaux, CNRS, France
- Hyung Wook Park, Ulsan National Institute of Science and Technology, Korea
- David B. Marshall, University of Colorado, USA
- Craig P. Przybyla, Air Force Research Laboratory, USA
- Junjie Wang, Northwestern Polytechnical University, China
- Jiwoong Kim, Soongsil University, Korea

HTCMC-12 Symposium 2: Fibers, Preforms, and Interphases

Symposium Organizers

- Sylvain Jacques, LCTS, University of Bordeaux, CNRS, France
- Stephanie Pfeifer, German Institutes of Textile and Fiber Research, Germany
- Emmanuel Boakye, Air Force Research Laboratory, USA
- Prarthanaa Khokar, Fureho AB, Sweden
- Calvin Prentice, Archer Technicoat Ltd., UK
- Bernd Clauß, German Institutes of Textile and Fiber Research, Germany
- Judith Moosburger-Will, University of Augsburg, Germany
- Katsumi Yoshida, Institute of Science Tokyo, Japan
- Dong-Geun Shin, Korea Institute of Ceramic Engineering and Technology, Korea
- Cédric Sauder, French Alternative Energies and Atomic Energy Commission, France

HTCMC-12 Symposium 3: Polymer Derived Ceramics and Composites

Symposium Organizers

- Gurpreet Singh, Kansas State University, USA
- Matthew Dickerson, Air Force Research Laboratory, USA
- Samuel Bernard, University of Limoges, CNRS, France
- Paolo Colombo, University of Padova, Italy
- Dong-Pyo Kim, Pohang University of Science and Technology, Korea
- Ralf Riedel, Technical University Darmstadt, Germany
- Yoshiyuki Sugahara, Waseda University, Japan
- Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA
- Peter Kroll, University of Texas at Arlington, USA
- Rick Laine, University of Michigan, USA
- Zhaoju Yu, Xiamen University, China
- Jie Kong, Northwestern Polytechnical University, China
- Georges Chollon, LCTS, University of Bordeaux, CNRS, France
- Günter Motz, University of Bayreuth, Germany
- Ravi Kumar NV, Indian Institute of Technology, Madras, India
- Gian Domenico Sorarù, University of Trento, Italy
- Yuji Iwamoto, Nagoya Institute of Technology, Japan
- Toshihiro Ishikawa, Tokyo University of Science, Yamaguchi, Japan
- Masaki Kotani, Japan Aerospace Exploration Agency, Japan
- Yoonjoo Lee, Korea Institute of Ceramic Engineering and Technology, Korea

SYMPOSIA ORGANIZERS

HTCMC-12
Symposium 4:
Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

Symposium Organizers

- Dietmar Koch, University of Augsburg, Germany
- Daejong Kim, Korea Atomic Energy Research Institute, Korea
- Katsumi Yoshida, Tokyo Institute of Technology, Japan
- Jon Binner, University of Birmingham, UK
- Matthew Dickerson, Air Force Research Laboratory, USA
- Stefan Schafföner, University of Bayreuth, Germany
- Jesús González-Julián, LCTS, University of Bordeaux, CNRS, France
- Se-Young Kim, Korea Institute of Energy Research, Korea
- Andrea Lazzeri, University of Pisa, Italy
- Yongsheng Liu, Northwestern Polytechnical University, China
- Wataru Nakao, Yokohama National University, Japan
- Alberto Ortona, University of Applied Sciences and Arts of Southern Switzerland, Switzerland
- Walter Pritzkow, Pritzkow Spezialkeramik, Germany
- Dileep Singh, Argonne National Laboratory, USA
- Gerard Vignoles, LCTS, University of Bordeaux, CNRS, France
- Xinghong Zhang, Harbin Institute of Technology, China

HTCMC-12
Symposium 5:
Advanced Thermal and Environmental Barrier Coating - Processing, Properties, and Applications

Symposium Organizers

- Peter Mechnich, German Aerospace Center, Germany
- Douglas E. Wolfe, The Pennsylvania State University, USA
- Jie Zhang, Institute of Metal Research, Chinese Academy of Sciences, China
- Satoshi KItaoka, Japan Fine Ceramics Center, Nagoya, Japan
- Hideki Kasikawa, National Institute for Material Science, Japan
- Elizabeth Opila, University of Virginia, USA
- Jingyang Wang, Institute of Metal Research, Chinese Academy of Sciences, China
- Bryan Harder, NASA Glenn Research Center, USA
- Wei Pan, Tsinghua University, China
- Byung Koog Jang, Kyushu University, Japan
- David Poerschke, University of Minnesota, USA
- Ravisankar Naraparaju, German Aerospace Center, Germany
- Georg Mauer, Forschungszentrum Jülich GmbH, Germany
- Yoon-Suk Oh, Korea Institute of Ceramic Engineering and Technology, Korea
- Kee Sung Lee, Kookmin University, Korea
- Yeon Gil Jung, Changwon National University, Korea
- Sunghun Lee, Korea Institute of Materials Science, Korea

SYMPOSIA ORGANIZERS

HTCMC-12
Symposium 6:
Carbon/Carbon (C/C) - Carbon Fiber Reinforced Carbon Composites

Symposium Organizers

- Ralf Goller, Technical University of Applied Sciences Augsburg, Germany
- Matthias Kroedel, ECM Engineered Ceramic Materials GmbH, Germany
- Joseph Schnoell, Technical University of Applied Sciences Augsburg, Germany
- Bill Goodman, Goodman Technology, USA
- Zlatomir Apostolov, Air Force Research Laboratory, USA
- Seyoung Kim, Korea Institute of Energy Research, Korea
- Laura Silvestroni, CNR, Istituto di Scienza, Tecnologia e Sostenibilitá per lo sviluppo dei Materiali Ceramici, Italy
- Alain Celzard, University of Lorraine, France
- Sylvie Bonnamy, ICMN, University of Orléans, CNRS, France
- Florent Bouillon, Safran Ceramics, France
- Chisung Ahn, Korea Institute of Industrial Technology, Korea
- Henry Shin, DACC Carbon, Korea
- Dong Won Im, DACC Carbon, Korea

HTCMC-12
Symposium 7:
Materials for Extreme Environments - UHTCs, MAX phases, and Nanolaminates

Symposium Organizers

- Diletta Sciti, CNR, Istituto di Scienza, Tecnologia e Sostenibilitá per lo sviluppo dei Materiali Ceramici, Italy
- Jesus Gonzalez-Julian, LCTS, University of Bordeaux, CNRS, France
- Bai Cui, University of Nebraska-Lincoln, USA
- Bill Fahrenholtz, Missouri University of Science and Technology, USA
- Sea Hoon Lee, Korea Institute of Materials Science, Korea
- Yujin Wang, Harbin Institute of Technology, China
- Hanjung Kwon, Jeonbuk National University, Korea
- Jason Lonergan, Missouri University of Science and Technology, USA
- Miladin Radovic, Texas A&M University, USA
- Dong-geun Shin, Korea Institute of Ceramic Engineering and Technology, Korea
- Yoonjoo Lee, Korea Institute of Ceramic Engineering and Technology, Korea
- Clio Azina, LCTS, University of Bordeaux, CNRS, France
- Surojit Gupta, University of North Dakota, USA
- Michel Barsoum, Drexel University, USA
- Antonio Vinci, CNR, Istituto di Scienza, Tecnologia e Sostenibilitá per lo sviluppo dei Materiali Ceramici, Italy

SYMPOSIA ORGANIZERS

HTCMC-12
Symposium 8:
Testing and Evaluation of Ceramic Matrix Composites (from Constituents and Coupons to Components, including EBCs)

Symposium Organizers

- Amjad Almansour, NASA Glenn Research Center, USA
- Yutaka Kagawa, Tokyo University of Technology, Japan
- Ken Goto, Japan Aerospace Exploration Agency, Japan
- Frederic Laurin, Onera, France
- Gerard Vignoles, LCTS, University of Bordeaux, CNRS, France
- James D. Kiser, NASA Glenn Research Center, USA
- Dileep Singh, Argonne National Laboratory, USA
- George Jefferson, Air Force Research Laboratory, USA
- Kamala Raghavan, U.S. Department of Energy, USA
- Ryo Inoue, Tokyo University of Science, Japan
- Sung Min Lee, Korea Institute of Ceramic Engineering and Technology, Korea
- Dong-Ho Rhee, Korea Aerospace Research Institute, Korea
- Takuya Aoki, Japan Aerospace Exploration Agency, Japan

HTCMC-12
Symposium 9:
Joining and Integration Technologies for Ceramic Matrix Composites (CMCs)

Symposium Organizers

- Michael C. Halbig, NASA Glenn Research Center, USA.
- Monica Ferraris, Politecnico di Torino, Italy
- Peter Tatarko, Slovak Academy of Sciences, Slovakia
- Dang-Hyok Yoon, Yeungnam University, Korea
- Hans-Peter Martin, Fraunhofer Institute for Ceramic Technologies and Systems, Germany
- Jose' Arregui Mena, Oak Ridge National Laboratory, USA
- Rajiv Asthana, University of Wisconsin-Stout, USA
- Salvatore Grasso, Queen Mary University of London, UK
- Xiaobing Zhou, Ningbo Institute of Materials Technology and Engineering, China
- Hyeon-Geun Lee, Korea Atomic Energy Research Institute, Korea
- Stefano De la Pierre, Politecnico di Torino, Italy
- Anming Hu, University of Tennessee Knoxville, USA

SYMPOSIA ORGANIZERS

HTCMC-12 Symposium 10: CMC Applications I - Aerospace Propulsion and Structures

Symposium Organizers

- Eric Bouillon, Safran Ceramics, France
- Craig Smith, NASA Glenn Research Center, USA
- Marc Bouchez, MBDA, France
- Katie Detwiler, Air Force Research Laboratory, USA
- Dong-won Lim, DACC Carbon Ltd., Korea
- Gwang-soo Kim, DACC Carbon Ltd., Korea
- Jared Weaver, GE Aerospace, USA
- Richard Jones, Pratt & Whitney, USA
- Ken Goto, Japan Aerospace Exploration Agency, Japan
- Jon Binner, University of Birmingham, UK
- Chris Hawkins, Defence Science and Technology Laboratory (DSTL), UK
- Sungbo Shim, Rolls Royce High Temperature Composites, UK

HTCMC-12 Symposium 11: CMC Applications II - Solar, Nuclear and Propulsion Systems

Symposium Organizers

- Dong (Lilly) Liu, University of Oxford, UK
- Takaaki Koyanagi, Oak Ridge National Laboratory, USA
- Jens Schmidt, Fraunhofer Institute for Silicate Research ISC, Germany
- Christophe Lorrette, French Alternative Energies and Atomic Energy Commission, France
- Tatsuya Hinoki, Kyoto University, Japan
- Yutai Kato, Oak Ridge National Laboratory, USA
- Marc Bouchez, MBDA, France
- Anteneh Kebbede, General Electric, USA
- Kamala Raghavan, U.S. Department of Energy, USA
- Zhi Sun, Dalian University of Technology, China
- David Mitchell, University of Central Florida, USA
- Farhad Mohammadi-Koumleh, CTP, USA
- Ryo Ishibashi, Hitachi, Ltd., Japan
- Sosuke Kondo, Tohoku University, Japan
- Weon Ju Kim, Korea Atomic Energy Research Institute, Korea
- Hua-Tay Lin, Guangdong University of Technology, China
- Abhendra K. Singh, Baylor University, USA

HTCMC-12/GFMAT-3 Joint Symposium: Additive Manufacturing Technologies and Applications

Symposium Organizers

- Hui-suk Yun, Korea Institute of Materials Science, Korea
- Alberto Ortona, University of Applied Sciences and Arts of Southern Switzerland, Switzerland
- Paolo Colombo, University of Padova, Italy
- Amjad Almansour, NASA Glenn Research Center, USA
- Michael Halbig, NASA Glenn Research Center, USA
- Corson Cramer, Oak Ridge National Laboratory, USA
- Soshu Kirihara, Osaka University, Japan
- Rujie He, Beijing Institute of Technology, China
- Zhangwei Chen, Shenzhen University, China
- Hyung-il Choi, M.O.P Co., Ltd, Korea
- Martin Schwentenwein, Lithoz, Austria

SYMPOSIA ORGANIZERS

GFMAT-3
Symposium 1:
Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

Symposium Organizers
- Junichi Tatami, Yokohama National University, Japan
- Masayoshi Fuji, Nagoya Institute of Technology, Japan
- Yuji Hotta, National Institute of Advanced Industrial Science and Technology, Japan
- Satoshi Tanaka, Nagaoka University of Technology, Japan
- Jian Luo, University of California, San Diego, USA
- Sanjay Mathur, University of Cologne, Germany
- Eugene Olevsky, San Diego State University, USA
- Koji Morita, National Institute for Materials Science, Japan
- Taeseup Song, Hanyang University, Korea
- Jingxian Zhang, Shanghai Institute of Ceramics, China

GFMAT-3
Symposium 2:
Functional Nanomaterials for Sustainable Energy Technologies

Symposium Organizers
- Alberto Vomiero, Luleå University of Technology, Sweden
- Elisa Moretti, Ca' Foscari University of Venice, Italy
- Muhammet S. Toprak, KTH Royal Institute of Technology, Sweden
- Rafik Naccache, Concordia University, Canada
- Ya Yang, Beijing Institute of Nanoenergy and Nanosystems, China
- Andreu Cabot, Catalonia Institute for Energy Research, Spain

GFMAT-3
Symposium 3:
Novel, Green, and Strategic Processing and Manufacturing Technologies

Symposium Organizers
- Tatsuki Ohji, YNU/NITech/AIST, Japan
- Daniel Oropeza, University of California, Santa Barbara, USA
- Enrico Bernardo, University of Padova, Italy
- Bai Cui, University of Nebraska-Lincoln, USA
- Theresa Davey, Bangor University, UK
- Wei Ji, Wuhan University of Technology, China
- Reginaldo Muccillo, Institute of Energy and Nuclear Research, University of São Paulo, Brazil
- Tohru Suzuki, National Institute for Materials Science, Japan
- Yiquan Wu, Alfred University, USA

GFMAT-3
Symposium 4:
Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

Symposium Organizers
- Kiyoshi Shimamura, National Institute for Materials Science, Japan
- Nerine J. Cherepy, Lawrence Livermore National Laboratory, USA
- Rong-Jun Xie, Xiamen University, China
- Kenji Toda, Niigata University, Japan
- Takayuki Yanagida, Nara Institute of Science and Technology, Japan
- Romain Gaume, University of Central Florida, USA
- Mariya Zhuravleva, University of Tennessee, USA
- Hiroaki Furuse, National Institute for Materials Science, Japan
- Philippe Veber, West University of Timişoara, Romania
- Hiroki Tanaka, Leibniz-Institut für Kristallzüchtung, Germany
- Tetsuo Tsuchiya, National Institute of Advanced Industrial Science and Technology, Japan
- Javier E. Garay, University of California, San Diego, USA
- Kevin Anderson, U.S. Naval Research Laboratory, USA

SYMPOSIA ORGANIZERS

GFMAT-3
Symposium 5:
Porous Ceramics for Advanced Applications Through Innovative Processing

Symposium Organizers

- Tobias Fey, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
- Alberto Ortona, University of Applied Sciences and Arts of Southern Switzerland, Switzerland
- Manabu Fukushima, National Institute of Advanced Industrial Science and Technology, Japan
- Paolo Colombo, Università di Padova, Italy
- Samuel Bernard, Institute of Research for Ceramics, CNRS, France
- Jian-feng Yang, Xi'an Jiaotong University, China
- Eliandra de Sousa Triches, University of São Paulo, Brazil
- Gisele Lecomte-Nana, University of Limoges, France

GFMAT-3
Symposium 6:
Advanced Batteries and Super-capacitors for Energy Storage Applications

Symposium Organizers

- Palani Balaya, National University of Singapore, Singapore
- Michael Dolle, Université de Montréal, Canada
- Naoaki Yabuuchi, Yokohama National University, Japan
- Mali Balasubramanian, Oak Ridge National Laboratory, USA
- Chunmei Ban, University of Colorado Boulder, USA
- Dany Carlier-Larregaray, ICMCB, University of Bordeaux, CNRS, France
- Robert Dominko, National Institute of Chemistry, Slovenia
- Donald Dornbusch, NASA Glenn Research Center, USA
- Shih-kang Lin, National Cheng Kung University, Taiwan
- Dong-Hwa Seo, Korea Advanced Institute of Science and Engineering, Korea
- Neeraj Sharma, University of New South Wales, Australia

SYMPOSIA ORGANIZERS

GFMAT-3
Symposium 10:
Materials Recycling for Energy and Environment Applications

Symposium Organizers

- Surojit Gupta, University of North Dakota, USA
- Chiharu Tokoro, Waseda University, Japan
- Sonia Lucia Fiorilli, Politecnico di Torino, Italy
- Motoyuki Iijima, Yokohama National University, Japan
- Tohru Suzuki, National Institute for Materials Science, Japan
- Alberto Mannu, University of Brescia, Italy
- Enrico Bernardo, University of Padova, Italy

GFMAT-3
Symposium 11:
Ceramics and Glasses for Bio-Medical Applications

Symposium Organizers

- Katalin Balázsi, HUN-REN Centre for Energy Research, Hungary
- Cristina Balagna, Politecnico di Torino, Italy
- Elzbieta Pamula, AGH University of Science and Technology, Poland
- Csaba Balázsi, HUN-REN Centre for Energy Research, Hungary
- Justin J. Chung, Seoul National University Hospital, Korea
- Reeja Jayan, Carnegie Mellon University, USA
- Dong Hou, Clemson University, USA
- Sungho Lee, National Institute of Advanced Industrial Science and Technology, Japan
- Shiv Prakash Singh, Liaoning Academy of Materials, China

Young Professionals Forum:

Symposium Organizers

- Yuki Nakashima, National Institute of Advanced Industrial Science and Technology, Japan
- Dong (Lilly) Liu, University of Oxford, UK
- Meelad Ranaiefar, NASA Glenn Research Center, USA
- Bai Cui, University of Nebraska-Lincoln, USA
- Elisa Moretti, Ca' Foscari University of Venice, Italy
- Chenxu Wang, Peking University, China
- Qiance Quincy Zhang, University of Oxford, UK
- Nor Ezzaty Ahmad, Universiti Teknologi Malaysia, Malaysia
- Alex Leide, UK Atomic Energy Authority, UK
- Nico Langhof, Universität Bayreuth, Germany
- Jing Liu, University of Alberta, Canada

TECH SESSIONS BY SYMPOSIA

Due to cancellations and withdraws, the session start and end times might have changed slightly.

Always consult the online planner for the most current information.

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
Plenary	Plenary Presentations	Monday, June 01, 2026	8:30 AM	12:00 PM	Silver Pearl 1-3
GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development	GFMATS1- Particle and powder design and synthesis	Monday, June 01, 2026	1:30 PM	3:50 PM	Shorebreak 2
GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development	GFMATS1- Advanced characterization and analytical techniques for powder processing and materials	Tuesday, June 02, 2026	8:40 AM	11:40 AM	Shorebreak 2
GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development	GFMATS1- Nanostructure and microstructure control	Tuesday, June 02, 2026	1:30 PM	2:52 PM	Shorebreak 2
GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development	GFMATS1- Low-cost and energy-saving processing of advanced ceramics and ceramic composites, including smart recycling of materials for sustainable development	Wednesday, June 03, 2026	8:40 AM	9:30 AM	Shorebreak 2
GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development	GFMATS1- Particle dispersion control in liquid or polymers	Wednesday, June 03, 2026	9:30 AM	11:30 AM	Shorebreak 2
GFMAT-3 Sym 1 - Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development	GFMATS1- Novel shaping, forming, and sintering technology, including additive manufacturing	Thursday, June 04, 2026	8:30 AM	11:50 AM	Shorebreak 2
GFMAT-3 Sym 2 - Functional Nanomaterials for Sustainable Energy Technologies	GFMATS2- Metal oxide nanostructures for sensing, batteries, and water splitting applications	Thursday, June 04, 2026	1:30 PM	2:20 PM	Sandpiper C
GFMAT-3 Sym 2 - Functional Nanomaterials for Sustainable Energy Technologies	GFMATS2- Nanomaterials for energy conversion, storage, and catalysis	Thursday, June 04, 2026	2:20 PM	4:40 PM	Sandpiper C
GFMAT-3 Sym 2 - Functional Nanomaterials for Sustainable Energy Technologies	GFMATS2- Transition metal chalcogenides, carbon nanostructures, 2D materials	Thursday, June 04, 2026	4:40 PM	5:10 PM	Sandpiper C
GFMAT-3 Sym 3 - Novel, Green, And Strategic Processing and Manufacturing Technologies	GFMATS3- Novel, Green, and Strategic Processing and Manufacturing Technologies I	Thursday, June 04, 2026	8:30 AM	12:00 PM	Sandpiper D

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
GFMAT-3 Sym 3 - Novel, Green, And Strategic Processing and Manufacturing Technologies	GFMATS3- Novel, Green, and Strategic Processing and Manufacturing Technologies II	Thursday, June 04, 2026	1:30 PM	4:50 PM	Sandpiper D
GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications	GFMATS4- Phosphor and sensor	Monday, June 01, 2026	1:30 PM	5:28 PM	Sandpiper C
GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications	GFMATS4- Electronic material	Tuesday, June 02, 2026	8:30 AM	10:40 AM	Sandpiper C
GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications	GFMATS4- Transparent ceramic	Tuesday, June 02, 2026	10:40 AM	12:10 PM	Sandpiper C
GFMAT-3 Sym 4 - Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications	GFMAT-S4- Scintillator	Tuesday, June 02, 2026	1:30 PM	3:10 PM	Sandpiper C
GFMAT-3 Sym 5 - Porous Ceramics for Advanced Applications Through Innovative Processing	GFMATS5- Porous Ceramics for Advanced Applications Through Innovative Processing	Friday, June 05, 2026	8:30 AM	9:40 AM	Shorebreak 1
GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications	GFMATS6- Li-ion batteries-Electrode Materials	Monday, June 01, 2026	1:30 PM	4:50 PM	Tidepool 1
GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications	GFMAT-S6- Battery Electrolyte and Interface Design	Tuesday, June 02, 2026	8:30 AM	12:20 PM	Tidepool 1
GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications	GFMATS6- Advanced Battery Materials	Tuesday, June 02, 2026	1:30 PM	3:02 PM	Tidepool 1
GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications	GFMATS6- All-solid-state Batteries	Wednesday, June 03, 2026	8:30 AM	11:40 AM	Tidepool 1
GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications	GFMATS6- Na-ion battery and Supercapacitor	Thursday, June 04, 2026	8:30 AM	11:10 AM	Tidepool 1
GFMAT-3 Sym 6 - Advanced Batteries and Supercapacitors for Energy Storage Applications	GFMAT-S6- New and Emerging Electrochemisty	Thursday, June 04, 2026	1:30 PM	4:50 PM	Tidepool 1

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
GFMAT-3 Sym 10 - Materials Recycling for Energy and Environment Applications	GFMATS10- Disassembly and recycling solutions for end-of-life batteries, fuel cells	Wednesday, June 03, 2026	8:30 AM	9:40 AM	Sandpiper C
GFMAT-3 Sym 10 - Materials Recycling for Energy and Environment Applications	GFMATS10- Life cycle analysis and techno-economic analysis of the technologies	Wednesday, June 03, 2026	9:40 AM	11:50 AM	Sandpiper C
GFMAT-3 Sym 10 - Materials Recycling for Energy and Environment Applications	GFMATS10- Recycling	Thursday, June 04, 2026	8:30 AM	12:02 PM	Sandpiper C
GFMAT-3 Sym 11 - Ceramics and Glasses for Bio-Medical Applications	GFMATS11- Ceramics and Glasses for Bio-Medical Applications I	Thursday, June 04, 2026	10:20 AM	11:50 AM	Sandpiper A
GFMAT-3 Sym 11 - Ceramics and Glasses for Bio-Medical Applications	GFMATS11- Ceramics and Glasses for Bio-Medical Applications II	Thursday, June 04, 2026	1:30 PM	4:30 PM	Sandpiper A
HTCMC-12 Sym 1 - Computational Modeling and Design of New Materials and Processes	HTCMCS1- Computation of mechanical, thermal and thermomechanical properties I	Thursday, June 04, 2026	1:30 PM	3:20 PM	Osprey
HTCMC-12 Sym 1 - Computational Modeling and Design of New Materials and Processes	HTCMCS1- Computation of mechanical, thermal and thermomechanical properties II	Thursday, June 04, 2026	3:20 PM	5:20 PM	Osprey
HTCMC-12 Sym 1 - Computational Modeling and Design of New Materials and Processes	HTCMCS1- Simulation of materials degradation	Friday, June 05, 2026	8:30 AM	9:00 AM	Osprey
HTCMC-12 Sym 1 - Computational Modeling and Design of New Materials and Processes	HTCMCS1- Data mining and first-principles computations	Friday, June 05, 2026	9:00 AM	10:20 AM	Osprey
HTCMC-12 Sym 1 - Computational Modeling and Design of New Materials and Processes	HTCMCS1- Modeling of materials processing	Friday, June 05, 2026	10:20 AM	11:30 AM	Osprey
HTCMC-12 Sym 2 - Fibers, Preforms, and Interphases	HTCMCS2- The Effects of Fiber and Preform Properties on the Thermal Behavior of CMCs	Thursday, June 04, 2026	8:30 AM	10:30 AM	Shorebreak 1
HTCMC-12 Sym 2 - Fibers, Preforms, and Interphases	HTCMCS2- Properties and New Developments in Interfaces/Interphases	Thursday, June 04, 2026	10:30 AM	12:00 PM	Shorebreak 1
HTCMC-12 Sym 2 - Fibers, Preforms, and Interphases	HTCMCS2-New Developments in Oxide and Non-Oxide Ceramic Fibers	Thursday, June 04, 2026	1:30 PM	3:30 PM	Shorebreak 1

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
HTCMC-12 Sym 2 - Fibers, Preforms, and Interphases	HTCMCS2- Performance of Interfaces/Interphases in Extreme Environments	Thursday, June 04, 2026	3:30 PM	5:00 PM	Shorebreak 1
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics I	Monday, June 01, 2026	1:30 PM	3:10 PM	Sandpiper A
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics II	Monday, June 01, 2026	3:10 PM	5:00 PM	Sandpiper A
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics III	Tuesday, June 02, 2026	8:30 AM	9:50 AM	Sandpiper A
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics IV	Tuesday, June 02, 2026	9:50 AM	11:20 AM	Sandpiper A
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics V	Tuesday, June 02, 2026	1:30 PM	2:52 PM	Sandpiper A
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics VI	Wednesday, June 03, 2026	8:30 AM	11:00 AM	Sandpiper A
HTCMC-12 Sym 3 - Polymer Derived Ceramics and Composites	HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics VII	Wednesday, June 03, 2026	11:00 AM	12:00 PM	Sandpiper A
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- Innovative design	Monday, June 01, 2026	1:30 PM	5:22 PM	Silver Pearl 1-3
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- Advanced processing and manufacturing technologies I	Tuesday, June 02, 2026	8:30 AM	12:00 PM	Silver Pearl 1-3
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- SiC-based composites I	Tuesday, June 02, 2026	1:30 PM	3:00 PM	Silver Pearl 1-3
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- SiC-based composites II	Wednesday, June 03, 2026	8:30 AM	10:20 AM	Silver Pearl 1
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- Advanced processing and manufacturing technologies II	Wednesday, June 03, 2026	10:20 AM	11:20 AM	Silver Pearl 1

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- Oxide-based composites	Thursday, June 04, 2026	8:30 AM	9:40 AM	Silver Pearl 1
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- Advanced processing and manufacturing technologies III/ SiC-based composites III	Thursday, June 04, 2026	9:40 AM	12:00 PM	Silver Pearl 1
HTCMC-12 Sym 4 - Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites	HTCMCS4- Characterization and damage assessment	Thursday, June 04, 2026	1:30 PM	4:20 PM	Silver Pearl 1
HTCMC-12 Sym 5 - Advanced Thermal and Environmental Barrier Coatings - Processing, Properties, and Applications	HTCMCS5- Ceramic Coatings	Wednesday, June 03, 2026	8:30 AM	11:10 AM	Silver Pearl 2/3
HTCMC-12 Sym 5 - Advanced Thermal and Environmental Barrier Coatings - Processing, Properties, and Applications	HTCMCS5- Interface phenomena, adhesion and interfacial properties	Wednesday, June 03, 2026	11:10 AM	12:10 PM	Silver Pearl 2/3
HTCMC-12 Sym 5 - Advanced Thermal and Environmental Barrier Coatings - Processing, Properties, and Applications	HTCMCS5- Thermal and environmental barrier coatings for CMCs	Thursday, June 04, 2026	8:30 AM	10:40 AM	Silver Pearl 2/3
HTCMC-12 Sym 5 - Advanced Thermal and Environmental Barrier Coatings - Processing, Properties, and Applications	HTCMCS5- Advanced testing and non-destructive evaluation methodologies	Thursday, June 04, 2026	10:40 AM	11:02 AM	Silver Pearl 2/3
HTCMC-12 Sym 6 - Carbon/Carbon - Carbon Fiber Reinforced Carbon Composites	HTCMCS6- Mechanical and thermal properties, Application and performance	Thursday, June 04, 2026	1:30 PM	3:20 PM	Pelican
HTCMC-12 Sym 6 - Carbon/Carbon - Carbon Fiber Reinforced Carbon Composites	HTCMCS6- Material, process development	Thursday, June 04, 2026	3:20 PM	5:20 PM	Pelican
HTCMC-12 Sym 6 - Carbon/Carbon - Carbon Fiber Reinforced Carbon Composites	HTCMCS6- Processing and applications	Friday, June 05, 2026	8:30 AM	9:30 AM	Pelican
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Entropy stabilized compositionally complex UHTCs and MAX phases I	Monday, June 01, 2026	1:30 PM	3:20 PM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Entropy stabilized compositionally complex UHTCs and MAX phases II	Monday, June 01, 2026	3:20 PM	5:00 PM	Osprey

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Novel processing methods for bulk, coatings, thin films, fibers, and/or composites	Tuesday, June 02, 2026	8:30 AM	9:40 AM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Processing-microstructure-property relationships of UHTCMCs	Tuesday, June 02, 2026	9:40 AM	11:20 AM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Response of UHTCs/UHTCMCs in Extreme Environments I	Tuesday, June 02, 2026	1:30 PM	2:54 PM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Processing-microstructure-property relationships of existing or new systems I	Wednesday, June 03, 2026	8:30 AM	10:20 AM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Processing-microstructure-property relationships of existing or new systems II	Wednesday, June 03, 2026	10:20 AM	12:00 PM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Response of UHTCs/UHTCMCs in Extreme Environments II	Thursday, June 04, 2026	8:30 AM	9:40 AM	Osprey
HTCMC-12 Sym 7 - Materials for Extreme Environments - UHTCs, MAX Phases, and Nanolaminates	HTCMCS7- Response of UHTCs/UHTCMCs in Extreme Environments III	Thursday, June 04, 2026	9:40 AM	11:20 AM	Osprey
HTCMC-12 Sym 8 - Testing and Evaluation of Ceramic Matrix Composites, from Constituents and Coupons to Components, including EBCs	HTCMCS8- Mechanical characterization of ceramics and composites, techniques and equipment I	Monday, June 01, 2026	1:30 PM	5:30 PM	Pelican
HTCMC-12 Sym 8 - Testing and Evaluation of Ceramic Matrix Composites, from Constituents and Coupons to Components, including EBCs	HTCMCS8- Mechanical characterization of ceramics and composites, techniques and equipment II	Tuesday, June 02, 2026	8:30 AM	12:10 PM	Pelican
HTCMC-12 Sym 8 - Testing and Evaluation of Ceramic Matrix Composites, from Constituents and Coupons to Components, including EBCs	HTCMCS8- Environmental effects, thermo-mechanical creep, fatigue performance and tribology	Tuesday, June 02, 2026	1:30 PM	3:10 PM	Pelican
HTCMC-12 Sym 8 - Testing and Evaluation of Ceramic Matrix Composites, from Constituents and Coupons to Components, including EBCs	HTCMCS8- Fracture mechanics, failure analysis and fractography	Wednesday, June 03, 2026	8:30 AM	10:20 AM	Pelican
HTCMC-12 Sym 8 - Testing and Evaluation of Ceramic Matrix Composites, from Constituents and Coupons to Components, including EBCs	HTCMCS8- Testing and Evaluation of Ceramic Matrix Composites	Wednesday, June 03, 2026	10:20 AM	11:50 AM	Pelican

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
HTCMC-12 Sym 9 - Joining and Integration Technologies for Ceramic Matrix Composites	HTCMCS9- Joining of CMCs to CMCs or ceramics	Thursday, June 04, 2026	1:30 PM	3:22 PM	Silver Pearl 2/3
HTCMC-12 Sym 9 - Joining and Integration Technologies for Ceramic Matrix Composites	HTCMCS9- Design and Modeling	Thursday, June 04, 2026	3:22 PM	4:12 PM	Silver Pearl 2/3
HTCMC-12 Sym 9 - Joining and Integration Technologies for Ceramic Matrix Composites	HTCMCS9- Testing and NDE	Thursday, June 04, 2026	4:12 PM	5:02 PM	Silver Pearl 2/3
HTCMC-12 Sym 9 - Joining and Integration Technologies for Ceramic Matrix Composites	HTCMCS9- Brazing	Friday, June 05, 2026	9:00 AM	10:20 AM	Silver Pearl 2/3
HTCMC-12 Sym 10 - CMC Applications I - Aerospace Propulsion and Structures	HTCMCS10- Processing and Properties of CMCs for Aerospace Applications I	Monday, June 01, 2026	1:30 PM	5:00 PM	Shorebreak 1
HTCMC-12 Sym 10 - CMC Applications I - Aerospace Propulsion and Structures	HTCMCS10- Processing and Properties of CMCs for Aerospace Applications II	Tuesday, June 02, 2026	8:30 AM	10:10 AM	Shorebreak 1
HTCMC-12 Sym 10 - CMC Applications I - Aerospace Propulsion and Structures	HTCMCS10- Design and Testing of CMC Components for Aerospace Applications I	Tuesday, June 02, 2026	10:10 AM	12:00 PM	Shorebreak 1
HTCMC-12 Sym 10 - CMC Applications I - Aerospace Propulsion and Structures	HTCMCS10- Design and Testing of CMC Components for Aerospace Applications II	Tuesday, June 02, 2026	1:30 PM	2:30 PM	Shorebreak 1
HTCMC-12 Sym 10 - CMC Applications I - Aerospace Propulsion and Structures	HTCMCS10- Design and Testing of CMC Components for Aerospace Applications III	Wednesday, June 03, 2026	8:30 AM	9:50 AM	Shorebreak 1
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11- Coatings, integration, joining and machining	Monday, June 01, 2026	1:30 PM	3:20 PM	Sandpiper D
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11- CMC for energy systems	Monday, June 01, 2026	3:20 PM	4:50 PM	Sandpiper D
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11- UHTC CMC materials	Tuesday, June 02, 2026	8:30 AM	9:30 AM	Sandpiper D
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11-Novel materials, processing, manufacturing, design, and qualification for energy applications	Tuesday, June 02, 2026	9:30 AM	12:10 PM	Sandpiper D
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11- SiC CMC for nuclear applications I	Tuesday, June 02, 2026	1:30 PM	3:22 PM	Sandpiper D

TECH SESSIONS BY SYMPOSIA

CATEGORY	SESSION TITLE	SESSION DAY & DATE	SESSION START TIME	SESSION END TIME	SESSION LOCATION
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11- SiC CMC for nuclear applications II	Wednesday, June 03, 2026	8:30 AM	10:20 AM	Sandpiper D
HTCMC-12 Sym 11 - CMC Applications II - Solar, Nuclear and Propulsion Systems	HTCMCS11- Effects of operating environment on microstructure, physical and mechanical properties	Wednesday, June 03, 2026	10:20 AM	11:50 AM	Sandpiper D
HTCMC-12/GFMAT-3 Joint Sym - Additive Manufacturing Technologies and Applications	HTCMC -GFMAT- Joint Sym- Applications I	Monday, June 01, 2026	1:30 PM	2:40 PM	Sandpiper B
HTCMC-12/GFMAT-3 Joint Sym - Additive Manufacturing Technologies and Applications	HTCMC-GFMAT- Joint Sym- Applications II	Monday, June 01, 2026	2:40 PM	5:00 PM	Sandpiper B
HTCMC-12/GFMAT-3 Joint Sym - Additive Manufacturing Technologies and Applications	HTCMC-GFMAT- Joint Sym- Applications III	Tuesday, June 02, 2026	8:30 AM	9:30 AM	Sandpiper B
HTCMC-12/GFMAT-3 Joint Sym - Additive Manufacturing Technologies and Applications	HTCMC -GFMAT- Joint Sym- Stereolithography	Tuesday, June 02, 2026	9:30 AM	12:10 PM	Sandpiper B
HTCMC-12/GFMAT-3 Joint Sym - Additive Manufacturing Technologies and Applications	HTCMC-GFMAT- Joint Sym- Integration of Artificial Intelligence	Tuesday, June 02, 2026	1:30 PM	3:00 PM	Sandpiper B
Young Professionals Forum	HTCMC-GFMAT- YPF- Ceramic-Based Composites I	Wednesday, June 03, 2026	8:30 AM	10:20 AM	Sandpiper B
Young Professionals Forum	HTCM-GFMAT-YPF- Ceramic-Based Composites II	Wednesday, June 03, 2026	10:20 AM	11:50 AM	Sandpiper B
Young Professionals Forum	HTCMC-GFMAT- YPF-Novel Ceramic Processing I	Thursday, June 04, 2026	8:30 AM	10:20 AM	Sandpiper B
Young Professionals Forum	HTCMC-GFMAT-YPF- Novel Ceramic Processing II	Thursday, June 04, 2026	10:20 AM	11:42 AM	Sandpiper B
Young Professionals Forum	HTCMC-GFMAT-YPF- Non-destructive testing	Thursday, June 04, 2026	1:30 PM	2:30 PM	Sandpiper B

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Oral Presenters

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
Iijima, M.	4-Jun	9:00AM	Sandpiper C	26
Ikegami, N.	2-Jun	2:50PM	Pelican	17
Ilyas, S.	1-Jun	2:00PM	Shorebreak 2	5
Ishii, K.	3-Jun	11:10AM	Shorebreak 2	20
Ivanov, I.	1-Jun	4:10PM	Shorebreak 1	9
Ivanov, I.	4-Jun	2:00PM	Shorebreak 1	32
Iyoki, K.	3-Jun	8:30AM	Sandpiper C	20
J				
Jacques, S.	5-Jun	8:30AM	Pelican	35
Jakubinek, M.	2-Jun	2:22PM	Sandpiper A	16
Janszen, G.J.	4-Jun	2:40PM	Pelican	33
Jefferson, G.	1-Jun	2:00PM	Pelican	8
Jimba, Y.	3-Jun	10:50AM	Sandpiper D	25
Johnson, N.B.	3-Jun	9:00AM	Tidepool 1	20
Jones, J.	1-Jun	4:00PM	Sandpiper B	6
Joyce, A.	5-Jun	9:20AM	Shorebreak 1	35
Jung, S.	4-Jun	10:40AM	Silver Pearl 1	28
Justin, J.	4-Jun	9:40AM	Osprey	29
K				
K C, J.R.	2-Jun	9:30AM	Sandpiper C	10
Kagawa, Y.	1-Jun	9:30AM	Silver Pearl 1-3	5
Kakisawa, H.	3-Jun	11:40AM	Silver Pearl 2/3	23
Kakisawa, H.	4-Jun	8:30AM	Silver Pearl 1	28
Kamiya, H.	3-Jun	9:30AM	Shorebreak 2	19
Kamiya, H.	4-Jun	11:20AM	Sandpiper C	26
Kanazawa, S.	2-Jun	2:20PM	Pelican	17
Kang, S.	1-Jun	2:40PM	Sandpiper B	6
Katsui, H.	4-Jun	11:40AM	Shorebreak 1	28
Khokar, P.	4-Jun	3:50PM	Pelican	33
Kim, D.	3-Jun	9:00AM	Silver Pearl 1	22
Kim, I.	2-Jun	11:10AM	Sandpiper B	11
Kim, J.	1-Jun	2:05PM	Tidepool 1	6
Kim, M.	4-Jun	2:30PM	Tidepool 1	31
Kim, S.	1-Jun	2:00PM	Silver Pearl 1-3	7
Kimani, P.K.	3-Jun	9:30AM	Sandpiper B	21
Kimotho, G.	3-Jun	10:20AM	Sandpiper C	20
King, D.	2-Jun	9:00AM	Silver Pearl 1-3	12
Kirihara, S.	1-Jun	3:30PM	Sandpiper B	6
Kitamura, K.	3-Jun	10:50AM	Shorebreak 2	20
Kobayashi, H.	4-Jun	9:30AM	Tidepool 1	26
Kobayashi, M.	1-Jun	2:30PM	Sandpiper C	5
Koch, D.	2-Jun	8:30AM	Silver Pearl 1-3	12
Kondo, S.	3-Jun	9:20AM	Sandpiper D	24
Koo, B.	4-Jun	2:20PM	Sandpiper C	30
Kostogiannes, A.	2-Jun	1:50PM	Sandpiper C	15
Kotani, M.	2-Jun	10:20AM	Silver Pearl 1-3	12
Koyanagi, T.	3-Jun	9:40AM	Sandpiper D	24
Kozien, D.D.	2-Jun	11:20AM	Sandpiper D	15
Kubota, Y.	3-Jun	9:30AM	Shorebreak 1	24
Kusdono, S.	3-Jun	9:40AM	Sandpiper A	21
L				
Laberge Lebel, L.	4-Jun	9:40AM	Silver Pearl 1	28
Laine, R.M.	2-Jun	10:50AM	Sandpiper A	12
Lakusta, M.	1-Jun	2:40PM	Osprey	8
Lalli, J.H.	2-Jun	10:20AM	Pelican	13
Lamm, B.W.	1-Jun	2:20PM	Sandpiper D	9
Langhof, N.	4-Jun	1:30PM	Pelican	33
Latour, M.	4-Jun	9:00AM	Silver Pearl 1	28
Laurin, F.	4-Jun	3:50PM	Osprey	32
Lee, H.	2-Jun	9:30AM	Tidepool 1	11
Lee, J.	2-Jun	11:10AM	Pelican	13
Lee, J.	4-Jun	11:20AM	Sandpiper A	27
Lee, K.	2-Jun	9:30AM	Sandpiper B	11
Lee, S.	1-Jun	2:10PM	Sandpiper A	7
Lee, S.	1-Jun	3:10PM	Shorebreak 1	9
Lee, S.	4-Jun	1:30PM	Sandpiper A	31
Lee, S.	4-Jun	2:30PM	Silver Pearl 1	33
Lee, S.	4-Jun	3:20PM	Silver Pearl 1	33
Lee, Y.	3-Jun	10:50AM	Osprey	23
Leide, A.J.	1-Jun	2:30PM	Silver Pearl 1-3	7
Lenz, B.	4-Jun	2:20PM	Osprey	32
Liu, D.	2-Jun	8:30AM	Pelican	13
Liu, D.	3-Jun	9:00AM	Sandpiper D	24
Liu, J.	3-Jun	11:10AM	Silver Pearl 2/3	23
Lonergan, J.	1-Jun	3:20PM	Osprey	8
Lu, K.	2-Jun	9:20AM	Sandpiper A	12
Lu, K.	4-Jun	9:30AM	Sandpiper C	26
M				
Maier, J.	2-Jun	10:50AM	Sandpiper D	14
Maier, J.	4-Jun	2:20PM	Shorebreak 1	32
Malinverni, C.	4-Jun	4:12PM	Silver Pearl 2/3	34
Matsuda, Y.	1-Jun	5:10PM	Pelican	9
Matsunaga, T.	1-Jun	2:00PM	Shorebreak 1	9
Matsushima, Y.	1-Jun	3:10PM	Shorebreak 2	5
McCormack, S.J.	4-Jun	8:30AM	Osprey	29
Mechnich, P.	3-Jun	10:20AM	Silver Pearl 2/3	22
Michaelis, A.	1-Jun	11:20AM	Silver Pearl 1-3	5
Michaelis, A.	2-Jun	8:30AM	Sandpiper B	11
Mitchell, D.	1-Jun	3:40PM	Shorebreak 1	9
Moon, S.	2-Jun	8:30AM	Osprey	13
Moore, A.	3-Jun	10:20AM	Sandpiper A	21
Mori, T.	3-Jun	10:20AM	Shorebreak 2	20
Morita, K.	4-Jun	9:00AM	Shorebreak 2	25
Mounérat, A.	4-Jun	11:20AM	Shorebreak 1	28
Müller, M.	2-Jun	2:10PM	Sandpiper C	15
N				
Nafis, T.	4-Jun	4:10PM	Sandpiper A	31
Nakamura, T.	4-Jun	1:30PM	Silver Pearl 1	33
Narayanan, B.	3-Jun	10:20AM	Tidepool 1	20
Narita, A.	3-Jun	9:00AM	Sandpiper C	20
Nguyen, K.T.	4-Jun	10:20AM	Silver Pearl 1	28
Nguyen, T.	4-Jun	4:00PM	Silver Pearl 1	33
Nishihara, H.	2-Jun	10:50AM	Tidepool 1	11
Nishikawa, A.	2-Jun	2:30PM	Osprey	17
Nishimura, T.	2-Jun	2:30PM	Silver Pearl 1-3	16
Norton, E.	4-Jun	3:40PM	Silver Pearl 1	33
Nurak, I.S.	3-Jun	9:20AM	Silver Pearl 2/3	22
O				
Oba, K.	5-Jun	10:50AM	Osprey	35
Ogiya, T.	2-Jun	2:30PM	Shorebreak 2	15
Ohashi, N.	4-Jun	10:50AM	Sandpiper C	26
Ohji, T.	4-Jun	11:30AM	Sandpiper D	26
Ohno, S.	3-Jun	9:30AM	Tidepool 1	20
Okanishi, O.	4-Jun	2:00PM	Sandpiper C	30
Okazaki, T.	2-Jun	9:40AM	Shorebreak 2	10
Okuma, G.	4-Jun	2:00PM	Sandpiper B	31
Olevsky, E.	4-Jun	8:30AM	Shorebreak 2	25
Opila, E.	3-Jun	8:30AM	Silver Pearl 2/3	22
Orikasa, Y.	2-Jun	10:20AM	Tidepool 1	11
Ortona, A.	1-Jun	1:30PM	Silver Pearl 1-3	7
Ortona, A.	1-Jun	2:40PM	Sandpiper A	7
P				
Palumbo, A.	3-Jun	9:20AM	Silver Pearl 1	22
Pamula, E.	4-Jun	2:30PM	Sandpiper A	31
Papageorgiou, V.	3-Jun	10:20AM	Silver Pearl 1	22
Park, H.	1-Jun	3:50PM	Tidepool 1	6
Park, H.	2-Jun	11:30AM	Sandpiper B	11
Park, I.	4-Jun	2:00PM	Tidepool 1	31
Park, J.	1-Jun	10:35AM	Silver Pearl 1-3	5
Park, J.	2-Jun	9:00AM	Osprey	13
Park, M.	1-Jun	4:40PM	Shorebreak 1	9
Park, Y.	2-Jun	10:40AM	Sandpiper C	10
Parolini, N.D.	3-Jun	9:20AM	Pelican	23
Patel, P.	4-Jun	11:20AM	Sandpiper B	27
Pedzich, Z.	2-Jun	10:20AM	Sandpiper D	14
Pedzich, Z.	2-Jun	2:00PM	Shorebreak 2	15
Ponder, J.	3-Jun	8:30AM	Sandpiper A	21

Oral Presenters

Name	Date	Time	Room	Page Number
Postler, K.	4-Jun	4:20PM	Shorebreak 1	33
Prabhu, V.J.	5-Jun	9:00AM	Silver Pearl 2/3	35
Preston, A.	3-Jun	9:10AM	Shorebreak 2	19
Pritzkow, W.	1-Jun	1:30PM	Pelican	8
Pritzkow, W.	3-Jun	8:30AM	Shorebreak 1	24
Prum, T.	4-Jun	3:50PM	Sandpiper D	30
Pruyn, T.	1-Jun	1:40PM	Sandpiper A	7
Puchas, G.	3-Jun	9:40AM	Silver Pearl 1	22
Puchas, G.	3-Jun	10:20AM	Sandpiper B	21
Q				
Quan, J.	2-Jun	2:20PM	Sandpiper D	17
Quiney, Z.	1-Jun	4:30PM	Pelican	9
R				
Radovic, M.	1-Jun	3:50PM	Osprey	8
Radovic, M.	3-Jun	8:30AM	Osprey	23
Ranaiefar, M.	1-Jun	2:00PM	Sandpiper B	6
Reimanis, I.	4-Jun	1:30PM	Sandpiper D	30
Ren, S.	2-Jun	8:30AM	Sandpiper D	14
Riesner, J.	1-Jun	3:20PM	Silver Pearl 1-3	7
Rikka, V.	4-Jun	3:20PM	Tidepool 1	31
Risbud, S.	2-Jun	11:40AM	Sandpiper C	11
Rosei, F.	4-Jun	4:10PM	Sandpiper C	30
Roy, A.	2-Jun	8:30AM	Sandpiper A	12
Roy, S.	3-Jun	11:30AM	Sandpiper C	21
Rubink, W.	3-Jun	9:40AM	Osprey	23
Rudzik, T.	2-Jun	1:30PM	Sandpiper C	15
Rufner, J.	4-Jun	10:50AM	Sandpiper D	25
Rugg, K.	2-Jun	2:00PM	Shorebreak 1	17
Rumen, T.	4-Jun	2:40PM	Osprey	32
S				
Sajgalik, P.	2-Jun	9:30AM	Sandpiper D	14
Sakai, M.	4-Jun	10:20AM	Shorebreak 2	25
Salameh, C.	1-Jun	4:30PM	Sandpiper A	7
Santo, L.	2-Jun	9:10AM	Shorebreak 2	10
Sato, K.	3-Jun	9:20AM	Sandpiper C	20
Sauder, C.	4-Jun	9:00AM	Shorebreak 1	27
Saxena, S.	4-Jun	10:50AM	Tidepool 1	26
Sayama, M.	4-Jun	11:40AM	Sandpiper C	26
Schmidt, J.	4-Jun	4:00PM	Shorebreak 1	33
Schmidt, J.	5-Jun	9:00AM	Pelican	35
Schonfeld, H.B.	4-Jun	9:00AM	Osprey	29
Schonfeld, H.B.	4-Jun	10:20AM	Osprey	29
Schukraft, J.	3-Jun	10:50AM	Sandpiper B	21
Schwartz, J.	2-Jun	9:00AM	Sandpiper B	11
Sciti, D.	2-Jun	1:30PM	Osprey	16
Scotson, D.	4-Jun	9:20AM	Silver Pearl 2/3	28
Scotson, D.	4-Jun	10:50AM	Sandpiper B	27
Segawa, H.	4-Jun	10:20AM	Sandpiper D	25
Sekigawa, T.	4-Jun	10:30AM	Shorebreak 1	27
Senani - de Monredon, S.	4-Jun	4:30PM	Sandpiper D	30
Sendeku, M.G.	4-Jun	3:40PM	Sandpiper C	30
Seo, D.	2-Jun	1:30PM	Tidepool 1	15
Seo, S.	1-Jun	1:30PM	Tidepool 1	6
Serrano, N.L.	4-Jun	11:00AM	Osprey	29
Sève, G.	4-Jun	9:00AM	Silver Pearl 2/3	28
Shaw, J.	1-Jun	3:50PM	Pelican	8
Shi, D.	4-Jun	3:10PM	Sandpiper C	30
Shimamura, A.	1-Jun	1:30PM	Sandpiper B	6
Shimamura, K.	2-Jun	2:40PM	Sandpiper C	15
Shimamura, K.	4-Jun	9:30AM	Sandpiper D	25
Shimoda, K.	4-Jun	8:30AM	Shorebreak 1	27
Shin, H.	2-Jun	10:40AM	Shorebreak 1	14
Shinoda, K.	3-Jun	10:40AM	Silver Pearl 2/3	23
Shirai, T.	3-Jun	8:40AM	Shorebreak 2	19
Shirakawa, H.	2-Jun	10:30AM	Shorebreak 2	10
Shuster, S.P.	1-Jun	2:00PM	Sandpiper D	9
Shuster, S.P.	2-Jun	11:50AM	Sandpiper D	15
Simpson, W.	2-Jun	9:00AM	Shorebreak 1	14
Simpson, W.	3-Jun	10:20AM	Pelican	24
Singh, D.	1-Jun	2:20PM	Sandpiper B	6
Singh, D.	1-Jun	3:50PM	Sandpiper D	10
Singh, H.	3-Jun	11:30AM	Sandpiper D	25
Singh, K.P.	1-Jun	4:20PM	Osprey	8
Singh, P.	4-Jun	4:20PM	Tidepool 1	31
Smith, C.	2-Jun	1:30PM	Pelican	17
So, J.	3-Jun	9:20AM	Sandpiper A	21
Sobczak, M.	2-Jun	1:32PM	Sandpiper A	16
Song, K.	4-Jun	3:20PM	Sandpiper D	30
Soni, A.	4-Jun	2:00PM	Osprey	32
Springer Simonova, P.	4-Jun	1:30PM	Sandpiper B	31
Stiller, J.H.	3-Jun	8:30AM	Sandpiper B	21
Sugahara, T.	1-Jun	3:50PM	Sandpiper C	5
Sumino, M.	4-Jun	9:30AM	Shorebreak 1	27
Suzuki, T.S.	4-Jun	11:10AM	Sandpiper D	26
Swanson, R.	3-Jun	9:00AM	Osprey	23
T				
Takai-Yamashita, C.	1-Jun	1:30PM	Shorebreak 2	5
Tanaka, M.	4-Jun	8:30AM	Silver Pearl 2/3	28
Tanaka, S.	2-Jun	8:40AM	Shorebreak 2	10
Tang, Y.	5-Jun	9:00AM	Osprey	35
Taniguchi, H.	2-Jun	9:20AM	Pelican	13
Tatami, J.	1-Jun	4:20PM	Sandpiper D	10
Tatami, J.	2-Jun	11:00AM	Shorebreak 2	10
Tatami, J.	4-Jun	9:00AM	Sandpiper D	25
Tatarko, P.	2-Jun	9:00AM	Sandpiper D	14
Tatarko, P.	4-Jun	2:20PM	Silver Pearl 2/3	34
Tatarkova, M.	4-Jun	2:40PM	Silver Pearl 2/3	34
Teshima, S.	3-Jun	9:40AM	Pelican	24
Toda, K.	1-Jun	2:00PM	Sandpiper C	5
Toda, K.	1-Jun	3:20PM	Sandpiper C	5
Toda, K.	1-Jun	4:20PM	Sandpiper C	6
Tokoro, C.	4-Jun	8:30AM	Sandpiper C	26
Toury, B.	2-Jun	10:10AM	Sandpiper A	12
Toury, B.	3-Jun	9:40AM	Silver Pearl 2/3	22
Trieu, O.	5-Jun	9:00AM	Shorebreak 1	34
Tsuchiya, T.	1-Jun	1:30PM	Sandpiper C	5
Tsuji, Y.	4-Jun	3:50PM	Sandpiper A	31
U				
Unseld, S.	5-Jun	8:30AM	Osprey	35
V				
Valenzuela-Heeger, E.	4-Jun	9:20AM	Silver Pearl 1	28
Valle, M.	1-Jun	1:30PM	Shorebreak 1	9
Venkatachalam, V.	4-Jun	8:30AM	Sandpiper B	27
Vignoles, G.L.	2-Jun	9:30AM	Silver Pearl 1-3	12
Vignoles, G.L.	4-Jun	5:00PM	Osprey	32
Vignoles, G.L.	5-Jun	10:20AM	Osprey	35
Vignoles, G.L.	5-Jun	11:10AM	Osprey	35
Vinci, A.	2-Jun	9:40AM	Osprey	13
W				
W, J.D.	4-Jun	10:40AM	Osprey	29
Wannenmacher, J.W.	1-Jun	2:20PM	Osprey	8
Watanabe, F.	2-Jun	10:10AM	Shorebreak 1	14
Wich, F.	3-Jun	9:00AM	Sandpiper B	21
Wich, F.	4-Jun	11:00AM	Shorebreak 1	27
Wickramathilaka, K.Y.	3-Jun	10:40AM	Sandpiper A	21
Wright, A.	4-Jun	10:20AM	Silver Pearl 2/3	29
X				
Xu, P.	3-Jun	8:30AM	Sandpiper D	24
Xu, W.	4-Jun	9:30AM	Shorebreak 2	25
Y				
Yabuuchi, N.	2-Jun	2:30PM	Tidepool 1	15
Yadav, M.	5-Jun	9:40AM	Osprey	35

Presenting Author List

Oral Presenters

Name	Date	Time	Room	Page Number
Yamada, Y.	2-Jun	9:00AM	Tidepool 1	11
Yamaguchi, Y.	4-Jun	10:20AM	Sandpiper C	26
Yamamoto, K.	4-Jun	1:30PM	Tidepool 1	31
Yamazaki, N.	3-Jun	11:10AM	Pelican	24
Yamazaki, R.	2-Jun	11:20AM	Shorebreak 2	10
Yang, J.	5-Jun	8:30AM	Shorebreak 1	34
Yoon, D.	4-Jun	1:30PM	Silver Pearl 2/3	34
Yoshida, K.	2-Jun	10:50AM	Silver Pearl 1-3	12
Yoshida, M.	2-Jun	1:30PM	Shorebreak 2	15
Yu, W.	3-Jun	10:20AM	Osprey	23
Yun, H.	1-Jun	5:00PM	Silver Pearl 1-3	7
Yun, H.	4-Jun	10:50AM	Shorebreak 2	25
Z				
Zackasee, J.	2-Jun	10:30AM	Sandpiper A	12
Zhang, J.	4-Jun	11:20AM	Shorebreak 2	25
Zhang, W.	3-Jun	10:50AM	Tidepool 1	20
Zhou, Y.	1-Jun	4:10PM	Pelican	8
Zok, F.W.	4-Jun	1:30PM	Osprey	32
Zok, F.W.	4-Jun	3:30PM	Shorebreak 1	33

Poster Presenters

Name	Date	Time	Room	Page Number
B				
Baba, N.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Beringue, R.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Bochenek, D.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Brzezinska, D.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
C				
Castro, M.T.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
D				
Dixon, C.R.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
F				
Fisher, I.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Fourcade, J.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Furuse, H.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
G				
Gramsch, A.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
H				
Harish, M.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Honda, A.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Hossain, M.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
J				
Jeon, S.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Joo, Y.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
L				
Langhof, N.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Lee, H.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Lee, J.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
M				
Makowska, J.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Masuda, R.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Miyagishi, T.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
O				
Olivo, E.F.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
P				
Park, S.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Pereira, M.d.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
S				
Saito, T.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Sandoval, L.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Seong, Y.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Shiratori, Y.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Sitarz, M.T.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Sobczak, M.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
T				
Tak, W.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Takemoto, R.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Teranishi, T.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
W				
Wich, F.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Wodecka-Dus, B.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Y				
Yang, J.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	19
Z				
Zered, M.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18
Zhibo, C.	2-Jun	5:30PM	Corals Ballroom 3, 4, 5	18

Monday, June 1, 2026

Plenary Session

Plenary Presentations

Room: Silver Pearl 1-3

Session Chairs: Mrityunjay Singh, Ohio Aerospace Institute; Tatsuki Ohji, Yokohama Kokuritsu Daigaku

8:30 AM

Opening remarks and Christina Back Introduction

8:45 AM

(PLEN-001-2026) Modernizing nuclear power with ceramic matrix composites (Invited)

C. A. Back*[1]

1. General Atomics Electromagnetic Systems Group, USA

9:25 AM

Yutaka Kagawa Introduction

9:30 AM

(PLEN-002-2026) Advances in research and development of ceramic matrix composites: Current Japanese scenario (Invited)

Y. Kagawa*[1]

1. Tokyo University of Technology, Katayanagi Laboratory, Japan

10:10 AM

Break

10:30 AM

Ji Yeon Park Introduction

10:35 AM

(PLEN-003-2026) Progress in the development of SiC CMC composites for extreme environments in Korea (Invited)

J. Park*[1]

1. Sewon Hardfacing Co. Ltd., Republic of Korea

11:15 AM

Alexander Michaelis Introduction

11:20 AM

(PLEN-004-2026) Advanced ceramics for stationary storage and CCU (carbon capture and utilization) technology (Invited)

A. Michaelis*[1]

1. Fraunhofer IKTS, Germany

GFMAT-3 Symposium 1- Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

GFMATS1- Particle and powder design and synthesis

Room: Shorebreak 2

Session Chairs: Satoshi Tanaka, Nagaoka University of Technology; Junichi Tatami, Yokohama National University

1:30 PM

(GFMAT-S1-001-2026) Design and Surface Characterization of Hollow Particles toward Functionalization (Invited)

C. Takai-Yamashita*[1,2]

1. Nagoya Kogyo Daigaku, Japan
2. Tohoku Daigaku, IMRAM, Japan

2:00 PM

(GFMAT-S1-002-2026) Stimuli-Responsive Nanocarriers for Tumor Specific Accumulation (Invited)

S. Ilyas*[1]; S. Mathur[1]

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

2:30 PM

(GFMAT-S1-003-2026) From high purity alumina to fully dense ceramics

J. Fourcade*[1]; A. Vivet[1]; J. Otto[1]

1. Baikowski SAS, France

2:50 PM

Break

3:10 PM

(GFMAT-S1-004-2026) Ag^+ Superionic Conductors Derived from Silver Iodide and Silver Oxyacid Salts

Y. Matsushima*[1]; R. Kawanago[1]; K. Uchida[1]; M. Yamamoto[1]; C. Matsushita[1]; N. Oishi[1]; S. Yin[2]

1. Yamagata University, Applied Chemistry, Chemical Engineering, and Biochemical Engineering, Japan
2. IMRAM, Tohoku University, Japan

3:30 PM

(GFMAT-S1-005-2026) Intercalation-Assisted Massive Phase Transformation

P. Gouma*[1]

1. The Ohio State University, MSE, USA

GFMAT-3 Symposium 4- Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

GFMATS4- Phosphor and sensor

Room: Sandpiper C

Session Chairs: Kevin Anderson, U.S. Naval Research Laboratory; Tetsuo Tsuchiya, National Institute of Advanced Industrial Science and Technology (AIST)

1:30 PM

(GFMAT-S4-001-2026) Flexible Sensor Development Using Phosphor Films with Photo-MOD (Invited)

J. Nomoto[1]; Y. Uzawa[1]; T. Tsuchiya*[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

2:00 PM

(GFMAT-S4-002-2026) Design of Long-Wavelength Emitting LED Phosphors (Invited)

K. Toda*[1]

1. Niigata University, Japan

2:30 PM

(GFMAT-S4-003-2026) Sol-gel composite materials for high temperature ultrasonic sensor applications (Invited)

M. Kobayashi*[1]

1. Kumamoto Daigaku, Japan

3:00 PM

Break

3:20 PM

(GFMAT-S4-004-2026) Synthesis of Phosphor Materials by the Water-Assisted Solid-State Reaction (Invited)

K. Toda*[1]

1. Niigata University, Japan

3:50 PM

(GFMAT-S4-005-2026) Development of hybrid gas sensors using low-dimensional carbon nanomaterials and oxide ceramic nanostructures with MOD mathod (Invited)

T. Sugahara*[1]

1. Kyoto Institute of technology, Faculty of Materials Science and Engineering, Japan

4:20 PM

(GFMAT-S4-006-2026) Synthesis of Silicate Phosphors Using a Novel Solid-Gas Hybrid Technology (Invited)

K. Toda*[1]; W. Hikita[1]

1. Niigata University, Japan

4:50 PM

(GFMAT-S4-007-2026) Bottom-up design and fabrication of thermoelectric nanomaterials (Invited)

K. Anderson*[1]; B. L. Greenberg[1]; A. G. Jacobs[1]; J. Wollmershauser[1]; B. N. Feigelson[1]

1. US Naval Research Laboratory, USA

5:20 PM

PPP- Dielectric and magnetic properties of the FE-Y2DyFe5O12 ceramic composites

5:22 PM

PPP- Technology and properties of multi-component multiferroic ceramic composites PMN-PT-PS-Ferrite

5:24 PM

PPP- Influence of rare-earth elements on the functional properties of BZT–BCT ceramics

5:26 PM

PPP- Synthesis, microstructural evolution and dielectric properties of BLT ceramics modified with a special glass admixture

GFMAT-3 Symposium 6- Advanced Batteries and Supercapacitors for Energy Storage Applications

GFMATS6- Li-ion batteries- Electrode Materials I

Room: Tidepool 1

Session Chairs: Naoaki Yabuuchi, Yokohama National University; Mickael Dollé, Université de Montreal

1:30 PM

(GFMAT-S6-001-2026) Toward high-energy-density and safe lithium-ion secondary batteries (Invited)

S. Seo*[1]

1. Semiconductor Energy Laboratory Co. Ltd, Japan

2:05 PM

(GFMAT-S6-002-2026) Surface-Enhanced Nickel-Rich Layered Cathodes by Cation-Disordered Rocksalt (Invited)

J. Kim*[1]

1. Stevens Institute of Technology, Chemical Engineering & Materials Science, USA

2:35 PM

(GFMAT-S6-003-2026) Impact of fluorination on the structure and electrochemistry of Mn-rich disordered rocksalt cathodes

Q. Deville[1]; F. Weill[1]; B. Mortemard de Boisse[2]; M. Guignard[1]; D. Carlier*[1]

1. Institut de Chimie de la Matiere Condensee de Bordeaux, France
2. SAFT, France

2:55 PM

Break

3:20 PM

(GFMAT-S6-004-2026) The Earth-abundant Cathode Active Materials (EaCAM) consortium: Advancing manganese-rich oxides toward practical Application (Invited)

J. R. Croy*[1]

1. Argonne National Laboratory, USA

3:50 PM

(GFMAT-S6-005-2026) Calcination process design for layered oxide cathodes toward sustainable lithium ion battery (Invited)

H. Park*[1]

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

4:20 PM

(GFMAT-S6-006-2026) Metastable lithium-rich layered oxides for an enhanced structural stability (Invited)

M. Guignard*[1]; G. Zhao[1]; L. Castro[2]; P. Salles[3]; S. Belin[4]; D. Carlier[1]; C. Delmas[1]

1. ICMCB-CNRS, France
2. Toyota Motor Europe NV SA, Belgium
3. ESRF, France
4. Synchrotron SOLEIL, France

HTCMC-12/GFMAT-3 Joint Symposium- Additive Manufacturing Technologies and Applications

HTCMC -GFMAT- Joint Sym- Applications I

Room: Sandpiper B

Session Chair: Soshu Kirihara, Osaka University

1:30 PM

(Joint Sym-001-2026) Improvement in packing density of green body via binder jetting using binary powder mixing (Invited)

A. Shimamura*[1]; Y. Chung[2]; N. Kondo[2]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan
2. Sangyo Gijutsu Sogo Kenkyujo Chubu Center, Japan

2:00 PM

(Joint Sym-002-2026) Fused filament fabrication of alumina and zirconia ceramics: Influence of infill architecture on microstructure and flexural strength

M. Ranaiefar*[1]; M. Singh[2]; M. C. Halbig[1]

1. NASA Glenn Research Center, USA
2. Ohio Aerospace Institute, USA

2:20 PM

(Joint Sym-003-2026) Micro-architected metamaterial composites by parametric optimization and additive manufacturing

M. Du[1]; C. Zheng[1]; H. Deng[1]; J. Tsai[1]; R. R. Kamath[1]; P. S. Chaugule[1]; C. A. Chuang[1]; D. Singh*[1]; M. C. Messner[1]

1. Argonne National Laboratory, USA

HTCMC-GFMAT- Joint Sym- Applications II

Room: Sandpiper B

Session Chair: Farid Akhtar, Lulea University of Technology

2:40 PM

(Joint Sym-004-2026) 3D printing technology for intelligent electronic medical devices (Invited)

S. Kang*[1]

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

3:10 PM

Break

3:30 PM

(Joint Sym-005-2026) Stereolithographic additive manufacturing for fine materials components (Invited)

S. Kirihara*[1]; F. Spirrett[1]

1. Osaka University, Joining and Welding Research Institute, Japan

4:00 PM

(Joint Sym-006-2026) Digital light processing of silica/chitosan inorganic/organic hybrids with open porosity (Invited)

J. Jones*[1]; H. Iqbal[1]; K. Lee[2]

1. Imperial College London, Department of Materials, United Kingdom
2. Imperial College London, Department of Aeronautics, United Kingdom

4:30 PM

(Joint Sym-007-2026) Extrusion-based additive manufacturing of alumina foams and ammonia sorbents with tailored porosity and stability (Invited)

F. Akhtar*[1]

1. Lulea University of Technology, Division of Materials Science, Sweden

HTCMC-12 Symposium 3- Polymer Derived Ceramics and Composites

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics I

Room: Sandpiper A

Session Chairs: Matthew Dickerson, Air Force Research Laboratory; Jordan Zackasee, Air Force Research Laboratory

1:30 PM

Opening Remarks

1:40 PM

(HTCMC-S3-002-2026) Synthesis constituents and processing technologies for UHTCMCs (Invited)

T. Pruyn*[1]; M. B. Dickerson[1]; J. Delcamp[1]

1. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

2:10 PM

(HTCMC-S3-003-2026) Laser-induced graphene from polymeric materials and its application to microwave absorption (Invited)

S. Lee*[1]

1. Inha University, Mechanical Engineering, Republic of Korea

2:40 PM

(HTCMC-S3-004-2026) Architected ceramics from preceramic polymers: Powder bed fusion pathways to functional components (Invited)

A. Ortona*[1]

1. SUPSI, MEMTi, Switzerland

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics II

Room: Sandpiper A

Session Chairs: Matthew Dickerson, Air Force Research Laboratory; Gurpreet Singh, Kansas State University

3:10 PM

Break

3:30 PM

(HTCMC-S3-005-2026) Mechanical characterization of 3D-printed polymer-derived ceramic composites at ambient and elevated temperature (Invited)

B. G. Compton*[1,2]

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

4:00 PM

(HTCMC-S3-006-2026) Straightforward design of 3D polymer-derived silicon carbide parts via extrusion-based 3D printing technology (Invited)

S. Bernard*[1]

1. CNRS, IRCER, France

4:30 PM WITHDRAWN

(HTCMC-S3-007-2026) Additive manufacturing of SiOC based monoliths as structured catalysts for CO_2 hydrogenation (Invited)

C. Salameh*[1]

1. Institut Européen des Membranes, France

HTCMC-12 Symposium 4- Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

HTCMCS4- Innovative design

Room: Silver Pearl 1-3

Session Chair: Katsumi Yoshida, Institute of Science Tokyo

1:30 PM

(HTCMC-S4-001-2026) Progress on the "Matrix-First" paradigm for fiber-reinforced ceramic matrix composites (Invited)

A. Ortona*[1]

1. SUPSI, MEMTi, Switzerland

2:00 PM

(HTCMC-S4-002-2026) Development of LSIed C/SiC Components for Scramjet Engines in Korea (Invited)

S. Kim*[1]; I. Han[1]; H. Bang[1]; S. Kim[1]; Y. Seong[2]; S. Lee[1]

1. Korea Institute of Energy Research, Republic of Korea
2. Korea Institute of Energy Research(KIER), Energy Materials Laboratory, Republic of Korea

2:30 PM

(HTCMC-S4-003-2026) Innovative design and testing of SiC/SiC composites for fusion devices (Invited)

A. J. Leide*[1]; D. Andrews[1]; J. Wade-Zhu[1]

1. UKAEA, Materials Division, United Kingdom

3:00 PM

Break

3:20 PM

(HTCMC-S4-004-2026) Optimized local reinforcement of C/C-SiC structures using Fiber Patch Placement (Invited)

J. Riesner*[1]; D. Koch[1]

1. Universitat Augsburg, Germany

3:50 PM

(HTCMC-S4-005-2026) Development of refractory high-entropy ceramic matrix composites through the integration of computational thermodynamics and experiments (Invited)

Y. Arai*[1]; R. Inoue[1]

1. Tokyo University of Science, Japan

4:20 PM

(HTCMC-S4-006-2026) Evaluation of mechanical and thermal properties of C/SiC using continuous composites CF3D technology

K. C. Bull*[1]; J. Gilder[2]; C. L. Cramer[3]; D. Gilmer[4]

1. The University of Tennessee Knoxville Tickle College of Engineering, Mechanical and Aerospace Engineering, USA
2. The University of Tennessee Knoxville Tickle College of Engineering, Aerospace, USA
3. Oak Ridge National Lab, Manufacturing Science Division, USA
4. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science and Engineering, USA

4:40 PM

(HTCMC-S4-007-2026) Laser powder bed fusion of ceramic–regolith composites for lunar-analog cylinder fabrication under inert conditions

M. Feehan*[1]

1. Space Copy Inc., Canada

5:00 PM

(HTCMC-S4-008-2026) Effects of C-fiber tow counts on physical and mechanical behavior of the NITE-AXIOM SiC slurry Pre-preg sheets and their Laminate C/SiC Composites

H. Yun*[1]; A. Stanley[1]; W. Simpson[2]; E. Vargas[3]; A. L. Guevara[4]; K. Grijalva[5]; A. Garcia[5]

1. Axiom Materials Inc, USA
2. Axiom Materials Inc, Technical, USA
3. University of Southern California, Materials Science and Engineering, USA
4. Axiom Materials Inc, R&D, USA
5. Axiom Materials Inc, Sales, USA

5:20 PM

PPP- New alumina matrix for high performance oxide CMC

HTCMC-12 Symposium 7- Materials for Extreme Environments – UHTCs, MAX phases, and nanolaminates

HTCMCS7- Entropy stabilized compositionally complex UHTCs and MAX phases I

Room: Osprey

Session Chair: Miladin Radovic, Texas A&M University

1:30 PM

(HTCMC-S7-001-2026) Phase stability of compositionally complex UHTC transition metal carbides (Invited)

T. Davey*[1,2]; E. Zancan[1]; Y. Chen[2]

1. Bangor University, Nuclear Futures Institute, United Kingdom
2. Tohoku University, Graduate School of Engineering, Japan

2:00 PM

(HTCMC-S7-002-2026) Single-phase high-entropy carbide and boride UHTCs enabled by data-driven composition selection

A. F. Ornelas[1]; A. G. Castellanos*[1]

1. The University of Texas at El Paso, Aerospace and Mechanical Engr. Dept., USA

2:20 PM

(HTCMC-S7-003-2026) Synthesis of zeta phase binary, mid-entropy, and high-entropy carbides exhibiting group IV and V metals

J. W. Wannenmacher*[1]

1. Missouri University of Science and Technology, Materials Science Engineering, USA

2:40 PM

(HTCMC-S7-004-2026) Lamellar microstructure engineering in tantalum, vanadium and niobium carbides for enhanced ceramic ductility

M. Lakusta*[1]; A. Emdadi[1]; J. Watts[1]; D. Lipke[1]; G. Hilmas[1]; J. Lonergan[1]

1. Missouri University of Science & Technology, Materials Science and Engineering, USA

3:00 PM

Break

HTCMCS7- Entropy stabilized compositionally complex UHTCs and MAX phases II

Room: Osprey

Session Chair: Antonio Vinci, CNR - ISSMC

3:20 PM

(HTCMC-S7-005-2026) Toughening transition metal carbides through high entropy zeta phase nano domains (Invited)

J. Lonergan*[1]; M. Lakusta[1]; A. Emdadi[1]; J. Watts[1]; D. Lipke[1]; G. Hilmas[1]

1. Missouri University of Science and Technology, Materials Science and Engineering, USA

3:50 PM

(HTCMC-S7-006-2026) Strategies for the controlled synthesis of compositionally complex MAX Phases (Invited)

M. Radovic*[1]; M. Dujovic[1]; C. Wang[1]; Z. Tan[1]; A. Srivastava[1]

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

4:20 PM

(HTCMC-S7-007-2026) Microstructure and mechanical property correlation in high-entropy dual-phase (Ti,Zr,Ta,Hf) boride-carbide-based ultra-high-temperature ceramic *WITHDRAWN*

K. P. Singh*[1]; K. Balani[1]

1. Indian Institute of Technology Kanpur, Materials Science and Engineering, India

4:40 PM

(HTCMC-S7-009-2026) Development of Ultra-Hard UHTCS from MAX phases and boron carbide

W. Banas*[1]; D. D. Kozien[1]; L. Silvestroni[2]; S. Failla[3]; Z. Pedzich[4]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Department of Ceramics and Refractories, Poland
2. Consiglio Nazionale delle Ricerche, ISSMC, Italy
3. National Research Council of Italy - Institute of Science, Technology and Sustainability for Ceramics, Department of Chemical Science and Materials Technologies (DSCTM), Italy
4. AGH University of Krakow, Department of Ceramics and Refractory Materials, Poland

HTCMC-12 Symposium 8- Testing and Evaluation of Ceramic Matrix Composites from Constituents and Coupons to Components, including EBCs

HTCMCS8- Mechanical characterization of ceramics and composites, techniques and equipment I

Room: Pelican

Session Chairs: Jeff Vervlied, Free Forms Fiber; Ryo Inoue, The University of Tokyo

1:30 PM

(HTCMC-S8-001-2026) Comparison of all-oxide ceramic matrix composites (OCMC) using Nextel, Nitivy and Vulcan Shield Global fabrics (Invited)

W. Pritzkow*[1]; V. Dosch[1]; T. Oberhofer[1]; K. Tushtev[2]; R. S. Almeida[2]; K. Rezwan[3]

1. Walter E.C. Pritzkow Spezialkeramik, Germany
2. University of Bremen, Advanced Ceramics Group, Germany
3. University of Bremen, Germany

2:00 PM

(HTCMC-S8-002-2026) Mode I interlaminar fracture behavior of ceramic composites at ultra-high temperature (Invited)

G. Jefferson*[1]; C. Popelar[2]; J. Pierce[3]; T. Jackson[3]

1. Air Force Research Laboratory, RXNC, USA
2. Southwest Research Institute, USA
3. University of Dayton, Research Institute, USA

2:30 PM

(HTCMC-S8-003-2026) Flexural strength of reinforced V shaped oxide/oxide composite specimen (Invited)

F. Guillet*[1]; R. Garcez[1]; A. Portal[1]; F. Laurin[2]

1. Commissariat a l'energie atomique et aux energies alternatives Siege administratif, France
2. ONERA, DMAS, France

3:00 PM

Break

3:20 PM

(HTCMC-S8-004-2026) Enhanced deformability of off-stoichiometric TiC in Mo-Ti-C ternary composites (Invited)

S. Ida*[1]; E. Nakagawa[3]; V. Paul[3]; F. Tropper[3]; T. Ohmura[3]; K. Yoshimi[2]; T. Kimura[1]

1. Japan Fine Ceramics Center, Japan
2. Tohoku University, Japan
3. National Institute for Materials Science, Japan

3:50 PM

(HTCMC-S8-005-2026) High temperature digital image correlation for strain measurement of ceramic matrix composites

J. Shaw*[1]; M. Mordasky[2]; D. Collins[2]

1. Pratt & Whitney, USA
2. Raytheon Technologies Research Center, USA

4:10 PM

(HTCMC-S8-006-2026) Direct measurement of interlaminar tensile strength in CMCs at elevated temperatures using the Flex ILT method

Y. Zhou*[1]; K. Maxwell[1]; G. Gemeinhardt[1]

1. GE Aerospace, USA

4:30 PM

(HTCMC-S8-007-2026) Condition assessment of SiC_f/SiC CMC via resonance testing techniques *WITHDRAWN*

Z. Quiney*[1]; J. Stephen[1]; G. Garcia Luna[4]; A. L. Chamberlain[2]; S. Jeffs[3]

1. Swansea University, Institute of Structural Materials, United Kingdom
2. Rolls-Royce North America Inc, USA
3. Swansea University, United Kingdom
4. Rolls-Royce plc, United Kingdom

4:50 PM

(HTCMC-S8-008-2026) Mechanical characterisation of unidirectional oxide/oxide ceramic matrix composite laminate

A. Garnier*[1,2]; C. Bouvet[1]; C. Morel[1]; T. Cutard[1]; G. Dusserre[1]; J. Malenfant[2]

1. Institut Clement Ader, France
2. Safran Ceramics, France

5:10 PM

(HTCMC-S8-009-2026) Tensile behavior and thermal analysis of an orthogonal 3D woven SiC-fiber/SiC composite under rapid temperature gradient heating

Y. Matsuda*[1]; N. Sugawara[1]; T. Ogasawara[1]; R. Inoue[2]; T. Aoki[4]; H. Sato[3]; Y. Kitamura[3]

1. Tokyo Noko Daigaku, Japan
2. Tokyo Rika Daigaku, Japan
3. Kabushiki Kaisha IHI, Japan
4. Uchu Koku Kenkyu Kaihatsu Kiko, Japan

HTCMC-12 Symposium 10- CMC Applications I – Aerospace Propulsion and Structures

HTCMCS10- Processing and Properties of CMCs for Aerospace Applications I

Room: Shorebreak 1

Session Chair: Christopher Hawkins, Dstl

1:30 PM

(HTCMC-S10-001-2026) High-temperature characterization of CMCs in inert and oxidizing atmospheres (Invited)

M. Valle*[1]; L. Delledonne[1]; C. Gigante[1]; L. Malucelli[1]; A. Monzillo[1]

1. Petroceramics S.p.A., Italy

2:00 PM

(HTCMC-S10-002-2026) Current Tyranno Fiber® (SiC Fiber) developed by UBE Corporation and its applications (Invited)

T. Matsunaga*[1]

1. UBE Corporation, Specialty Products Division, Japan

2:30 PM

(HTCMC-S10-003-2026) Damage-tolerant design for impact resistant ceramic matrix composites

A. Caporale*[1]; G. J. Janszen[1]; M. Ursic[2]; R. Passoni[2]; A. Airoldi[1]

1. Politecnico di Milano, Dept. of Aerospace Science and Technology, Italy
2. Brembo NV, Italy

2:50 PM

Break

3:10 PM

(HTCMC-S10-004-2026) Hafnium-based ceramic nano composites: Near-zero ablation for hybrid rocket applications (Invited)

S. Lee*[1]; V. Nguyen[1]

1. Korea Institute of Materials Science, Republic of Korea

3:40 PM

(HTCMC-S10-005-2026) Advanced manufacturing and densification techniques for fabricating ceramic matrix composites (Invited)

D. Mitchell*[1]

1. University of Central Florida, Materials Science and Engineering, USA

4:10 PM

(HTCMC-S10-006-2026) Polymeric ZrC precursors for ultrahigh-temperature ceramic matrix composites (Invited)

J. Hepp[1]; J. Williams[1]; I. Ivanov*[1]; C. Deck[1]; H. Khalifa[1]

1. General Atomics Electromagnetic Systems Group, Nuclear Technologies and Materials (NTM), USA

4:40 PM

(HTCMC-S10-007-2026) SiC-based matrix densification and high-temperature mechanical properties with solid-state synthesized additives for CMC: Boron and titanium

M. Park*[1]; S. Jung[1]; W. Kwon[1]; W. Choi[1]; S. Lee[1]

1. Korea Institute of Materials Science, Extreme Materials Research Institute, Republic of Korea

HTCMC-12 Symposium 11- CMC Applications II – Solar, Nuclear and Propulsion Systems

HTCMCS11- Coatings, integration, joining and machining

Room: Sandpiper D

Session Chair: John Holowczak, RTX Corporation

1:30 PM

(HTCMC-S11-001-2026) Development and assessment of SiC/SiC composite joints for containers in concentrated solar power systems (Invited)

V. Casalegno*[1]; C. Malinverni[1]; M. Salvo[2]

1. Politecnico di Torino, DISAT, Italy
2. Politecnico di Torino, Italy

2:00 PM

(HTCMC-S11-002-2026) The Joining and Fabrication of thin-walled ceramic composites with Embedded Wire Chemical Vapor Deposition

S. P. Shuster*[1]

1. Free Form Fibers, USA

2:20 PM

(HTCMC-S11-003-2026) Design and manufacture of SiC/SiC joints by embedded wire chemical vapor deposition

B. W. Lamm*[2]; J. Pegna[1]; E. Cakmak[2]; W. Zhong[2]; T. Koyanagi[2]

1. Free Form Fibers, USA
2. Oak Ridge National Laboratory, Materials Science and Technology Division, USA

2:40 PM

(HTCMC-S11-004-2026) Laser assisted joining of SiC/SiC for high temperature applications

M. Ferraris*[1,2]; K. Pandey[1,2]; A. Benelli[1,2]; M. De Maddis[3,2]

1. Politecnico di Torino, Department of Applied Science and Technology, Italy
2. J-Tech@PoliTO, Italy
3. Politecnico di Torino, DIGEP, Italy

3:00 PM

Break

HTCMCS11- CMC for energy systems

Room: Sandpiper D

Session Chair: Valentina Casalegno, Politecnico di Torino

3:20 PM

(HTCMC-S11-005-2026) Reflections on 40 Years of Structural Ceramics and CMCs for Nuclear, Turbine, and Heat Exchanger Applications (Invited)

J. E. Holowczak*[1]

1. RTX Corporation, Research Center, USA

3:50 PM

(HTCMC-S11-006-2026) Ceramic Heat Exchanger for Solar Industrial Process Heat* (Invited)

D. Singh*[1]

1. Argonne National Lab, USA

4:20 PM

(HTCMC-S11-007-2026) Microscopic mechanical properties of Si_3N_4-based ceramics (Invited)

J. Tatami*[1]

1. Yokohama National University, Faculty of Environmental and Information Sciences, Japan

Tuesday, June 2, 2026

GFMAT-3 Symposium 1- Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

GFMATS1- Advanced characterization and analytical techniques for powder processing and materials

Room: Shorebreak 2

Session Chairs: Shaista Ilyas, Institute of Inorganic and Materials Chemistry; Chika Takai, Nagoya Institute of Technology

8:40 AM

(GFMAT-S1-006-2026) Sequential 3D characterization for structure understanding and defect control in alumina manufacturing (Invited)

S. Tanaka*[1]

1. Nagaoka Gijutsu Kagaku Daigaku, Japan

9:10 AM

(GFMAT-S1-007-2026) Geopolymerization of lunar and martian regolith simulants for space sustainability (Invited)

L. Santo*[1]; A. Proietti[1]; F. Quadrini[1]

1. Universita degli Studi di Roma Tor Vergata, Italy

9:40 AM

(GFMAT-S1-009-2026) Rheology and microstructural dynamics in ceramic processing (Invited)

T. Okazaki*[1]

1. Sangyo Gijutsu Sogo Kenkyujo Tsukuba Chuo Jigyosho, Japan

10:10 AM

Break

10:30 AM

(GFMAT-S1-010-2026) Isotropic graphite manufacturing process and product introduction (Invited)

H. Shirakawa*[1]

1. Toyo Tanso Kabushiki Kaisha, Japan

11:00 AM

(GFMAT-S1-011-2026) Internal structure evolution of silica slurry during drying observed by OCT - Influence of molecular weight of PEI used as dispersant-

J. Tatami*[1]; H. Kuroda[1]; M. Iijima[2]; T. Takahashi[3]

1. Yokohama National University, Japan
2. Yokohama National University, Graduate School of Environment and Information Sciences, Japan
3. Kanagawa Institute of Industrial Science and Technology, Japan

11:20 AM

(GFMAT-S1-012-2026) Freezing behavior and spray freeze granulation drying of non-aqueous silicon nitride slurries with varying PEI molecular weights and OA contents

R. Yamazaki*[1]; J. Tatami[2]; M. Iijima[3]; S. Kawaguchi[4]; N. Kondo[5]

1. Yokohama Kokuritsu Daigaku, Graduate School of Environment and Information Sciences, Japan
2. Yokohama National University, Japan
3. Yokohama National University, Graduate School of Environment and Information Sciences, Japan
4. PRECI Co., Ltd., Japan
5. Kokuritsu Kenkyu Kaihatsu Hojin Sangyo Gijutsu Sogo Kenkyujo, Japan

GFMAT-3 Symposium 4- Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

GFMATS4- Electronic material

Room: Sandpiper C

Session Chairs: Kozo Fujiwara, Tohoku Daigaku

8:30 AM

(GFMAT-S4-008-2026) In-situ observation of solid-liquid interface phenomena in semiconductor materials (Invited)

K. Fujiwara*[1]

1. Tohoku Daigaku, Institute for Materials Research, Japan

9:00 AM

(GFMAT-S4-009-2026) Interfacial control and device structures of van der Waals semiconductors on ferroelectric HfZrOx insulator toward flexible electronics (Invited)

N. Hiroshiba*[1]; K. Koike[1]

1. Osaka Kogyo Daigaku, Japan

9:30 AM

(GFMAT-S4-010-2026) A process to make crystalline oxide ferroelectrics compatible with polymer or si substrates using expanded laser beam (Invited) *WITHDRAWN*

J. R. K C*[1]; A. TS[1]

1. University of Hyderabad, CASEST, School of Physics, India

10:00 AM

Break

10:20 AM

(GFMAT-S4-011-2026) Electrical properties of alkaline-earth hexaboride thin films doped with lithium

A. Hirales*[1]; V. R. Vasquez[2]; O. A. Graeve[1]

1. University of California San Diego, USA
2. University of Nevada Reno, USA

GFMATS4- Transparent ceramic

Room: Sandpiper C

Session Chairs: Matthias Müller, Radiation Monitoring Devices Inc; Nobuya Hiroshiba, Osaka Kogyo Daigaku

10:40 AM

(GFMAT-S4-013-2026) Surface initiated densification of $MgAl_2O_4$ spinel driven by Ca concentration gradient (Invited)

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

1. Korea Institute of Materials Science, Republic of Korea

11:10 AM

(GFMAT-S4-014-2026) Optical and laser properties of sapphire/YAG bonding materials by pulsed electric current sintering (Invited)

H. Furuse*[1]; H. Uehara[2]; R. Yasuhara[2]

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

11:40 AM

(GFMAT-S4-019-2026) Laser purification and processing of quartz silica sand

S. Risbud*[1]; A. Naim[1]

1. University of California, USA

GFMAT-3 Symposium 6- Advanced Batteries and Supercapacitors for Energy Storage Applications

GFMAT-S6- Battery Electrolyte and Interface Design

Room: Tidepool 1

Session Chairs: Dong-Hwa Seo, Korea Advanced Institute of Science and Engineering (KAIST); Yuki Orikasa, Ritsumeikan University

8:30 AM

(GFMAT-S6-008-2026) Unlocking the potential of non-aqueous battery electrolytes beyond conventional constraints (Invited)

I. Cekic-Laskovic*[1]

1. Forschungszentrum Julich GmbH, Helmholtz Institute Münster, Germany

9:00 AM

(GFMAT-S6-009-2026) Rational solvent design for advanced lithium-ion batteries (Invited)

Y. Yamada*[1]

1. The University of Osaka, SANKEN, Japan

9:30 AM

(GFMAT-S6-010-2026) Renovating electrolytes for fast-charging and high-energy Li-ion batteries (Invited)

H. Lee*[1]

1. Yonsei University, Republic of Korea

10:00 AM

Break

10:20 AM

(GFMAT-S6-011-2026) Interfacial reaction mechanisms governing battery kinetics and degradation (Invited)

Y. Orikasa*[1]; Y. Goto[1]; T. Hamada[1]; Y. Miyaura[1]; Y. Shiomi[1]

1. Ritsumeikan University, Department of Applied Chemistry, Japan

10:50 AM

(GFMAT-S6-012-2026) Three-dimensional mesoporous graphene for energy applications (Invited)

H. Nishihara*[1]

1. Tohoku Daigaku, Japan

11:20 AM

(GFMAT-S6-013-2026) Development of high performance Li-S batteries via the usage of scalable electrocatalysts (Invited)

A. J. Bhattacharyya*[1]

1. Indian Institute of Science, Interdisciplinary Centre for Energy Research, India

11:50 AM

(GFMAT-S6-035-2026) Borate-Based Electrolytes Enabling Sustainable Sodium Batteries (Invited)

C. Ban*[1]

1. University of Colorado, Boulder, Mechanical Engineering, USA

HTCMC-12/GFMAT-3 Joint Symposium- Additive Manufacturing Technologies and Applications

HTCMC-GFMAT- Joint Sym- Applications III

Room: Sandpiper B

Session Chair:

8:30 AM

(Joint Sym-008-2026) Challenges and opportunities of ceramic additive manufacturing (Invited)

A. Michaelis*[1]

1. Fraunhofer IKTS, Germany

9:00 AM

(Joint Sym-009-2026) Multimaterial and composite printing: Ongoing efforts at Lawrence Livermore National Laboratory (Invited)

J. Schwartz*[1]

1. Lawrence Livermore National Laboratory, Materials Science Division, USA

HTCMC -GFMAT- Joint Sym- Stereolithography

Room: Sandpiper B

Session Chair: Johanna Schwartz, Lawrence Livermore National Laboratory

9:30 AM

(Joint Sym-010-2026) Maturing ceramic additive manufacturing: Process–Structure–Property relationships in Vat photopolymerization (Invited)

K. Lee*[1]

1. Los Alamos National Laboratory, USA

10:00 AM

Break

10:20 AM

(Joint Sym-011-2026) Eliminating prolonged debinding in vat photopolymerization of ceramic materials: A photocurable suspension design approach (Invited)

M. Iijima*[1]; Y. Yamanoi[1]; F. Yokomori[1]; J. Tatami[1]

1. Yokohama National University, Japan

10:50 AM

(Joint Sym-012-2026) Studies and characterization of 3D printed ceramic electrolytes for batteries

M. Faral*[1]; A. Laventure[1]; M. Dollé[1]

1. University of Montreal, Chemistry, Canada

11:10 AM

(Joint Sym-013-2026) Optimized DLP-based 3D printing of porous ceramics and data-driven process modeling

I. Kim*[1]; H. Yun[1,2]

1. Korea Institute of Materials Science, Republic of Korea
2. University of Science and Technology, Republic of Korea

11:30 AM

(Joint Sym-014-2026) Preparation of a photocationic siloxane oligomer–Based hybrid binder for photopolymerization-based ceramic 3D printing

H. Park*[1]; S. Sakuragi[2]; S. Yang[2]; Y. Sohn[1]

1. University of Central Florida College of Engineering and Computer Science, USA
2. Changwon National University, Republic of Korea

11:50 AM

(Joint Sym-018-2026) Analysis of mixing parameters on rheology and polymer stability in aqueous silicon carbide slurries

J. Feldbauer*[1,2]; C. L. Cramer[2]; T. Aquirre[2]; B. L. Armstrong[3]; R. Walker[5]; P. Snarr[4]; D. Gilmer[5]

1. The University of Tennessee Knoxville Tickle College of Engineering, USA
2. Oak Ridge National Lab, Manufacturing Science Division, USA
3. Oak Ridge National Lab, Material Science & Technology, USA
4. The University of Texas at Austin, USA, USA
5. The University of Tennessee Knoxville Tickle College of Engineering, Material Science and Engineering, USA

HTCMC-12 Symposium 3- Polymer Derived Ceramics and Composites

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics III

Room: Sandpiper A

Session Chair: Matthew Dickerson, Air Force Research Laboratory

8:30 AM

(HTCMC-S3-009-2026) Preparation and characterization of ceramic composites from hafnium and silicon oxycarbide hybrid precursor

A. Roy*[1]; G. Singh[2]

1. Kansas State University, Mechanical and Nuclear Engineering, USA
2. Kansas State University Carl R Ice College of Engineering, USA

8:50 AM

(HTCMC-S3-010-2026) Developing ceramic materials via preceramic polymer chemistry and a thorough understanding of structure-property relationships at the atomic scale (Invited) ***WITHDRAWN***

N. Bedford*[1]

1. Idaho National Laboratory, USA

9:20 AM

(HTCMC-S3-011-2026) Polymer-derived TiC/SiC ceramics: Microstructural evolution and property enhancement (Invited)

K. Lu*[1]; M. Bidabadi[1]; S. Nemani[1]

1. University of Alabama at Birmingham, USA

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics IV

Room: Sandpiper A

Session Chairs: Matthew Dickerson, Air Force Research Laboratory; James Ponder, Air Force Research Lab

9:50 AM

Break

10:10 AM

(HTCMC-S3-012-2026) From preceramic polymers to hBN 2D materials

C. Maestre[1]; C. Journet[1]; P. Steyer[2]; V. Garnier[2]; B. Toury*[1]

1. Universite Claude Bernard Lyon 1, Laboratoire des Multimatériaux et Interfaces, France
2. Materiaux Ingenierie et Science, France

10:30 AM

(HTCMC-S3-013-2026) Maximizing ceramic yields of polymer grafted nanoparticle via modification of polymer architecture and nanoparticle composition

J. Zackasee*[1]; A. Advincula[1]; J. Ponder[1]; J. Delcamp[1]; T. Pruyn[1]; M. B. Dickerson[1]

1. Air Force Research Laboratory, USA

10:50 AM

(HTCMC-S3-014-2026) Metal nitride syntheses for dummies (Invited)

Z. Yi[1]; M. Aekka[1]; K. Osada[1]; J. Heron[2]; R. M. Laine*[1]

1. University of Michigan, Materials Science and Engineering, USA
2. University of Michigan, USA

HTCMC-12 Symposium 4- Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

HTCMCS4- Advanced processing and manufacturing technologies I

Room: Silver Pearl 1-3

Session Chairs: Alberto Ortona, SUPSI; Daejong Kim, Korea Atomic Energy Research Institute

8:30 AM

(HTCMC-S4-009-2026) Comprehensive development of sustainable ceramic matrix composites (Invited) ***WITHDRAWN***

D. Koch*[1]; A. Thorenz[1]; D. Schüppel[1]; F. Halter[1]; L. Wietschel[1]; A. Schneller[1]

1. University of Augsburg, Institute for Materials Resource Management, Germany

9:00 AM

(HTCMC-S4-010-2026) Agile CMC fabrication through continuous fiber 3D printing and on-head matrix impregnation (Invited)

D. King*[1]; D. Seymour[1]; B. Hill[1]; D. Young[1]; B. Garcia[1]

1. Weber State University, Miller Advanced Research and Solutions Center, USA

9:30 AM

(HTCMC-S4-011-2026) Fluidized bed chemical vapor deposition – A versatile technique for the preparation of ceramic composites (Invited)

A. El Mansouri[1]; T. Da Calva[1]; A. Guette[1]; N. Bertrand[1]; G. Chollon[1]; H. Plaisantin[1]; S. Couthures[1]; G. L. Vignoles*[1]

1. University Bordeaux, LCTS - Lab for ThermStructural Composites, France

10:00 AM

Break

10:20 AM

(HTCMC-S4-012-2026) AI image diagnosis of damage cracks in ceramic matrix composites

M. Kotani*[3]; M. Yagai[2]; Y. Tanaka[1]; Y. Kagawa[1]

1. Tokyo University of Technology, Japan
2. Research Institute of Systems Planning, Inc., Japan
3. Japan Aerospace Exploration Agency, Japan

10:50 AM

(HTCMC-S4-013-2026) Application of pulsed DC electrophoretic deposition process to interphase formation for SiC_f/SiC composites (Invited)

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

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

11:20 AM

(HTCMC-S4-014-2026) Advances in the processing of ceramic matrix composites (CMCs) by polymer infiltration and pyrolysis (PIP)

M. B. Dickerson*[1]; Z. D. Apostolov[1]; L. M. Rueschhoff[1]; M. Cinibulk[1]; J. Delcamp[1]; C. Kassner[1]; T. Pruyn[1]

1. Air Force Research Laboratory, USA

11:40 AM

(HTCMC-S4-015-2026) The influence of key processing parameters on porosity in CMCs fabricated using CVI

O. Brandt*[1]; R. Steadman[2]; V. Venkatachalam[2]; T. Shoulders[3]; L. Backman[1]; J. Binner[4]

1. US Naval Research Laboratory, Spacecraft Engineering Division, USA
2. University of Birmingham, Metallurgy and Materials, United Kingdom
3. Technology Assessment and Transfer Inc, USA
4. University of Birmingham, Ceramic Science & Engineering, United Kingdom

HTCMC-12 Symposium 7- Materials for Extreme Environments – UHTCs, MAX phases, and nanolaminates

HTCMCS7- Novel processing methods for bulk, coatings, thin films, fibers, and/or composites

Room: Osprey

Session Chair: Diletta Scitti, CNR-ISSMC

8:30 AM

(HTCMC-S7-010-2026) Enhanced high temperature protective performance of hybrid composite fibers (Invited)

S. Moon*[1]; S. Yun[1]; W. Kim[2]

1. Korea Institute of Science and Technology, Republic of Korea
2. Korea Institute of Ceramic Engineering and Technology, Aerospace&Defense R&D Group, Republic of Korea

9:00 AM

(HTCMC-S7-012-2026) A novel processing route for near-net-shape Cf–ZrB_2 CMCs using 3D-printed fiber preforms

J. Park*[1,2]; H. Choi[1]; S. Lee[1]

1. Korea Institute of Materials Science, Extreme Materials Institute, Republic of Korea
2. Pusan National University, Republic of Korea

9:20 AM

(HTCMC-S7-013-2026) Kinetic study and reaction mechanisms of C/ZrC composite in molten chloride salt

A. El Melhoufi*[1]; L. Maillé[1]; J. Braun[1,2]; F. Rebillat[1]

1. University of Bordeaux - Laboratory for Thermostructural Composites (LCTS), UMR 5801, France
2. CEA, France

HTCMCS7- Processing-microstructure-property relationships of UHTCMCs

Room: Osprey

Session Chair: Jason Lonergan, Missouri University of Science and Technology

9:40 AM

(HTCMC-S7-014-2026) Recent advances on ceramic matrix composites obtained by sintering (Invited)

A. Vinci*[1]; L. Zoli[1]; M. Mor[1]; D. Sciti[1]

1. CNR - ISSMC, Italy

10:10 AM

Break

10:30 AM

(HTCMC-S7-015-2026) Investigation and modelling of the mechanical response of UHTCMC materials (Invited)

A. Airoldi*[1]; A. Caporale[1]; L. Zoli[2]; P. Galizia[2]; A. Vinci[2]; R. Savino[3]; D. Sciti[2]

1. Politecnico di Milano, Dept. of Aerospace Science and Technology, Italy
2. CNR - ISSMC, Italy
3. Universita degli Studi di Napoli Federico II, Italy

11:00 AM

(HTCMC-S7-016-2026) Effect of composition and fiber orientation on the thermal conductivity and emissivity of ultrahigh temperature ceramic matrix composites

E. S. Golightly*[1]; H. B. Schonfeld[1]; P. E. Hopkins[2]; D. Sciti[3]; A. Vinci[3]

1. University of Virginia, Mechanical and Aerospace Engineering, USA
2. University of Virginia, USA
3. CNR - ISSMC, Italy

HTCMC-12 Symposium 8- Testing and Evaluation of Ceramic Matrix Composites from Constituents and Coupons to Components, including EBCs

HTCMCS8- Mechanical characterization of ceramics and composites, techniques and equipment II

Room: Pelican

Session Chairs: Udayakumar Andi; Takuya Aoki, Japan Aerospace Exploration Agency

8:30 AM

(HTCMC-S8-010-2026) Real time X-ray tomography imaging of cracks initiation and propagation in CMCs above1000°C (Invited)

D. Liu*[1]

1. University of Oxford, Engineering Science, United Kingdom

9:00 AM

(HTCMC-S8-011-2026) Development of a fully articulated graphite flexure fixture for high temperature testing

W. M. Carty*[1,2]; J. Castle[1]; H. Lee[1]

1. New York State College of Ceramics at Alfred University, Ceramic Engineering, USA
2. Materials Research Furnaces, LLC, Research & Development, USA

9:20 AM

(HTCMC-S8-012-2026) Damage detection in heat-resistant composites using synchrotron radiation CT and deep learning-based image segmentation

H. Taniguchi*[1]; G. Okuma[2]; Y. Arai[1]; T. Tsunoura[3]; H. Tsuruta[3]; H. Kakisawa[2]; R. Inoue[1]

1. Tokyo Rika Daigaku, Japan
2. Busshitsu Zairyo Kenkyu Kiko, Japan
3. Kabushiki Kaisha IHI, Japan

9:40 AM

(HTCMC-S8-013-2026) Development of an experimental-numerical dialogue for the identification of a damage initiation threshold under combined loadings in a SiC/SiC CMC

V. Herbert*[2]; F. Laurin[2]; T. Archer[2]; A. DeBarre[2]; T. Vandellos[1]

1. SAFRAN Ceramics, France
2. DMAS, ONERA, Université Paris-Saclay, France

10:00 AM

Break

10:20 AM

(HTCMC-S8-031-2026) Radiation and h2 durable nuclear thermal propulsion fuel element mxene insulator (Invited)

J. H. Lalli*[1]

1. NanoSonic, Inc., USA

10:50 AM

(HTCMC-S8-015-2026) Mechanical behavior of a sandwich structure based on carbon fibers geopolymer matrix composites

D. Habans*[1]; P. Reynaud[1]; É. Prud'homme[1]; T. Cutard[2]; G. Dusserre[2]; G. Fantozzi[1]; N. Godin[1]

1. Institut National des Sciences Appliquees de Lyon, MATEIS, CNRS UMR5510, France
2. Ecole Nationale Superieure des Mines d'Albi-Carmaux, ICA, CNRS UMR5312, France

11:10 AM

(HTCMC-S8-016-2026) Ablation behavior of C_f/ZrB_2-SiC CMCs fabricated with high concentration slurry using an HVOF torch

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

1. Korea Institute of Materials Science, Extreme Materials Institute, Republic of Korea

11:30 AM

(HTCMC-S8-017-2026) Test for rapid assessment of interface coating performance

B. Callaway*[1]; J. Shaw[1]

1. Pratt & Whitney, USA

11:50 AM

(HTCMC-S8-018-2026) Automated fiber push in measurements for fiber coating evaluation in CMCs

A. Badran*[1]; E. Maillet[1]; G. Zorn[1]; Y. Zhou[1]

1. GE Aerospace Research, USA

HTCMC-12 Symposium 10- CMC Applications I – Aerospace Propulsion and Structures

HTCMCS10- Processing and Properties of CMCs for Aerospace Applications II

Room: Shorebreak 1

Session Chairs: Jon Binner, University of Birmingham; Marc Bouchez

8:30 AM

(HTCMC-S10-008-2026) Oxide ceramic matrix composites for aeronautical applications: Relationships between materials, processes, properties and thermomechanical behavior (Invited)

T. Cutard*[1]

1. Ecole Nationale Superieure des Mines d'Albi-Carmaux, Institut Clément Ader - UMR CNRS 5312, France

9:00 AM

(HTCMC-S10-009-2026) Advances in materials and processing for cost-effective, scalable Ox–Ox CMCs (Invited)

W. Simpson*[1,2]; E. Vargas[1,3]; K. Dincer[5]; M. G. Simpson[4]; S. Fast[4]; H. Yun[1]

1. Axiom Materials Inc, Research and Development, USA
2. University of California Irvine, Material Science & Engineering, USA
3. University of Southern California, Materials Science and Engineering, USA
4. 3M Company, Advanced Materials, USA
5. Axiom Materials Inc, Process Engineering, USA

9:30 AM

(HTCMC-S10-010-2026) Angle-dependent erosion and microstructural damage in oxide-oxide ceramic matrix composites and polycrystalline nickel alloy

A. Wright[4]; K. Young[3]; V. Heng[2]; A. Ghoshal*[1]

1. US Army Combat Capabilities Development Command Army Research Laboratory Aberdeen Proving Ground, USA
2. The Boeing Company Defense Space and Security Huntington Beach, USA
3. The Boeing Company, USA
4. SURVICE Engineering Company LLC, USA

9:50 AM

Break

HTCMCS10- Design and Testing of CMC Components for Aerospace Applications I

Room: Shorebreak 1

Session Chairs: Richard Jones, Pratt & Whitney; Jared Weaver, GE Aerospace

10:10 AM

(HTCMC-S10-011-2026) An overview of CMC application development at IHI (Invited)

F. Watanabe*[1]

1. Kabushiki Kaisha IHI, Japan

10:40 AM

(HTCMC-S10-012-2026) Development and industrial deployment of high-temperature CMC technologies in Korea (Invited)

H. Shin*[2]; K. Kim[2]; D. Im[1]

1. DACC Co Ltd, R&D Center, Republic of Korea
2. DACC Carbon Co., Ltd, Republic of Korea

11:10 AM

(HTCMC-S10-013-2026) CMCs for the aerospace market: Recent high-impact applications

L. Cavalli*[1]; Y. Akram[1]; M. Arnoldi[1]; M. Boiocchi[1]; M. Cantù[1]; F. Giacometti[1]

1. Petroceramics, Italy

11:30 AM

(HTCMC-S10-015-2026) Multidisciplinary approach to designing and validating CMC components, testing and simulation pyramid at SAFRAN (Invited)

S. Denneulin*[1]

1. Safran SA, CERAMICS, France

HTCMC-12 Symposium 11- CMC Applications II – Solar, Nuclear and Propulsion Systems

HTCMCS11- UHTC CMC materials

Room: Sandpiper D

Session Chair: Zbigniew Pedzich, AGH University of Krakow

8:30 AM

(HTCMC-S11-08-2026) Interface-engineered ceramic composites for extreme temperatures (Invited)

S. Ren*[1]

1. University of Maryland, USA

9:00 AM

(HTCMC-S11-010-2026) Novel ultra-high temperature ceramic matrix composites for high temperature applications (Invited)

P. Tatarko*[1]; H. Ünsal[1]; S. sahin.ates@tubitak.gov.tr[2]; F. Valenza[3]; R. Kumar[4]; I. Dlouhy[5]

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Department of Ceramics, Slovakia
2. Tubitak Marmara Arastirma Merkezi, Turkey
3. Istituto di Chimica della Materia Condensata e di Tecnologie per l'Energia Consiglio Nazionale delle Ricerche Sede di Genova, Italy
4. Indian Institute of Technology Madras, Metallurgical and Materials Engineering, India
5. Ustav fyziky materialu Akademie ved Ceske republiky, Czechia

HTCMCS11-Novel materials, processing, manufacturing, design, and qualification for energy applications

Room: Sandpiper D

Session Chair: Tatsuya Hinoki, Kyoto University

9:30 AM

(HTCMC-S11-027-2026) SiC as bulk ceramics for harsh environment applications (Invited)

P. Sajgalik*[1]; O. Hanzel[1]; M. Hicak[1]; A. Kovalcíkova[1]

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Ceramic Department, Slovakia

10:00 AM

Break

10:20 AM

(HTCMC-S11-011-2026) Reactive sintering of UHTC materials as a method for tailoring their composition and properties (Invited)

Z. Pedzich*[1]; D. D. Kozien[1]; W. Banas[1]; A. Gubernat[1]; A. Wojteczko[1]; E. Durda[2]; C. Balazsi[3]

1. AGH University of Krakow, Department of Ceramics and Refractory Materials, Poland
2. AGH University of Krakow, Department of Physical Chemistry and Modelling, Poland
3. Centre for Energy Research, Centre of Excellence of Hungarian Academy of Sciences, Hungary

10:50 AM

(HTCMC-S11-012-2026) Environmental barrier coatings based on rare earth silicates (Invited)

J. Maier*[1]; C. Eckardt[1]; J. Vogt[1]; A. Konschak[1]

1. Fraunhofer-Zentrum fur Hochtemperatur-Leichtbau HTL, Germany

11:20 AM

(HTCMC-S11-013-2026) The influence on used FAST techniques on microstructure and phase composition of reactively sintered UHTC materials (Invited)

D. D. Kozien*[1]; W. Banas[2]; D. Salamon[3]; P. Tatarko[4]; M. Hicak[4]; O. Hanzel[5]; K. Pasiut[1]; P. Nieroda[7]; Z. Pedzich[6]

1. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Department of Ceramics and Refractory Materials, Poland
2. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Department of Ceramics and Refractories, Poland
3. Central European Institute of Technology, Brno University of Technology, Czechia
4. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Department of Ceramics, Slovakia
5. Ustav anorganickej chemie Slovenska akademia vied, Slovakia
6. AGH University of Krakow, Department of Ceramics and Refractory Materials, Poland
7. AGH University of Krakow, Department of Inorganic Chemistry, Poland

11:50 AM

(HTCMC-S11-014-2026) Enhancement in the joining sections of nuclear cladding materials through the use of embedded wire chemical vapor deposition

S. P. Shuster*[1]

1. Free Form Fibers, USA

GFMAT-3 Symposium 1- Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

GFMATS1- Nanostructure and microstructure control

Room: Shorebreak 2

Session Chairs: Loredana Santo, Universita degli Studi di Roma Tor Vergata; Takashi Shirai, Nagoya Institute of Technology

1:30 PM

(GFMAT-S1-013-2026) Sintering of transparent nanocrystalline tetragonal zirconia without stabilizers (Invited)

M. Yoshida*[1]

1. Gifu Daigaku, Japan

2:00 PM

(GFMAT-S1-014-2026) Refining of ATZ mechanical properties by reactive sintering process (Invited)

Z. Pedzich*[1]; M. Grabowy[2]; A. Kluczowska[2]; M. Gromada[2]; D. D. Kozien[3]; W. Banas[3]

1. AGH University of Krakow, Department of Ceramics and Refractory Materials, Poland
2. Institute of Power Engineering - Research Institute, Ceramics Division Cerel, Poland
3. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Department of Ceramics and Refractory Materials, Poland

2:30 PM

(GFMAT-S1-015-2026) Improving dispersion of hollow silica nanoparticles in polymer composites via melt kneading

T. Ogiya*[1]; K. Ishii[1]; Y. Sato[2]; Y. Takagi[3]; M. Ishihara[1]; M. Fuji[1]

1. Nagoya Institute of Technology, Japan
2. Tokyo City University, Japan
3. Tokyo University of Science, Japan

2:50 PM

PPP- Reduced-order modeling of gas-solid flows with heat transfer via a frequency-based approach

GFMAT-3 Symposium 4- Crystalline Materials for Semiconductor, Optical/Scintillator and Dielectric Applications

GFMAT-S4- Scintillator

Room: Sandpiper C

Session Chairs: Kenji Toda, Niigata University; Ha-Neul Kim, Korea Institute of Materials Science

1:30 PM

(GFMAT-S4-015-2026) Development of halide ceramics processing methodologies to achieve transparency requirements for optical applications

T. Rudzik*[1]; N. Cherepy[2]; S. A. Payne[1]

1. Lawrence Livermore National Laboratory, USA
2. Lawrence Livermore National Lab, Chemistry and Materials Science, USA

1:50 PM

(GFMAT-S4-016-2026) Transparent ceramic scintillators fabricated into pixelated arrays via Direct-Ink-Write

A. Kostogiannes*[1]; N. Cherepy[1]; S. A. Payne[1]

1. Lawrence Livermore National Laboratory, Materials Science Department, USA

2:10 PM

(GFMAT-S4-017-2026) Garnet ceramics for radiation detection (Invited)

M. Müller*[1]

1. Radiation Monitoring Devices Inc, Ceramics, USA

2:40 PM

(GFMAT-S4-018-2026) $Y_{1-x}Tb_xTaO_4$ single crystals as scintillators for X-ray detection (Invited)

K. Shimamura*[1]; E. G. Víllora[1]; Y. Zhou[1]; D. Nakauchi[2]; T. Kato[2]; N. Kawaguchi[2]; T. Yanagida[3]

1. National Institute for Materials Science (NIMS), Japan
2. Nara Sentan Kagaku Gijutsu Daigakuin Daigaku, Japan
3. Nara Institute of Science and Technology, Japan

GFMAT-3 Symposium 6- Advanced Batteries and Supercapacitors for Energy Storage Applications

GFMATS6- Advanced Battery Materials

Room: Tidepool 1

Session Chair: Dany Carlier, Institut de Chimie de la Matiere Condensee de Bordeaux

1:30 PM

(GFMAT-S6-036-2026) Accelerating battery materials development with autonomous labs and AI: From disordered rocksalt cathodes to electrolytes

D. Seo*[1]

1. Korea Advanced Institute of Science and Engineering (KAIST), Daejeon, Republic of Korea

2:00 PM

(GFMAT-S6-015-2026) Safety assessment of lithium metal batteries: From reactive materials to advanced diagnostics (Invited)

M. Bertrand[1]; N. B. Johnson[2]; C. Saint-Antoine[1]; M. Dollé*[1]

1. Université de Montréal, Chemistry, Canada
2. Sandia National Laboratories, Power Sources R&D, USA

2:30 PM

(GFMAT-S6-016-2026) Defect-enginnered and practical lithium insertion materials for Li storage applications (Invited)

N. Yabuuchi*[1]

1. Yokohama National University, Japan

3:00 PM

PPP- Electrochemical performance of Silicon oxy-carbide (SiOC) in ionic liquids (ILs) for high temperature adaptable Li-ion batteries

HTCMC-12/GFMAT-3 Joint Symposium- Additive Manufacturing Technologies and Applications

HTCMC-GFMAT- Joint Sym- Integration of Artificial Intelligence

Room: Sandpiper B

Session Chair: Motoyuki Iijima, Yokohama National University

1:30 PM

(Joint Sym-015-2026) Predicting composite material properties from images using a multi-input deep learning framework (Invited)

M. Kim[1]; H. Choi*[1]

1. Chung-Ang University, Mechanical Engineering, Republic of Korea

2:00 PM

(Joint Sym-016-2026) Industrialising ceramic AM with artificial intelligence and automation

A. Hovsepyan*[1,2]; E. Louradour[1]; R. Gaignon[1]

1. 3DCeram Sinto, 3DCeram Sinto, USA
2. Additive Plus, USA

2:20 PM

(Joint Sym-017-2026) A domain-specialized AI agent for photopolymer composite AM: Process and material recommendation, optimization, feedback control

S. Han*[1]; L. Geonhwi[1]; H. Choi[1]

1. Chung-Ang University, Department of Mechanical Engineering, Republic of Korea

2:40 PM

(Joint Sym-019-2026) A review of Additive Manufacturing Technologies for designing polymer matrix composites (PMCs)

S. Gupta*[1]

1. University of North Dakota, Mechanical Engineering, USA

HTCMC-12 Symposium 3- Polymer Derived Ceramics and Composites

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics V

Room: Sandpiper A

Session Chairs: Matthew Dickerson, Air Force Research Laboratory; Kathy Lu, University of Alabama at Birmingham

1:30 PM

PPP- The effect of oxygen and excess carbon on the densification behavior of polycrystalline SiC fibers stabilized by electron beam irradiation

1:32 PM

(HTCMC-S3-015-2026) Wrinkled SiOC ceramic surfaces via UV–thermal dual curing of novel polysiloxane precursors

M. Sobczak*[1]; T. Li[1]; K. Song[1]

1. University of Georgia, Mechanical Engineering, USA

1:52 PM

(HTCMC-S3-016-2026) Light-driven transformations of polymers to ceramics (Invited)

R. Hickey*[1]; B. Stovall[1]; A. Katona[2]; T. Coutinho de Carvalho[1]; A. Ul Hosna[3]; A. van Duin[3,1]; J. Maria[1]; B. Lear[2]

1. The Pennsylvania State University, Materials Science and Engineering, USA
2. The Pennsylvania State University, Chemistry, USA
3. The Pennsylvania State University, Mechanical Engineering, USA

2:22 PM

(HTCMC-S3-017-2026) Formulation and filler effects on the printability and properties of polymer-derived ceramic lattices (Invited)

M. Jakubinek*[1]; H. Yazdani Sarvestani[2]; A. Kulkarni[2]; T. Lacelle[1]; C. Nojavan[2]; A. Robitaille[3]; B. Ashrafi[2]

1. National Research Council Canada, Division of Emerging Technologies, Canada
2. National Research Council Canada, Aerospace Research Centre, Canada
3. Defence Research and Development Canada, Valcartier Research Centre, Canada

HTCMC-12 Symposium 4- Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

HTCMCS4- SiC-based composites I

Room: Silver Pearl 1-3

Session Chair: Alex Leide, UKAEA

1:30 PM

(HTCMC-S4-016-2026) Material design of the novel metal-SiC hybrid composites (Invited)

T. Hinoki*[1]

1. Kyoto University, Japan

2:00 PM

(HTCMC-S4-017-2026) Advanced lightweight ceramic composites with short fiber reinforcement for aeronautical applications (Invited)

M. Bechelany*[1]; E. Bouillon[1]

1. Safran SA, Safran Ceramics, France

2:30 PM

(HTCMC-S4-018-2026) Development of SiC core material for LWR (Invited)

T. Nishimura*[1]; M. Ukai[1]; S. Suyama[2]; T. Takada[1]; S. Kuboya[1]; M. Akimoto[1]; R. Kojima[1]

1. Kabushiki Kaisha Toshiba, Japan
2. Toshiba Energy Systems & Solutions Corporation, Japan

HTCMC-12 Symposium 7- Materials for Extreme Environments – UHTCs, MAX phases, and nanolaminates

HTCMCS7- Response of UHTCs/UHTCMCs in Extreme Environments I

Room: Osprey

Session Chair: Elizabeth Golightly, University of Virginia

1:30 PM

(HTCMC-S7-018-2026) Aerothermal response of leading edge prototypes made of Pan or Pitch based Cf – reinforced UHTCs

D. Sciti*[4]; A. Vinci[4]; L. Zoli[4]; A. Airoldi[1]; A. Caporale[2]; M. De Stefano Fumo[3]

1. Politecnico di Milano, Dept. of Aerospace Science and Technology, Italy
2. Politecnico di Milano, Italy
3. Centro Italiano Ricerche Aerospaziali, Italy
4. Consiglio Nazionale delle Ricerche, Italy

1:50 PM

(HTCMC-S7-019-2026) High-enthalpy testing of UHTCMC leading edges under hypersonic flow conditions

L. Baier*[1]; M. Friess[1]; N. Hensch[1]; O. Hohn[1]; J. Schukraft[2]

1. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Germany
2. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Ceramic composites and Structures, Germany

2:10 PM

(HTCMC-S7-020-2026) High temperature ablation resistance of C_f/ZrC-SiC UHTCMCs formed by electrophoretic co-deposition

M. J. Ammendola*[1,2]; N. Tran[2]; C. Mosebey[3,2]; A. Ghoshal[2]; D. E. Wolfe[1]

1. The Pennsylvania State University, Materials Science and Engineering, USA
2. US Army Combat Capabilities Development Command Army Research Laboratory Aberdeen Proving Ground, USA
3. SURVICE Engineering Company LLC, USA

2:30 PM

(HTCMC-S7-021-2026) Surface erosion resistance of carbon fiber reinforced ultra-high-temperature ceramic matrix composites in harsh environments

A. Nishikawa*[1]; Y. Arai[1]; R. Inoue[1]

1. Tokyo University of Science, Japan

2:50 PM

PPP- Ultra-High Temperature (UHT) Processing of Refractory Metal Borides and Carbides at 2500°C

2:52 PM

PPP- Textured ZrB2 ceramics self-reinforced by aligned elongated grains via strong magnetic field alignment

HTCMC-12 Symposium 8- Testing and Evaluation of Ceramic Matrix Composites from Constituents and Coupons to Components, including EBCs

HTCMCS8- Environmental effects, thermo-mechanical creep, fatigue performance and tribology

Room: Pelican

Session Chairs: Ken Goto, Japan Aerospace Exploration Agency; George Jefferson, USAF

1:30 PM

(HTCMC-S8-019-2026) Retained strength of SiC/SiC CMC after exposure to combustion environment (Invited)

C. Smith*[1]; A. S. Almansour[2]; M. J. Presby[3]; R. I. Webster[1]

1. NASA Glenn Research Center, USA
2. NASA Glenn Research Center, Mechanical Engineering, USA
3. NASA Glenn Research Center, Environmental Effects and Coatings Branch, USA

2:00 PM

(HTCMC-S8-020-2026) Behaviour of SiC/SiC composites under thermomechanical stress combining flame and tensile testing

E. Perret[1]; A. Bernardot[1]; S. Denneulin*[2]; V. Herb[2]; J. Mateo[2]

1. Institut de Recherche Technologique Antoine de Saint-Exupery, Ceramix Matrix Composites Division, France
2. Safran SA, CERAMICS, France

2:20 PM

(HTCMC-S8-021-2026) Oxidation behavior through cracks of unidirectional ceramic composites in dry and wet air (Invited)

S. Kanazawa*[1]; F. W. Zok[2]

1. IHI Corporation, Japan
2. University of California Santa Barbara, USA

2:50 PM

(HTCMC-S8-022-2026) Demonstration of a new test method for evaluating fatigue crack growth in SiC fiber/SiC matrix composites at elevated temperatures in air

N. Ikegami*[1]; T. Ogasawara[1]; T. Aoki[2]

1. Tokyo Noko Daigaku - Koganei Campus, Japan
2. Japan Aerospace Exploration Agency, Advanced Composite Research Center, Institute of Aeronautical Technology, Japan

HTCMC-12 Symposium 10- CMC Applications I – Aerospace Propulsion and Structures

HTCMCS10- Design and Testing of CMC Components for Aerospace Applications II

Room: Shorebreak 1

Session Chairs: Jared Weaver, GE Aerospace; Richard Jones, Pratt & Whitney

1:30 PM

(HTCMC-S10-014-2026) CMCs components development for aero-turbine, in Safran (Invited)

E. Bouillon*[1]

1. Safran SA, Safran Ceramics, France

2:00 PM

(HTCMC-S10-016-2026) CMC turbine vane subelement testing and validation (Invited)

K. Rugg*[1]

1. Pratt and Whitney, USA

HTCMC-12 Symposium 11- CMC Applications II – Solar, Nuclear and Propulsion Systems

HTCMCS11- SiC CMC for nuclear applications I

Room: Sandpiper D

Session Chair: Peter Tatarko, Institute of Inorganic Chemistry, Slovak Academy of Sciences

1:30 PM

(HTCMC-S11-015-2026) Development of SiGA® Silicon Carbide Composite Cladding Technology for the Light Water Reactor Fleet (Invited)

S. Gonderman*[1]; S. Oswald[1]; L. Borowski[1]; A. Giles[1]; W. Mcmahon[1]; R. Haefelfinger[1]; D. Kuebler[1]; L. Hunter[1]; A. Moore[1]; G. Lovelace[1]; A. Langevin[1]; A. Sathrum[1]; C. Deck[1]; G. Jacobsen[1]; H. Khalifa[1]

1. General Atomics Electromagnetic Systems Group, Nuclear Technologies and Materials, USA

2:00 PM

(HTCMC-S11-016-2026) Metal/SiC interactions in SiC/SiC composites: Diffusion-driven reaction kinetics and implications for Generation IV reactor applications

F. Bourlet*[1]; C. Lorrette[1]

1. Commissariat a l'energie atomique et aux energies alternatives Siege administratif, France

2:20 PM

(HTCMC-S11-017-2026) Mechanical characterization and scaling of SiC composite nuclear fuel cladding

J. Quan*[1]; S. Gonderman[1]; R. Haefelfinger[1]; S. Oswald[1]; L. Borowski[1]; A. Giles[1]; G. Jacobsen[1]; H. Khalifa[1]

1. General Atomics Electromagnetic Systems Group, NTM, USA

2:40 PM

(HTCMC-S11-018-2026) Irradiation effect on onstituents of SiC composites

T. Hinoki*[1]; Y. Zhong[1]; J. Lee[1]; S. Kondo[2]

1. Kyoto University, Japan
2. Tohoku University, Institute for Materials Research, Japan

3:00 PM

PPP- Irradiation-condition dependence of heavy-ion-induced flow for surface damage recovery in oxide ceramics

3:02 PM

Break

3:20 PM

Global Industry Leaders' Roundtable

Silver Pearl 1- 3

Posters

Room: Corals Ballroom 3, 4, 5

5:30 PM

(Poster001-2026) Design of multi-elemental oxides for thermal barrier coatings using first-principles molecular dynamics and machine learning potential

R. Masuda*[1]; T. Kurata[1]; R. Inoue[1]; Y. Kogo[1]; Y. Arai[1]

1. Tokyo Rika Daigaku, Japan

(Poster002-2026) Advanced manufacturing of ceramic materials via novel compositions

M. Sobczak*[1]; T. Li[1]; D. Patil[1]; A. Ramanathan[1]; S. Thummalapalli[1]; K. Song[1]

1. University of Georgia, Mechanical Engineering, USA

(Poster003-2026) Controlling cracking behavior of preceramic polymers via manipulation of gelation conditions

I. Fisher*[1]; J. Wiggins[2]

1. University of Southern Mississippi, USA
2. University of Southern Mississippi College of Arts and Science, Polymer Science and Engineering, USA

(Poster004-2026) The effect of oxygen and excess carbon on the densification behavior of polycrystalline SiC fibers stabilized by electron beam irradiation

WITHDRAWN

H. Lee*[1,2]; T. Kim[1,2]; Y. Jeong[2]; K. Choi[1]; J. Joo[2]

1. Korea Institute of Ceramic Engineering and Technology, Republic of Korea
2. Pusan National University College of Engineering, Republic of Korea

(Poster005-2026) Thermal and radiative heat transport in $Gd_2Zr_2O_7$ for thermal barrier coating applications: A first-principles study

WITHDRAWN

M. Harish*[1]; T. Jamithlu[1]

1. Indian Institute of Technology Bombay, Energy Science and Engineering, India

(Poster007-2026) Scale-dependent Tg in amorphous PEKK nanocomposites from structural and thermomechanical analysis

C. R. Dixon*[1]; J. Wiggins[2]

1. University of Southern Mississippi, Polymer Science and Engineering, USA
2. University of Southern Mississippi College of Arts and Science, Polymer Science and Engineering, USA

(Poster008-2026) Oxygen flow rate as a parameter for UHTC's oxidation behaviour under oxyacetylene flame

R. Beringue*[1]; S. Zaoui[1]; L. Maillé[1]; J. Braun[1,2]; F. Rebillat[1]

1. Laboratoire des Composites Thermostructuraux, France
2. Commissariat a l'energie atomique et aux energies alternatives Direction des applications militaires Le Ripault, France

(Poster010-2026) Effects of filler composition on the joint properties of SiC joined by Si-C reaction bonding

S. Park*[1]; S. Joo[1]; J. Jung[1]; S. Bang[1]; D. Yoon[1]

1. Yeungnam University, School of Materials Science and Engineering, Republic of Korea

(Poster011-2026) Irradiation-condition dependence of heavy-ion-induced flow for surface damage recovery in oxide ceramics

T. Miyagishi*[1,2]; S. Kondo[2]; Y. Ogino[2]; K. Yabuuchi[2]; M. Park[2]; H. Yu[2]; A. Hasegawa[2]; R. Kasada[2]

1. Tohoku University, Grauate School of Engineering, Japan
2. Tohoku University, Institute for Materials Research, Japan

(Poster012-2026) Degradation of mechanical properties of single-crystal 8YSZ – Effects of point defects from reduction treatment in vacuum at high temperature –

N. Baba*[1]; J. Tatami[1]; T. Ohji[1]; M. Iijima[1]; T. Takahashi[2]; H. Nakano[3]; D. Mlnami[2]; K. Matsui[1]

1. Yokohama Kokuritsu Daigaku, Japan
2. Chiho Dokuritsu Gyosei Hojin Kanagawa Kenritsu Sangyo Gijutsu Sogo Kenkyujo, Japan
3. Toyohashi Gijutsu Kagaku Daigaku, Japan

(Poster013-2026) In-situ OCT visualization of internal structure evolution in alumina slip casting: Roles of mold geometry and dispersant content

A. Honda*[1]; J. Tatami[1]; M. Iijima[2]

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

(Poster014-2026) Reduced-order modeling of gas-solid flows with heat transfer via a frequency-based approach

M. T. Castro*[1]; S. Li[1]; H. Imai[1]; K. Yang[1]; T. Imatani[1]; M. Sakai[1]

1. Tokyo Daigaku, Department of Nulear Engineering and Management, Japan

(Poster015-2026) Synthesis of Na-A zeolites from coal residual fractions for agronomic application as slow-release ammonium carriers

WITHDRAWN

E. F. Olivo*[1,2]; M. d. Pereira[1,2]; C. Borgert[3]; J. Acordi[1]; V. Ribeiro[4]; R. B. Santos[5]; F. Raupp-Pereira[1]

1. Universidade do Extremo Sul Catarinense, Graduate program in materials science and engineering, Brazil
2. Instituto Politecnico de Viana do Castelo, Master's program in Mechanical Engineering, Energy and Materials, Portugal
3. Universidade Federal de Santa Catarina, Graduate Program in Chemical Engineering (PósENQ), Brazil
4. Instituto Politecnico de Viana do Castelo, Materials, Energy and Environment for Sustainability, Portugal
5. Universidade de Ribeirao Preto, Postgraduate Program in Environmental Technology, Brazil

(Poster016-2026) Fabrication and structural analyses of $Hf_xZr_{1-x}O_2$ gate insulators by chemical slution deposition method

R. Takemoto*[1]; T. Nakazawa[1]; H. Takese[1]; M. Kikuchi[1]; Y. Hirofuji[1]; K. Koike[1]; N. Hiroshiba[1]

1. Osaka Kogyo Daigaku Nano Zairyo Microdevice Kenkyu Center, Japan

(Poster017-2026) Electrochemical performance of Silicon oxy-carbide (SiOC) in ionic liquids (ILs) for high temperature adaptable Li-ion batteries

M. Hossain*[1]; D. Soares[1]

1. Wichita State University, Electrical and Computer Engineering, USA

(Poster018-2026) Grain-scale fracture resistance in silicon nitride ceramics measured using microcantilever specimens

T. Saito*[2]; T. Ohji[2]; T. Takahashi[1]; M. Iijima[2]; J. Tatami[2]

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

(Poster020-2026) Three-dimensional continuum damage-based constitutive model for C/C–SiC composites fabricated via liquid silicon infiltration

M. Zered*[1]; A. Bikbulatov[1]; R. Padan[1]; E. Levin[2]; R. Haj-Ali[1]

1. Tel Aviv University, Israel
2. Rafael Advanced Defense Systems Ltd, Israel

(Poster021-2026) In-situ high-temperature fracture behavior of polymer-derived SiC fibers under thermal shock in air

Y. Joo*[1]; K. Cho[1]; H. Lee[1]

1. Korea Institute of Ceramic Engineering and Technology, Aerospace&Defense Research Group, Republic of Korea

(Poster022-2026) Development of reaction bonded alumina short fiber reinforced oxide ceramic matrix composites based on an injection molding process

A. Gramsch*[1]; J. H. Stiller[1]; K. Roder[1]; D. Nestler[1]; L. Kroll[1]

1. Technische Universitat Chemnitz Fakultat fur Maschinenbau, Department of Lightweight Structures, Germany

(Poster023-2026) New alumina matrix for high performance oxide CMC

J. Fourcade*[1]; L. Marra[1]; I. Metzger[1]

1. Baikowski SAS, France

(Poster024-2026) Textured ZrB_2 ceramics self-reinforced by aligned elongated grains via strong magnetic field alignment

C. Zhibo*[1]; O. Vasylkiv[1]; M. Estili[2]; T. S. Suzuki[3]

1. Busshitsu Zairyo Kenkyu Kiko, Research Center for Electronic and Optical Materials, Japan
2. National Institute for Materials Science (NIMS), Advanced Ceramics Group, Japan
3. National Institute for Materials Science, Optical Ceramics Group, Japan

(Poster025-2026) Ultra-high temperature (UHT) processing of refractory metal borides and carbides at 2500°C

L. Sandoval*[1]; S. Shantha-Kumar[2]; A. Bronson[2]

1. California State University Long Beach, USA
2. The University of Texas at El Paso College of Engineering, Aerospace and Mechanical Engineering, USA

(Poster026-2026) Ablation behavior of ZrB_2-SiC composites: Evaluation of bulk and joined materials

W. Tak*[1]; W. Kim[1]; Y. Joo[1]; K. Cho[1]

1. Korea Institute of Ceramic Engineering and Technology, Aerospace&Defense Research Group, Republic of Korea

(Poster027-2026) In-SEM single-fiber-push-out tests of ceramic matrix composites – Fiber-matrix-bonding distribution within a whole fiber bundle

N. Langhof*[1]; F. Wich[1]; P. Springer Simonova[1]; S. Schafföner[1]

1. Universitat Bayreuth, Chair of Ceramic Materials Engineering, Germany

(Poster028-2026) Accessing the high-temperature thermophysical and mechanical properties of C/C-SiC materials with varying fiber volume contents up to 1350 °C

F. Wich*[1]; F. Ebrahimi[1]; N. Langhof[1]; S. Schafföner[1]

1. Universitat Bayreuth, Ceramic Materials Engineering, Germany

(Poster029-2026) Diffusion-Induced grain boundary migration during sintering of a Gd_2O_3–ZrO_2 composite for burnable absorber application in small modular reactors

S. Jeon*[1]; Y. Kim[1]; H. Gu[1]; A. Park[1]; S. Ha[2]; Y. Na[2]; K. Lim[2]

1. Changwon National University, Materials Science and Engineering, Republic of Korea
2. KEPCO NF, Republic of Korea

(Poster030-2026) Irradiation test of neutron absorber pellets for control rod of light water reactors

J. Yang*[1]; D. Kim[1]; D. Kim[1]; K. Lim[2]

1. Korea Atomic Energy Research Institute, Republic of Korea
2. KEPCO NF, Republic of Korea

(Poster031-2026) Synthesis and photocatalytic activity of TiO_2 nanoparticles for the degradation of the drug N-(4-hydroxyphenyl)ethanamide (paracetamol)

M. d. Pereira*[2]; E. F. Olivo[2]; F. Raupp-Pereira[1]; M. Ribeiro[3]; A. M. Bernardin[2]

1. Universidade do Extremo Sul Catarinense, Brazil
2. Universidade do Extremo Sul Catarinense, Graduate program in materials science and engineering, Brazil
3. Instituto Politecnico de Viana do Castelo, Portugal

(Poster032-2026) Thermal analyses of zeolite/polylactide filaments for additive manufacturing of the flowing islands

M. T. Sitarz*[1]; J. Marchewka[2]

1. AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Poland
2. Akademia Gorniczo-Hutnicza im Stanislawa Staszica w Krakowie, Faculty of Materials Science and Ceramics, Poland

(Poster033-2026) The development status of SiC heating elements in Korea

Y. Seong*[1]; I. Han[1]; D. Seo[1]; H. Hwang[1]; S. Lee[1]; S. Kim[1]; S. Kim[1]; H. Bang[1]

1. Korea Institute of Energy Research, Republic of Korea

(Poster035-2026) Dielectric and magnetic properties of the FE-$Y_2DyFe_5O_{12}$ ceramic composites

D. Brzezinska*[1]; D. Bochenek[1]; M. Zubko[1]; A. Chrobak[1]

1. University of Silesia in Katowice, Faculty of Science and Technology, Institute of Materials Engineering, Poland

(Poster036-2026) Fabrication and mid-infrared optical properties of transparent Er:Sc_2O_3 ceramics

Z. Xu[2,1]; H. Furuse*[1]; T. S. Suzuki[1,2]

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

(Poster037-2026) Influence of rare-earth elements on the functional properties of BZT–BCT ceramics

J. Makowska*[1]; M. Adamczyk-Habrajska[1]; B. Wodecka-Dus[1]

1. Uniwersytet Slaski w Katowicach, Poland

(Poster038-2026) Technology and properties of multi-component multiferroic ceramic composites PMN-PT-PS-Ferrite

D. Bochenek*[1]; D. Brzezinska[1]; M. Zubko[1]; A. Chrobak[1]

1. University of Silesia in Katowice, Faculty of Science and Technology, Institute of Materials Engineering, Poland

(Poster039-2026) Synthesis, microstructural evolution and dielectric properties of BLT ceramics modified with a special glass admixture

B. Wodecka-Dus*[1]; J. Makowska[1]; M. Adamczyk-Habrajska[1]

1. Uniwersytet Slaski w Katowicach, Faculty of Science and Technology, Poland

(Poster040-2026) Interfacial control for accelerating charge transfer in secondary batteries

T. Teranishi*[1,2]; A. Kishimoto[1]

1. Okayama University, Japan
2. Insitute of Science Tokyo, Japan

(Poster041-2026) Effect of E-Glass Powder Addition on Characteristics of Blast Furnace Slag-Based Glass Marbles

J. Lee*[1]

1. Korea Institute of Ceramic Engineering and Technology (KICET), Republic of Korea

(Poster042-2026) Chemical robustness of aqueous quasi-solid-electrolyte (3D-SLISE) and their batteries

Y. Shiratori*[1]; S. Yasui[1]

1. Tokyo Kagaku Daigaku, Japan

Wednesday, June 3, 2026

GFMAT-3 Symposium 1- Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

GFMATS1- Low-cost and energy-saving processing of advanced ceramics and ceramic composites, including smart recycling of materials for sustainable development

Room: Shorebreak 2

Session Chairs: Takamasa Mori, Hosei Daigaku Seimei Kagakubu; Wenwu Xu, San Diego State University

8:40 AM

(GFMAT-S1-017-2026) Development of functional materials using interfacial reaction fields by powder technology (Invited)

T. Shirai*[1]

1. Nagoya Kogyo Daigaku, Advanced Ceramics Research Center, Japan

9:10 AM

(GFMAT-S1-018-2026) Reaction sintering synthesis of tungsten tetraboride at relevant scale via electric field assisted sintering

A. Preston*[1]; J. Rufner[2]

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

GFMATS1- Particle dispersion control in liquid or polymers

Room: Shorebreak 2

Session Chairs: Koji Morita, National Institute for Materials Science (NIMS); Arin Preston, Idaho National Laboratory

9:30 AM

(GFMAT-S1-019-2026) Dispersion of conductive nanomaterials in structural adhesives for easy disassembly using high-voltage electrical pulses (Invited)

H. Kamiya*[2,1]; M. Inutsuka[2]; K. Matsuo[3]; Y. Okada[4]; S. Yamashita[4,5]; M. Kubo[6]; T. Saito[6]; C. Tokoro[2]

1. Tokyo University of Agriculture and Technology, Institute of Engineering, Japan
2. Waseda University, Japan
3. Waseda Daigaku Riko Gakujutsuin, Japan
4. Institute of Agriculture, Japan
5. Tokyo Noko Daigaku, Japan
6. Tohoku Daigaku, Japan

10:00 AM

Break

10:20 AM

(GFMAT-S1-020-2026) Do slurries decide density?— Flow or packing: What really controls it? — (Invited)

T. Mori*[1]

1. Hosei Daigaku Seimei Kagakubu, Japan

10:50 AM

(GFMAT-S1-021-2026) Structural and physical property evaluation of multi-component slurries for sheet-forming processes

K. Kitamura*[1,2]; T. Mori[3,2]

1. Hosei Daigaku, Chemical Science and Technology, Japan
2. Hosei Daigaku, Hosei University Research Institute for Slurry Engineering, Japan
3. Hosei Daigaku Seimei Kagakubu, Japan

11:10 AM

(GFMAT-S1-022-2026) Hollow silica nanoparticle-polymer composite films and their thermal insulation properties

K. Ishii*[1]; Y. Yoshida[1]; R. Ichihara[1]; M. Fuji[1]

1. Nagoya Institute of Technology, Japan

GFMAT-3 Symposium 6- Advanced Batteries and Supercapacitors for Energy Storage Applications

GFMATS6- All-solid-state Batteries I

Room: Tidepool 1

Session Chairs: Saneyuki Ohno, Kyushu Daigaku; Kentaro Yamamoto, Nara Women's University

8:30 AM

(GFMAT-S6-017-2026) NASICON-based materials: A wonderful "crystal-chemistry" playground (Invited)

J. Chotard*[3]; N. Subash[3]; P. Cabelguen[1]; F. Fauth[2]; C. Masquelier[3]

1. Umicore, Belgium
2. CELLS-ALBA Synchrotron, Spain
3. Laboratoire Reactivite et Chimie des Solides, France

9:00 AM

(GFMAT-S6-018-2026) Comprehensive safety evaluation of solid-state batteries compared to lithium-ion (Invited)

N. B. Johnson*[1]

1. Sandia National Laboratories, Power Sources R&D, USA

9:30 AM

(GFMAT-S6-019-2026) Challenges of transport limitations in solid-state Li–S batteries (Invited)

S. Ohno*[1]

1. Tohoku Daigaku, Institute of Multidisciplinary Research for Advanced Materials, Japan

10:00 AM

Break

10:20 AM

(GFMAT-S6-020-2026) Mechanisms of ion-transport and interfacial stability in argyrodite electrolytes for solid-state lithium batteries (Invited)

B. Narayanan*[1]; V. Shreyas[1]; S. Gupta[1]

1. University of Louisville, Mechanical Engineering, USA

10:50 AM

(GFMAT-S6-021-2026) Interface design for all-solid-state lithium metal batteries operable at room temperature and low pressure (Invited) *WITHDRAWN*

W. Zhang*[1]

1. Nanyang Technological University, Electrical and Electronic Engineering, Singapore

11:20 AM

(GFMAT-S6-022-2026) How can glass help us to discover new materials

C. Chenier*[1]; M. Serhane[1]; D. Chartrand[1]; G. Foran[1]; S. Rousselot[1]; M. Dollé[1]

1. Universite de Montreal, Chemistry, Canada

GFMAT-3 Symposium 10- Materials Recycling for Energy and Environment Applications

GFMATS10- Disassembly and recycling solutions for end-of-life batteries, fuel cells

Room: Sandpiper C

Session Chairs: Kenta Iyoki, Tokyo Daigaku Daigakuin Shinryoiki Sosei Kagaku Kenkyuka; Asako Narita, Waseda University; Surojit Gupta, University of North Dakota

8:30 AM

(GFMAT-S10-001-2026) Sustainable synthesis of zeolites and their applications (Invited)

K. Iyoki*[1]

1. Tokyo Daigaku Daigakuin Shinryoiki Sosei Kagaku Kenkyuka, Environment Systems, Japan

9:00 AM

(GFMAT-S10-002-2026) Separation of lithium-ion batteries from small appliances using high-voltage electrical pulses - aiming for both safety and resource circulation -

A. Narita*[3]; T. Kirihara[1]; C. Tokoro[3,2]

1. Waseda Daigaku, Graduate School of Creative Science and Engineering, Japan
2. Tokyo Daigaku, Faculty of Engineering, Japan
3. Waseda Daigaku Riko Gakujutsuin, Japan

9:20 AM

(GFMAT-S10-003-2026) Recovery of carbon fibers from unidirectional CFRP laminates using direct electrical pulsed discharge

K. Sato*[1]; M. Inutsuka[2]; C. Tokoro[3]

1. Waseda Daigaku, Graduate School of Creative Science and Engineering, Japan
2. Waseda Daigaku, Waseda Center for a Carbon Neutral Society, Japan
3. Waseda Daigaku, Faculty of Science and Engineering, Japan

GFMATS10- Life cycle analysis and techno-economic analysis of the technologies

Room: Sandpiper C

Session Chair: Motoyuki Iijima, Yokohama National University

9:40 AM

(GFMAT-S10-016-2026) Design and development of next generation biomass based recycling technologies

S. Gupta*[1]

1. University of North Dakota, Mechanical Engineering, USA

10:00 AM

Break

10:20 AM

(GFMAT-S10-005-2026) Improving high temperature ceramic composites for sustainable energy applications

G. Kimotho*[1]

1. University of Nairobi, Research, Kenya

10:40 AM

(GFMAT-S10-006-2026) LCA driven recycling of yttrium disilicate: Towards a circular economy for environmental barrier coatings

C. Augeard*[1,2]; G. Sonnemann[2]; C. Aymonier[1]

1. Institut de Chimie de la Matiere Condensee de Bordeaux, France
2. Institut des Sciences Moleculaires, CyVi, France

11:00 AM

(GFMAT-S10-007-2026) Fabrication and detailed study of novel MoAlB/Cr2AlC waste glass composites (Invited)

M. Dey*[1]; E. Sofowora[2]; E. Oloo[1]; J. Zhang[1]; S. Gupta[1]

1. University of North Dakota, Mechanical Engineering, USA
2. University of North Dakota, Chemical Engineering, USA

11:30 AM

(GFMAT-S10-008-2026) Effect of multi-directional fiber architecture on the microstructure and mechanical properties of C_f-SiC_m composites

S. Roy*[1]; A. Mahato[2]; S. Mondal[1]; M. Thangarasu[1]; S. K. Sahoo[1]; A. Meena[1]

1. Indian Institute of Technology Kharagpur, Materials Science Center, India
2. Indian Institute of Technology Kharagpur, School of Nanoscience and Technology, India

Young Professionals Forum

HTCMC-GFMAT- YPF- Ceramic-Based Composites I

Room: Sandpiper B

Session Chairs: Nico Langhof, University of Bayreuth; Dong Liu, University of Oxford

8:30 AM

(YPF-001-2026) Thermoset injection molding as shaping possibility for C/C-SiC production (Invited)

J. H. Stiller*[1]; D. Nestler[1]; L. Kroll[1]

1. Technische Universitat Chemnitz Fakultat fur Maschinenbau, Department of Lightweight Structures, Germany

9:00 AM

(YPF-002-2026) The detrimental role of the fiber volume content in reactive melt infiltrated C/C-SiC Processing–Microstructure–Property correlations (Invited)

F. Wich*[1]; F. Ebrahimi[1]; N. Langhof[1]; S. Schafföner[1]

1. University of Bayreuth, Chair of Ceramic Materials Engineering, Germany

9:30 AM

(YPF-003-2026) Silica-carboxymethyl cellulose macrobeads as scalable templates for metal–organic framework growth (Invited)

P. K. Kimani*[1]; C. Takai-Yamashita[1,2]; M. Fuji[1]

1. Nagoya Kogyo Daigaku, Advanced Ceramics Research Institute, Japan
2. Tohoku Daigaku, Institute of Multidisciplinary Research for Advanced Materials, Japan

10:00 AM

Break

HTCM-GFMAT-YPF- Ceramic-Based Composites II

Room: Sandpiper B

Session Chair: Meelad Ranaiefar, NASA Glenn Research Center

10:20 AM

(YPF-004-2026) Prepreg-based oxide fiber composites – Processing influences, repeatability, and properties (Invited)

G. Puchas*[1]; L. Wagner[1]; F. Lindner[1]; A. Held[1]; S. Schafföner[1]; W. Krenkel[1]

1. University of Bayreuth, Chair of Ceramic Materials Engineering, Germany

10:50 AM

(YPF-005-2026) Manufacturing and application of HTCMCs for space application at the German Aerospace Center (DLR) (Invited)

L. Baier[2]; I. Petkov[2]; T. Reimer[1]; G. Di Martino[1]; C. Rauh[1]; D. Hargarten[3]; A. Gülhan[4]; H. Weihs[1]; J. Schukraft*[2]

1. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Space System Integration, Germany
2. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Ceramic Composites and Structures, Germany
3. Deutsches Zentrum fur Luft- und Raumfahrt DLR, MORABA, Germany
4. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Supersonic and Hypersonic Technologies, Germany

11:20 AM

(YPF-006-2026) Ceramic to metal joining for high temperature oxygen separation applications (Invited)

S. De La Pierre*[1]; P. Fedeli[2]; F. Smeacetto[1]; F. Drago[2]; M. Ferraris[1]

1. Politecnico di Torino, DISAT, Italy
2. Ricerca sul Sistema Energetico RSE SpA, Italy

HTCMC-12 Symposium 3- Polymer Derived Ceramics and Composites

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics VI

Room: Sandpiper A

Session Chairs: Matthew Dickerson, Air Force Research Laboratory; Timothy Pruyn, Air Force Research Laboratory

8:30 AM

(HTCMC-S3-018-2026) Structure modification of preceramic polymer grafted nanoparticles for tunable preceramic processability and polymer derived ceramic composition (Invited)

J. Ponder*[1]; A. Advincula[1]; J. Zackasee[1]; J. Delcamp[2]; T. Pruyn[2]; M. B. Dickerson[2]

1. AV Inc., USA
2. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

9:00 AM

(HTCMC-S3-019-2026) Multi-step kinetic modeling of polysilazane pyrolysis *WITHDRAWN*

J. Fischer*[1]; R. Walker[1]; J. Efferson[2]; D. Gilmer[1]

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

9:20 AM

(HTCMC-S3-020-2026) Design of tailored polymeric precursors enabling high-performance UHTCs via the PIP route

J. So*[1]; K. Lee[1]; H. Hwang[1]; J. Choi[1]; S. Lee[1]

1. Korea Institute of Materials Science, Republic of Korea

9:40 AM

(HTCMC-S3-021-2026) Evolution of C/SiC fiber/matrix microstructure under field-assisted sintering technique (FAST)

S. Kusdono*[1]; S. Nutt[1]

1. University of Southern California, Mork Department of Materials Science and Chemical Engineering, USA

10:00 AM

Break

10:20 AM

(HTCMC-S3-022-2026) Processing and performance of fiber-reinforced polymer-derived CMCs for harsh environment applications

A. Moore*[1]; G. Lovelace[1]; L. Hunter[1]; A. Langevin[1]; J. Hepp[1]; J. Williams[1]; A. Sathrum[1]; I. Ivanov[1]; N. Pacheco[1]; C. Deck[1]; H. Khalifa[1]

1. General Atomics Electromagnetic Systems Group, NTM, USA

10:40 AM

(HTCMC-S3-023-2026) Microstructural and defect evolution in polytitanoxane-derived titanium carbide systems for next-generation CMCs *WITHDRAWN*

K. Y. Wickramathilaka*[1]; S. L. Suib[1]

1. University of Connecticut, USA

HTCMCS3- Preceramic Polymers and Polymer-Derived Ceramics VII

Room: Sandpiper A

Session Chairs: Timothy Pruyn, Air Force Research Laboratory; Jordan Zackasee, Air Force Research Laboratory

11:00 AM

(HTCMC-S3-024-2026) Process parameters – mechanical properties relationships for metakaolin geopolymers used in continuous fiber composites and chemical foams

D. Habans*[1]; É. Prud'homme[1]; P. Reynaud[1]; T. Cutard[2]; G. Dusserre[2]; G. Fantozzi[1]

1. Institut National des Sciences Appliquees de Lyon, MATEIS, France
2. Ecole Nationale Superieure des Mines d'Albi-Carmaux, ICA, CNRS UMR5312, France

11:20 AM

(HTCMC-S3-025-2026) Radio frequency transparent materials based on geopolymers *WITHDRAWN*

A. El Khomsi*[1]; A. Gharzouni[1]; E. Martinod[2]; S. Rossignol[1]

1. Institut de Recherche sur les Ceramiques, UMR-CNRS-7315, France
2. XLIM - UMR CNRS 7252, France

11:40 AM

(HTCMC-S3-026-2026) The effect of dopants and controlled cooling rates on solar thermal properties of fayalitic slags

G. Alkan*[3]; P. Mechnich[3]; D. Schneider[2]; F. Flucht[3]; B. Kölsch[1]; B. Friedrich[2]

1. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Germany
2. Rheinisch-Westfalische Technische Hochschule Aachen, Germany
3. DLR - German Aerospace Center, Institute of Frontier Materials on Earth and in Space, Germany

HTCMC-12 Symposium 4- Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

HTCMCS4- SiC-based composites II

Room: Silver Pearl 1

Session Chair: Sea-Hoon Lee, Korea Institute of Materials Science

8:30 AM

(HTCMC-S4-019-2026) C/C-SiC sandwich structures for optical benches (Invited)

B. Heidenreich*[1]; D. Boban[2]; O. Simane[2]; M. Berrill[3]

1. German Aerospace Center, Germany
2. Thales Alenia Space Cannes la Bocca, France
3. European Space Research and Technology Centre, Netherlands

9:00 AM

(HTCMC-S4-020-2026) Deposition of porous carbon via C_xH_y-based CVD for liquid silicon infiltrated SiC_f/SiC composites

D. Kim*[1]; J. Lee[1,2]; W. Kim[3]

1. Korea Atomic Energy Research Institute, Materials Safety Technology Research Division, Republic of Korea
2. Hanyang University, Republic of Korea
3. Korea Atomic Energy Research Institute, Republic of Korea

9:20 AM

(HTCMC-S4-021-2026) Advanced manufacturing and characterization of high-purity, stress-free SiC/SiC CMCs for high-temperature applications

A. Palumbo*[1]; L. Montgomery[1]; W. Fischer III[1]

1. Advanced Silicon Carbide Materials, USA

9:40 AM

(HTCMC-S4-022-2026) Matrix development for non-oxide ceramic matrix composites based on the weak matrix concept

G. Puchas*[1]; F. Schwedler[1]; L. Wagner[1]; S. Schafföner[1]

1. University of Bayreuth, Chair of Ceramic Materials Engineering, Germany

10:00 AM

Break

HTCMCS4- Advanced processing and manufacturing technologies II

Room: Silver Pearl 1

Session Chair: Seyoung Kim, Korea Institute of Energy Research

10:20 AM

(HTCMC-S4-023-2026) Advanced CVI procession of next-generation high-temperature composite structures (Invited)

V. Papageorgiou*[1]; N. Djordjevic[1]; H. Strakov[1]

1. IHI Bernex AG, Switzerland

10:50 AM

(HTCMC-S4-024-2026) Development of high-temperature protective coatings for ceramic matrix composites using the aerosol deposition method (Invited)

M. Hasegawa*[1]

1. Yokohama National University, Graduate School of Engineering Science, Japan

HTCMC-12 Symposium 5- Advanced Thermal and Environmental Barrier Coating – Processing, Properties, and Applications

HTCMCS5- Ceramic Coatings

Room: Silver Pearl 2/3

Session Chair: Peter Mechnich, DLR - German Aerospace Center

8:30 AM

(HTCMC-S5-001-2026) Mechanisms of CMAS interactions with rare earth monosilicates (Invited)

E. Opila*[1]; C. Miller[1]

1. University of Virginia, USA

9:00 AM

(HTCMC-S5-002-2026) Enhanced CMAS resistance of EBCs using yttrium-silicon-iron oxide APS coating

C. Y. Guijosa Garcia*[1]; E. Garcia Granados[2]; P. Mechnich[1]; V. Venkatachalapathy[2]; S. Sampath[2]; U. Schulz[1]; R. Naraparaju[1]

1. DLR - German Aerospace Center, Institute of Materials Research, Germany
2. Stony Brook University, Center for Thermal Spray Research, USA

9:20 AM

(HTCMC-S5-003-2026) Microstructural and chemical analysis on multilayered sample with PDC coating for high temperature application

I. S. Nurak*[1]; A. Pundt[1]; Y. Eggeler[2]

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

9:40 AM

(HTCMC-S5-004-2026) Next-generation sol-gel protective coatings against high-temperature oxidation for aeronautic applications

B. Toury*[1]; L. Lager[3]; S. BENAYOUN[2]; J. Delfosse[3]; S. Senani - de Monredon[3]

1. Universite Claude Bernard Lyon 1, Laboratoire des Multimatériaux et Interfaces, France
2. école centrale de Lyon, France
3. Safran SA, France

10:00 AM

Break

10:20 AM

(HTCMC-S5-005-2026) Rapid assessment of the particle impact resistance of plasma-sprayed coatings for oxide/oxide ceramic matrix composites

P. Mechnich*[1]; G. Löhr[1]

1. DLR - German Aerospace Center, Institute of Frontier Materials on Earth and in Space, Germany

10:40 AM

(HTCMC-S5-006-2026) Deposition of ultra-high temperature ceramics by hybrid aerosol deposition (Invited)

K. Shinoda*[1]; T. Ghara[1]; T. Nagoshi[1]; S. Kuroda[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Core Manufacturing Technology Research Institute, Japan

HTCMCS5- Interface phenomena, adhesion and interfacial properties

Room: Silver Pearl 2/3

Session Chair: Peter Mechnich, DLR - German Aerospace Center

11:10 AM

(HTCMC-S5-007-2026) Mechanisms controlling the failure resistance of high entropy alloys to static and cyclic oxidation conditions (Invited)

J. Liu*[1]

1. University of Alberta, Canada

11:40 AM

(HTCMC-S5-008-2026) Evaluation techniques of interface toughness for environmental barrier coatings on ceramic matrix composites (Invited)

H. Kakisawa*[1]

1. Busshitsu Zairyo Kenkyu Kiko, Japan

HTCMC-12 Symposium 7- Materials for Extreme Environments – UHTCs, MAX phases, and nanolaminates

HTCMCS7- Processing-microstructure-property relationships of existing or new systems I

Room: Osprey

Session Chair: Yoonjoo Lee, Korea Institute of Ceramic Engineering and Technology

8:30 AM

(HTCMC-S7-022-2026) Mechanistic insights in shear, delamination and kinking in MAX phases (Invited)

M. Radovic*[1]; A. Srivastava[1]; M. Dujovic[1]; H. J. Rathod[1]; Z. Zhan[1]; S. Celik[1]

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

9:00 AM

(HTCMC-S7-023-2026) High-fidelity 3D microstructural characterization of ZrB_2 during hot-pressing

R. Swanson*[1]; M. Chapman[3]; Y. Zhou[2]; A. Hilmas[3]; L. M. Rueschhoff[4]; M. D. Uchic[3]; W. Fahrenholtz[2]; S. J. McCormack[1]

1. University of California Davis, Materials Science and Engineering, USA
2. Missouri University of Science & Technology, Materials Science and Engineering, USA
3. Air Force Research Laboratory Materials & Manufacturing Directorate, USA
4. Air Force Research Lab, Materials and Manufacturing Directorate, USA

9:20 AM

(HTCMC-S7-024-2026) Low-temperature synthesis of high purity ZrC with controlled carbon stoichiometry

H. Gross*[1]; A. Emdadi[1]; J. Lonergan[1]

1. Missouri University of Science & Technology, Materials Science and Engineering, USA

(HTCMC-S7-025-2026) Synthesis and evolution of ζ-phase vanadium carbide microstructures *WITHDRAWN*

W. Rubink*[1]

1. Lawrence Livermore National Laboratory Physical and Life Sciences Directorate, Materials Science Dept, USA

HTCMCS7- Processing-microstructure-property relationships of existing or new systems II

Room: Osprey

Session Chair: Sook Young Moon, Korea Institute of Science and Technology

(HTCMC-S7-026-2026) Fabrication of seamless 3D woven ceramic matrix composites via continuous through-thickness architecture (Invited) *WITHDRAWN*

W. Yu*[1]; J. Yang[1]; Y. Oh[1]

1. Seoul National University, Republic of Korea

9:40 AM

(HTCMC-S7-027-2026) Transformation and crystallization behavior of $HfC_{1-x}N_x$ in a polymer-derived SiC matrix (Invited)

Y. Lee*[1]

1. Korea Institute of Ceramic Engineering and Technology, Republic of Korea

10:10 AM

BREAK

10:30 AM

(HTCMC-S7-028-2026) Optimisation of the impregnation slurry for the development of Ultra-High-Temperature Ceramic Matrix Composite (UHTCMC)

F. Courjault*[1]; J. Petit[1]; A. DeBarre[1]; A. Julian Jankowiak[1]; N. Brard[2]

1. Office National d'Etudes et de Recherches Aerospatiales, DMAS, France
2. MBDA Holding SAS, France

10:50 AM

(HTCMC-S7-029-2026) Dynamic oxidation resistance and thermal properties of additive-free SiC ceramics and CVD-SiC

O. Hanzel*[1]; M. Tatarkova[1]; Z. Netriová[1]; M. Hicak[1]; P. Sajgalik[1]

1. Ustav anorganickej chemie Slovenska akademia vied, Slovakia

HTCMC-12 Symposium 8- Testing and Evaluation of Ceramic Matrix Composites from Constituents and Coupons to Components, including EBCs

HTCMCS8- Fracture mechanics, failure analysis and fractography

Room: Pelican

Session Chairs: Takuya Aoki, Japan Aerospace Exploration Agency; Sung-Min Lee, Korea Institute of Ceramic Engineering and Technology (KICET)

8:30 AM

(HTCMC-S8-023-2026) Cf–SiC composites for high-temperature structural and hypersonic applications (Invited)

U. Andi*[1]

1. CSIR National Aerospace Laboratories, Materials Science Division, India

9:00 AM

(HTCMC-S8-024-2026) Analytical model for the static tensile behavior of cross-ply ceramic matrix composites

D. Haruyama*[1]

1. IHI Corporation, Japan

9:20 AM

(HTCMC-S8-025-2026) Temperature-dependent fracture toughness of monolithic alumina evaluated by the disk-compression method *WITHDRAWN*

N. D. Parolini*[1]; A. K. Singh[1]

1. Baylor University, Baylor University, Waco, TX, US, academic, Mechanical Engineering, USA

9:40 AM

(HTCMC-S8-026-2026) Fabrication conditions to enhance mechanical properties and high-temperature oxidation resistance of FB-SiC/SiC composites

S. Teshima*[1]; T. Kondo[1]; S. Inoue[1]; Y. Kubota[2]; M. Uda[2]; K. Abe[3]; K. Kishimoto[4]; A. Hosoi[1,5]; H. Kawada[1,6]

1. Waseda University, Japan
2. KENQ, INC., Japan
3. IHI AEROSPACE Co.,Ltd., Japan
4. Trade Service Corporation, Japan
5. Kagami Memorial Research Institute for Materials Science and Technology, Japan
6. Kanazawa Institute of Technology, Japan

10:00 AM

Break

HTCMCS8- Testing and Evaluation of Ceramic Matrix Composites

Room: Pelican

Session Chairs: Dong Liu, University of Oxford; Gerard Vignoles, University Bordeaux

10:20 AM

(HTCMC-S8-027-2026) Boron nitride nanotube modified ox-ox cmcs: Processing, microstructure, and physical properties (Invited)

E. Vargas[4]; W. Simpson*[1,2]; L. R. Scammell[3]; M. G. Simpson[5]; S. Fast[5]; T. Henneberg[3]

1. Axiom Materials Inc, Technical, USA
2. University of California Irvine, Material Science & Engineering, USA
3. BNNT Materials, Applications, USA
4. University of Southern California, Materials Science and Engineering, USA
5. 3M Company, Advanced Materials, USA

10:50 AM

(HTCMC-S8-028-2026) Damage evolution during mechanical loading of oxide composites by X-ray tomography, acoustic emission and machine learning

R. S. Almeida*[1]; J. Horvath[1]; K. Tushtev[1]; K. Rezwan[1]

1. University of Bremen, Germany

11:10 AM

(HTCMC-S8-029-2026) Enhancing CMAS corrosion resistance of ytterbium-aluminum garnet by secondary phase addition

N. Yamazaki*[1]; T. Nakamura[1]; S. Kitaoka[2]; M. Tanaka[2]; t. Yamamoto[3]

1. IHI Corporation, Japan
2. Japan Fine Ceramics Center, Japan
3. Nagoya Daigaku, Japan

11:30 AM

(HTCMC-S8-030-2026) EBC coated ceramic matrix composite (CMC) thermal mismatch parametric study via combined DIC and finite element analysis

A. Abdul-Aziz*[2]; M. Onifade[2]; R. I. Webster[1]

1. NASA Glenn Research Center, USA
2. Kent State University, Aerospace, USA

HTCMC-12 Symposium 10- CMC Applications I – Aerospace Propulsion and Structures

HTCMCS10- Design and Testing of CMC Components for Aerospace Applications III

Room: Shorebreak 1

Session Chair: Sungbo Shim, Rolls-Royce plc

8:30 AM

(HTCMC-S10-017-2026) Thin walled and light weight all oxide ceramic matrix composites (OCMC) structures for a novel propulsion system- a long development story (Invited)

W. Pritzkow*[1]; V. Dosch[1]; F. Wehner[1]; A. Evulet[2]

1. Walter E.C. Pritzkow Spezialkeramik, Germany
2. Jetoptera Inc, USA

9:00 AM

(HTCMC-S10-018-2026) Towards Space Rider Flight Readiness: Development, qualification, and production of C/SiC based thermal protection system (Invited)

M. De Stefano Fumo*[1]

1. Centro Italiano Ricerche Aerospaziali, Italy

9:30 AM

(HTCMC-S10-019-2026) Feasibility evaluation of a SiC/SiC stand-off thermal protection system

Y. Kubota*[1]; K. Abe[2]; T. Kondo[3]; K. Kishimoto[4]; M. Uda[1]; H. Kawada[3]

1. KENQ, INC., Japan
2. Kabushiki Kaisha IHI Aerospace, Japan
3. Waseda Daigaku, Japan
4. Trade Service Corporation, Japan

HTCMC-12 Symposium 11- CMC Applications II – Solar, Nuclear and Propulsion Systems

HTCMCS11- SiC CMC for nuclear applications II

Room: Sandpiper D

Session Chair: Benjamin Lamm, Oak Ridge National Laboratory

8:30 AM

(HTCMC-S11-019-2026) Revolutionizing nuclear safety: SiC ceramic matrix composites research and development at Idaho National Laboratory (Invited)

P. Xu*[1]; S. Gonderman[2]; S. Oswald[3]

1. Idaho National Lab, USA
2. General Atomics, USA
3. General Atomics Electromagnetic Systems Group, Nuclear Technologies and Materials, USA

9:00 AM

(HTCMC-S11-020-2026) Effect of outer coating thickness on the deformation and fracture of a SiC-based nuclear-fuel cladding at 1200°C

G. Yuan[2]; E. J. Lahoda[4]; M. Ukai[5]; T. Takada[5]; P. Xu[3]; D. Liu*[1]

1. University of Oxford, Engineering Science, United Kingdom
2. University of Bristol, Physics, United Kingdom
3. Idaho National Lab, USA
4. Westinghouse Electric Company LLC, USA
5. Toshiba Energy Systems & Solutions Corporation, Isogo Nuclear Engineering Centre, Japan

9:20 AM

(HTCMC-S11-021-2026) Extrusion-based processing of high-purity silicon carbide for nuclear applications

S. Kondo*[1]; D. Miura[2,1]; H. Yu[1]; Y. Ogino[1]; R. Kasada[1]

1. Tohoku University, Institute for Materials Research, Japan
2. Tohoku Daigaku, Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Japan

9:40 AM

(HTCMC-S11-022-2026) Advancing SiC composite tube processing and non-destructive evaluations for nuclear applications

T. Koyanagi*[1]; D. Richardson[1]; A. Rogers[1]; B. W. Lamm[2]; E. Cakmak[2]; J. D. Arregui-Mena[3]

1. Oak Ridge National Laboratory, USA
2. Oak Ridge National Laboratory, Materials Science & Technology Division, USA
3. Oak Ridge National Lab, Nuclear Materials Science & Technology Group, USA

10:00 AM

Break

HTCMCS11- Effects of operating environment on microstructure, physical and mechanical properties

Room: Sandpiper D

Session Chair: Takaaki Koyanagi, Oak Ridge National Laboratory

10:20 AM

(HTCMC-S11-023-2026) Neutron-induced radioactivity and response to atomic displacement damage of CB/BN particles dispersed SiC fabricated by liquid-phase sintering (Invited)

B. Huang*[1]

1. Sun Yat-Sen University, China

10:50 AM

(HTCMC-S11-024-2026) Effects of high dose neutron irradiation at light water reactor-relevant temperatures on the mechanical properties of SiC/SiC composites

Y. Jimba*[1]; T. Koyanagi[1]; Y. Katoh[1]

1. Oak Ridge National Laboratory, USA

11:10 AM

(HTCMC-S11-025-2026) Spatially-resolved microscale thermal conductivity measurements of ion-irradiated SiC/SiC CMCs for fusion applications

D. M. Cogbill*[1]; A. J. Leide[2]; J. Pomeroy[1]; A. Sarua[1]; J. Wade-Zhu[2]; D. Liu[3]

1. University of Bristol, School of Physics, United Kingdom
2. UKAEA, Materials Division, United Kingdom
3. University of Oxford, Department of Engineering Science, United Kingdom

11:30 AM

(HTCMC-S11-026-2026) Irradiation-induced mechanical response of polymer-derived SiC: Linking defect formation to hardening

H. Singh*[1]; D. Gilmer[1]; K. Hattar[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Material Science & Engineering, USA

Thursday, June 4, 2026

GFMAT-3 Symposium 1- Powder Processing Innovation and Technologies for Advanced Materials and Sustainable Development

GFMATS1- Novel shaping, forming, and sintering technology, including additive manufacturing

Room: Shorebreak 2

Session Chairs: Eugene Olevsky, San Diego State University; Hui-Suk Yun, Korea Institute of Materials Science

8:30 AM

(GFMAT-S1-023-2026) Electro-Nano-Pulsing: New manufacturing paradigm (Invited)

E. Olevsky*[1]

1. San Diego State University, College of Engineering, USA

9:00 AM

(GFMAT-S1-024-2026) Effect of electric field and current on high-temperature processing of 8Y-CSZ (Invited)

K. Morita*[1]

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

9:30 AM

(GFMAT-S1-025-2026) Flash sintering of YSZ from atomistic modeling and experiment: Mechanisms and grain growth (Invited)

W. Xu*[1]; S. Soltero[1]; C. Delaney[1]; T. Norris[1]

1. San Diego State University, Mechanical Engineering, USA

10:00 AM

Break

10:20 AM

(GFMAT-S1-026-2026) Advanced modeling strategies for digital twins in powder processing: Challenges and opportunities (Invited)

M. Sakai*[1]

1. Tokyo Daigaku, Japan

10:50 AM

(GFMAT-S1-027-2026) Approaches for selecting sustainable raw materials in ceramic additive manufacturing (Invited)

H. Yun*[1,2]

1. Korea Institute of Materials Science, Republic of Korea
2. University of Science and Technology, Republic of Korea

11:20 AM

(GFMAT-S1-028-2026) Study on the 3D printing of zirconia and silicon nitride by stereolithography (Invited) *WITHDRAWN*

J. Zhang*[1]

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

GFMAT-3 Symposium 3- Novel, Green, and Strategic Processing and Manufacturing Technologies

GFMATS3- Novel, Green, and Strategic Processing and Manufacturing Technologies I

Room: Sandpiper D

Session Chairs: Tatsuki Ohji, Yokohama Kokuritsu Daigaku; Ivar Reimanis, Colorado School of Mines

8:30 AM

(GFMAT-S3-001-2026) How sintering mechanisms impact novel sintering methods (Invited)

S. J. Dillon*[1]

1. University of California, Irvine, USA

9:00 AM

(GFMAT-S3-002-2026) Operando observation using an OCT-TG-FTIR-MS combined system for understanding dewaxing process and green manufacturing (Invited)

J. Tatami*[1]; F. Kimura[1]; M. Iijima[2]

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

9:30 AM

(GFMAT-S3-003-2026) Optical single crystals, growth and characteristics (Invited)

K. Shimamura*[1]; E. G. Víllora[1]

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

10:00 AM

Break

10:20 AM

(GFMAT-S3-004-2026) Fabrication of high-nitrogen-content silicon oxynitride glasses and their physical properties (Invited)

H. Segawa*[1]

1. Busshitsu Zairyo Kenkyu Kiko, Japan

10:50 AM

(GFMAT-S3-005-2026) The industrial relevance of advanced sintering technology: Field assisted sintering

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

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

11:10 AM

(GFMAT-S3-006-2026) Controlled crystallographic orientation and fabrication of transparent lanthanum silicate apatite phosphor using high magnetic field and SPS

T. S. Suzuki*[1]; H. Ariga[2]; A. Kawamura[2]; K. Kobayashi[1]; H. Kiyono[2]

1. National Institute for Materials Science, Optical Ceramics Group, Japan
2. Shibaura Kogyo Daigaku, Japan

11:30 AM

(GFMAT-S3-007-2026) Recent progress of silicon nitride ceramics

T. Ohji*[1]; J. Tatami[1]

1. Yokohama National University, Japan

GFMAT-3 Symposium 6- Advanced Batteries and Supercapacitors for Energy Storage Applications

GFMATS6- Na-ion battery and Supercapacitor

Room: Tidepool 1

Session Chairs: Bruce Dunn, UCLA; Matteo Bianchini, Universitat Bayreuth Fakultat fur Biologie Chemie Geowissenschaften

9:00 AM

(GFMAT-S6-024-2026) Development of positive and negative electrode materials Na-ion batteries (Invited)

M. Xu[1]; G. Gammaitoni[1]; M. Bianchini*[1]

1. Universitat Bayreuth Fakultat fur Biologie Chemie Geowissenschaften, Germany

9:30 AM

(GFMAT-S6-025-2026) Development of cost-effective and high-energy cathodes for sodium-ion battery (Invited)

H. Kobayashi*[1]

1. Hokkaido University, Japan

10:00 AM

Break

10:20 AM

(GFMAT-S6-026-2026) Sodium-Ion electrodes based on induced pseudocapacitive behavior (Invited)

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

1. UCLA, Materials Science and Engineering, USA

10:50 AM

(GFMAT-S6-027-2026) Systematic phase modulation in $Na_{0.8}$(Mn-Fe-Ni)O_2 system for high energy density & structural stability

S. Saxena*[1]; N. Dagar[1]; S. Kumar[1]

1. Indian Institute of Technology Indore, India

GFMAT-3 Symposium 10- Materials Recycling for Energy and Environment Applications

GFMATS10- Recycling

Room: Sandpiper C

Session Chairs: Madhusoodana C D, Bharat Heavy Electricals Limited; Maharshi Dey, UbiQD, Inc.; Shibayan Roy, Indian Institute of Technology Kharagpur

8:30 AM

(GFMAT-S10-009-2026) Next-generation photovoltaic module recycling via selective interfacial heating and design-for-disassembly (Invited)

C. Tokoro*[1]

1. Waseda University, Japan

9:00 AM

(GFMAT-S10-010-2026) Recycling DLP-3D printed green bodies: Disassembling and powder reusage to photocurable suspensions (Invited)

M. Iijima*[1]; Y. Hiroshige[1]; N. Morimoto[1]; J. Tatami[1]

1. Yokohama National University, Japan

9:30 AM

(GFMAT-S10-011-2026) Polymer-derived ceramic coatings on zirconia microspheres via rotating flow fluid dynamics and pyrolysis (Invited)

K. Lu*[1]; N. Ravi[1]; K. Behera[1]

1. University of Alabama at Birmingham, USA

10:00 AM

Break

10:20 AM

(GFMAT-S10-012-2026) Novel low-temperature chemical densification process for ceramics considering material recycling (Invited)

Y. Yamaguchi*[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

10:50 AM

(GFMAT-S10-013-2026) Chemithermal pulverization: A potential technique for ceramics recycling (Invited)

H. Segawa[2]; N. Ohashi*[2,1]

1. Institute of Science Tokyo, MDX Research Center for Elemental Strategy, Japan
2. National Institute for Materials Science (NIMS), Japan

11:20 AM

(GFMAT-S10-014-2026) Enhancing citric acid solubility and mitigating heavy metal contamination in sewage sludge incineration ash for high-quality fertilizer production

H. Kamiya*[1]; X. Hao[1]; Z. Kun[1]; S. Oleszek[1]; H. Iwai[1]; M. Ito[2]; K. Fujimori[2]; Y. Iwai[2]; R. Tsujibayashi[2]; C. Tokoro[1]

1. Waseda University, Japan
2. Sanki Engineering Co Ltd, Japan

11:40 AM

(GFMAT-S10-015-2026) A novel interfacial separation method for rubber–metal composites recycling using liquid nitrogen cooling and its mechanism

M. Sayama*[3]; A. Narita[1]; T. Nishioka[2]; A. Mase[2]; C. Tokoro[1,4]

1. Waseda University, Faculty of Science and Engineering, Japan
2. Sumitomo Riko Companny Limited, Japan
3. Waseda University, Graduate School of Creative Science and Engineering, Japan
4. The University of Tokyo, Faculty of Engineering, Japan

12:00 PM

PPP- Grain-scale fracture resistance in silicon nitride ceramics measured using microcantilever specimens

GFMAT-3 Symposium 11- Ceramics and Glasses for Bio-Medical Applications

GFMATS11- Ceramics and Glasses for Bio-Medical Applications

Room: Sandpiper A

Session Chair: Cristina Balagna, Politecnico di Torino, Italy

10:20 AM

(GFMAT-S11-001-2026) Respiratory infection single exhale (RISE) breath test (Invited)

P. Gouma*[1]

1. The Ohio State University, MSE, USA

10:50 AM

(GFMAT-S11-002-2026) Decomposition of luminescent hydroxyapatite scaffolds in simulated body fluid (Invited)

O. A. Graeve*[1]; F. Martinez-Pallares[1]; M. Herrera[2]

1. University of California, San Diego, Mechanical and Aerospace Engineering, USA
2. Universidad Nacional Autonoma de Mexico, Centro de Nanociencias y Nanotecnologia, Mexico

11:20 AM

(GFMAT-S11-003-2026) DNApatite: An elastic apatite with sub-nanometer scale organo–inorganic structures (Invited)

J. Lee*[1]

1. Sungkyunkwan University, Advanced Materials Science & Engineering, Republic of Korea

Young Professionals Forum

HTCMC-GFMAT- YPF-Novel Ceramic Processing I

Room: Sandpiper B

Session Chairs: Alex Leide, UKAEA; Yuki Nakashima, National Institute of Advanced Industrial Science and Technology (AIST)

8:30 AM

(YPF-007-2026) Developing a hybrid route for next-generation ceramic matrix composites (Invited) ***WITHDRAWN***

V. Venkatachalam*[1]; J. Binner[2]

1. University of Birmingham, Metallurgy and Materials, United Kingdom
2. University of Birmingham, Ceramic Science & Engineering, United Kingdom

9:00 AM

(YPF-011-2026) Effect of cellulose-nano-fiber addition on the rheology properties of ceramic paste for extrusion-based additive manufacturing (Invited) ***Moved to 2:30 PM***

Y. Chung*[1]; A. Shimamura[1]; N. Kondo[1]; M. Hotta[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

9:30 AM

(YPF-009-2026) Unlocking the potential of microwave heating for advanced ceramics and composites processing (Invited) ***WITHDRAWN***

R. D'Ambrosio*[1]; A. Cintio[1]; A. Lazzeri[2,1]; G. Annino[3]

1. Istituto per i Processi Chimico-Fisici Consiglio Nazionale delle Ricerche, Italy
2. University of Pisa, Department of Civil and Industrial Engineering, Italy
3. Istituto per i Processi Chimico-Fisici Consiglio Nazionale delle Ricerche Sede Secondaria di Pisa, Dipartimento di Scienze Chimiche e Tecnologie dei Materiali, Italy

10:00 AM

Break

HTCMC-GFMAT-YPF- Novel Ceramic Processing II

Room: Sandpiper B

Session Chair: Yuki Nakashima, National Institute of Advanced Industrial Science and Technology (AIST)

10:20 AM

(YPF-010-2026) Advanced metal oxide nanoparticles with hierarchical nanostructures: Novel synthesis and applications in catalysis and sensors (Invited)

T. Fuchigami*[1]

1. Sangyo Gijutsu Sogo Kenkyujo Tsukuba Chuo Jigyosho, Japan

10:50 AM

(YPF-008-2026) SiC_f/SiC composites made by conventional and particle enhanced polymer infiltration pyrolysis (Invited)

C. Akaoglu[1]; J. Lao[1]; Q. Zhang[2]; P. Withers[1]; P. Xiao[1]; D. Scotson*[1]

1. The University of Manchester, Materials, United Kingdom
2. University of Bristol, Physics, United Kingdom

11:20 AM

(YPF-012-2026) Wet filament winding of non-oxide ceramic matrix composites

P. Patel*[1]

1. University of Bristol, United Kingdom

11:40 AM

PPP- Low-cost, high-volume manufacture of oxide based CMCs

HTCMC-12 Symposium 2- Fibers, Preforms, and Interphases

HTCMCS2- The Effects of Fiber and Preform Properties on the Thermal Behavior of CMCs

Room: Shorebreak 1

Session Chair: Jonathan Maier

8:30 AM

(HTCMC-S2-001-2026) High-temperature performance of SiC fibers and the role of interphases in ceramic-matrix composite fracture (Invited)

K. Shimoda*[1]; H. Katsui[2]

1. National Institute for Materials Science (NIMS), Research Center for Structural Materials, Japan
2. National Institute of Advanced Industrial Science and Technology (AIST), Multi-Material Research Institute, Japan

9:00 AM

(HTCMC-S2-002-2026) Effect of through thickness Stitching of 2D preforms on the thermomechanical properties of C/SiC composites (Invited)

C. Sauder*[1]; t. courtellemont[1]; M. Bornert[2]; p. aimedieu[2]

1. Commissariat a l'energie atomique et aux energies alternatives Centre de Saclay Bibliotheque, SRMA, France
2. Ecole nationale des ponts et chaussees, France

9:30 AM

(HTCMC-S2-003-2026) Emerging SiC fiber and mini-composite with superior thermal stability and creep resistance

M. Sumino*[2]; T. Matsunaga[1]

1. UBE Kabushiki Kaisha, Specialty Products Division, Japan
2. UBE Kabushiki Kaisha, Research & Development, Japan

9:50 AM

(HTCMC-S2-004-2026) Effects of matrix composition on the thermal stability and grain growth kinetics of alumina-based fibers

R. S. Almeida*[1]; K. Tushtev[1]; K. Rezwan[1]

1. University of Bremen, Germany

10:10 AM

Break

HTCMCS2- Properties and New Developments in Interfaces/Interphases

Room: Shorebreak 1

Session Chair: Cédric Sauder, CEA

10:30 AM

(HTCMC-S2-005-2026) In-situ observation of micro-cracking in SiC/SiC ceramic matrix composites (Invited)

T. Sekigawa*[1]; Y. Tanaka[1]; M. Takeda[1]

1. Tokyo University of Technology, Japan

11:00 AM

(HTCMC-S2-006-2026) The evolution of the fiber matrix bonding strength during CMC processing – Single fiber push-out tests in CFRP, C/C and C/C-SiC state

F. Wich*[1]; N. Langhof[1]; S. Schafföner[1]

1. University of Bayreuth, Chair of Ceramic Materials Engineering, Germany

11:20 AM

(HTCMC-S2-007-2026) CVI-controlled growth and characterization of a 3D-architectured BN interphase

A. Mounérat*[1]; H. Plaisantin[2]; S. Jacques[3]; G. Chollon[3]

1. SAFRAN Ceramics, LCTS, University of Bordeaux, France
2. SAFRAN Ceramics, LCTS, France
3. CNRS, LCTS, University of Bordeaux, France

11:40 AM

(HTCMC-S2-008-2026) Tailored interphases and UHTC coatings by laser-assisted chemical vapor deposition

H. Katsui*[1]; K. Shimoda[2]; M. Hotta[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Multi-Material Research Institute, Japan
2. National Institute for Materials Science (NIMS), Research Center for Structural Materials, Japan

HTCMC-12 Symposium 4- Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

HTCMCS4- Oxide-based composites

Room: Silver Pearl 1

Session Chair: Matthew Dickerson, Air Force Research Laboratory

8:30 AM

(HTCMC-S4-027-2026) Fracture mechanism of oxide fiber reinforced oxide matrix composites at room temperature and high temperature (Invited)

H. Kakisawa*[1]

1. Busshitsu Zairyo Kenkyu Kiko, Japan

9:00 AM

(HTCMC-S4-028-2026) Blind machining of a 2D woven oxide-oxide ceramic matrix composite using abrasive waterjet process

M. Latour*[1]; L. Crouzeix[1]; C. Morel[1]; G. Dusserre[1]; R. Zitoune[1]; T. Cutard[1]; J. Malenfant[2]

1. Institut Clement Ader, France
2. Safran Ceramics, France

9:20 AM WITHDRAWN

(HTCMC-S4-029-2026) Thermal control of slurry infiltration and tow impregnation in oxide ceramic matrix composites

E. Valenzuela-Heeger*[1]; J. Binner[2]

1. University of Birmingham, Metallurgy and Materials, United Kingdom
2. University of Birmingham, Ceramic Science & Engineering, United Kingdom

HTCMCS4- Advanced processing and manufacturing technologies III/ SiC-based composites III

Room: Silver Pearl 1

Session Chair: Gerard Vignoles, University Bordeaux

9:40 AM

(HTCMC-S4-030-2026) Effect of membrane pressure application timing on slurry transfer molding of SiC/SiC parts

M. Dias[1]; N. Eberling-Fux[2]; L. Laberge Lebel*[1]

1. Polytechnique Montreal, Canada
2. Safran Ceramics, France

10:00 AM

Break

10:20 AM

(HTCMC-S4-031-2026) Hybrid post-processing to suppress porosity growth during crystallization of PIP-derived C_f/SiC

K. T. Nguyen*[1]; S. Nutt[3]; E. J. Pope[2]

1. University of Southern California, Aerospace Mechanical Engineering, USA
2. MATECH, USA
3. University of Southern California, USA

10:40 AM

(HTCMC-S4-032-2026) High-solid-loading ceramic slurry infiltration process for high-temperature structural ceramic composites *WITHDRAWN*

S. Jung*[1,2]; M. Park[1,2]; W. Kwon[1]; S. Lee[2]

1. Korea Institute of Materials Science, Republic of Korea
2. Korea Institute of Materials Science, Extreme Materials Research Institute, Republic of Korea

11:00 AM

(HTCMC-S4-033-2026) Development of pre-impregnated carbon fiber tapes using PVA and PVA-PEG aqueous solutions

J. Gilder*[1,2]; A. Capehart[3]; C. Clarkson[2]; K. E. Copenhaver[4]; A. Hubbard[2]; E. Krist[2]; C. L. Cramer[4]; D. Gilmer[3]

1. The University of Tennessee Knoxville Tickle College of Engineering, Aerospace, USA
2. Oak Ridge National Laboratory, USA
3. The University of Tennessee Knoxville Tickle College of Engineering, MSE, USA
4. Oak Ridge National Lab, Manufacturing Science Division, USA

11:20 AM

(HTCMC-S4-034-2026) Drying control for scaling aqueous ceramic slurry material extrusion geometries

A. Gourley*[1,2]; C. Wyckoff[3,1]; J. Kaufman[3,1]; J. Hardin[1]; L. M. Rueschhoff[4]

1. Air Force Research Laboratory, Materials and Manufacturing Directorate, USA
2. National Academies of Sciences Engineering and Medicine, USA
3. UES, Inc., USA
4. Air Force Research Lab, Materials and Manufacturing Directorate, USA

11:40 AM

(HTCMC-S4-035-2026) Advanced routes for manufacturing high performance CMCs

C. Akaoglu*[1]; A. Dobosz[1]; G. Jones[1]; V. Rubio[1]

1. Lucideon Ltd, Advanced Materials, United Kingdom

HTCMC-12 Symposium 5- Advanced Thermal and Environmental Barrier Coating – Processing, Properties, and Applications

HTCMCS5- Thermal and environmental barrier coatings for CMCs

Room: Silver Pearl 2/3

Session Chair: Elizabeth Opila, University of Virginia

8:30 AM

(HTCMC-S5-009-2026) Advanced design of high-temperature-stable and radiation-efficient T/EBC systems using machine learning (Invited)

M. Tanaka*[1]; N. Kawashima[1]; T. Ogawa[1]; T. Ito[1]; K. Nakayama[1]; T. Kato[1]; N. Yamaguchi[1]; H. Suzuki[2]; H. Shibata[2]; A. Kawasaki[2]; S. Kitaoka[1,3]

1. Japan Fine Ceramics Center, Japan
2. Japan AeroSpace Technology Foundation, Japan
3. Tokyo University of Technology, Japan

9:00 AM

(HTCMC-S5-010-2026) Dense and pure ytterbium disilicate environmental barrier coating as protection of SiC against oxidation

G. Sève*[1]; F. Rebillat[2]; S. Jacques[3]

1. Laboratoire des Composites Thermostructuraux, Safran Ceramics, University of Bordeaux, France
2. Laboratoire des Composites Thermostructuraux, University of Bordeaux, France
3. Laboratoire des Composites Thermostructuraux, CNRS, France

9:20 AM

(HTCMC-S5-011-2026) Characterising boron diffusion into silicon bond coats for environmental barrier coatings

D. Scotson*[1]; A. Paksoy[1]; K. Li[1]; E. Yilmaz[1]; K. Moore[1]; P. Xiao[1]

1. The University of Manchester, Department of Materials, United Kingdom

9:40 AM

(HTCMC-S5-012-2026) Ultrafast fabrication of high-temperature resistant Si–Al–C–N ceramic coatings from single source precursors

A. D. Camacho Ramirez*[1]; M. Boroojerdi[1]; L. Korell[2]; G. Falcão[3]; M. C. Galetz[2]; M. Heilmaier[3]; E. Ionescu[4]; R. Riedel[1]

1. Technische Universitat Darmstadt Fachbereich Material- und Geowissenschaften, Germany
2. DECHEMA Gesellschaft fur Chemische Technik und Biotechnologie eV, High Temperature Materials, Germany
3. Karlsruher Institut fur Technologie, Institute for Applied Materials (IAM-WK), Germany
4. Fraunhofer-Gesellschaft zur Forderung der angewandten Forschung eV, Fraunhofer Research Institution for Materials Recycling and Resource Strategies IWKS, Germany

10:00 AM

Break

10:20 AM

(HTCMC-S5-013-2026) Porosity dependence of molten sand wetting and infiltration in oxide ceramics

A. Wright*[1]; T. Sharobem[2]; C. Dambra[2]; B. Keyes[2]; A. Ghoshal[1]

1. US Army Combat Capabilities Development Command Army Research Laboratory Aberdeen Proving Ground, USA
2. Oerlikon Metco US Inc, USA

HTCMCS5- Advanced testing and non-destructive evaluation methodologies

Room: Silver Pearl 2/3

Session Chair: Elizabeth Opila, University of Virginia

10:40 AM

(HTCMC-S5-015-2026) Optical diagnostics of CMAS infiltration into environmental barrier coatings with spectroscopic ellipsometry and high temperature spectral pyrometry

E. S. Golightly*[1]; L. A. Doumaux[3]; G. Harrington[4]; R. Golden[4]; A. L. Chamberlain[4]; E. J. Opila[3]; P. E. Hopkins[2]

1. University of Virginia, Mechanical and Aerospace Engineering, USA
2. University of Virginia, USA
3. University of Virginia, Materials Science and Engineering, USA
4. Rolls Royce, USA

HTCMC-12 Symposium 7- Materials for Extreme Environments – UHTCs, MAX phases, and nanolaminates

HTCMCS7- Response of UHTCs/UHTCMCs in Extreme Environments II

Room: Osprey

Session Chair: Theresa Davey, Bangor University

8:30 AM

(HTCMC-S7-030-2026) Eutectics observed in Group (IV,V) binary transition metal diboride (Invited)

S. Ness[3]; A. N. Dorner[2]; W. Rosenberg[3]; P. Spencer[4]; G. Hilmas[2]; W. Fahrenholtz[2]; S. J. McCormack*[1]

1. University of California Berkeley, Materials Science and Engineering, USA
2. Missouri University of Science & Technology, Dept. of Materials Science and Engineering, USA
3. University of California Davis, Chemical Engineering, USA
4. The Spencer Group Inc, USA

9:00 AM

(HTCMC-S7-031-2026) Uncovering the spectral emissivity of transition metal carbides at ultrahigh temperatures

H. B. Schonfeld*[4]; W. Hutchins[4]; M. Milich[4]; C. Stephens[1,2]; L. Backman[3]; E. Opila[1,4]; P. E. Hopkins[4]

1. University of Virginia, Material Science and Engineering, USA
2. Johns Hopkins University Applied Physics Laboratory, USA
3. U.S. Naval Research Laboratory, Spacecraft Engineering Division, USA
4. University of Virginia, Mechanical and Aerospace Engineering, USA

9:20 AM

(HTCMC-S7-032-2026) Influence of the state and quantity of oxygen on the oxidation mechanisms of a ZrB2-ZrC-SiC system under high flux conditions

R. Beringue*[1]; L. Maillé[1]; A. Quet[2]; V. Genissel[2]; L. Charpentier[3]; T. Archer[4]; J. Braun[2,1]; F. Rebillat[1]

1. Laboratoire des Composites Thermostructuraux, France
2. Commissariat a l'energie atomique et aux energies alternatives Direction des applications militaires Le Ripault, France
3. Laboratoire Procedes Materiaux et Energie Solaire, France
4. Office National d'Etudes et de Recherches Aerospatiales, France

HTCMCS7- Response of UHTCs/UHTCMCs in Extreme Environments III

Room: Osprey

Session Chair: Scott McCormack, University of California Berkeley

9:40 AM

(HTCMC-S7-033-2026) Recent developments and characterization of ultra-refractories for harsh environments

J. Justin*[1]; A. Julian Jankowiak[1]; L. Sevin[1]; A. DeBarre[1]

1. Office National d'Etudes et de Recherches Aerospatiales, DMAS, ONERA, Université Paris-Saclay, France

10:00 AM

Break

10:20 AM

(HTCMC-S7-034-2026) From prediction to proof: Zirconium carbonitrides with near-record melting temperatures

H. B. Schonfeld*[1]; Q. Hong[2]; I. M. Hawthorne[3]; S. Ryu[1]; D. Fisher[2]; J. Matteucci[4]; S. Ushakov[4]; A. CampBell[2]; H. Xu[4]; P. E. Hopkins[1,3]; E. J. Opila[3,1]; A. Navrotsky[4]

1. University of Virginia, Mechanical and Aerospace Engineering, USA
2. Arizona State University, School for Engineering of Matter, Transport, and Energy, USA
3. University of Virginia, Material Science and Engineering, USA
4. Arizona State University, School of Molecular Sciences, USA

10:40 AM

(HTCMC-S7-035-2026) Synthesis and characterization of 2.5D C/SiC composites with SiC/ZrB2/SiC modified matrix for ultra high temperature applications

J. D. W*[1]; U. Andi[2]; M. S[1]

1. Anna University, Department of Ceramic Technology, India
2. CSIR National Aerospace Laboratories, Materials Science Division, India

11:00 AM

(HTCMC-S7-036-2026) Effect of SiC content on the densifiction, mechanical properties, and ablation response of HfC-SiC-TaC UHTCs

N. L. Serrano*[1]; C. T. Doolittle[1]; A. Ghoshal[2]; S. D. Walck[2]; L. Vargas-Gonzalez[2]; M. L. Young[1]; A. Voevodin[1]; S. Aouadi[1]

1. University of North Texas College of Engineering, Materials Science and Engineering, USA
2. US Army Research Laboratory, USA

GFMAT-3 Symposium 2- Functional Nanomaterials for Sustainable Energy Technologies

GFMATS2- Metal oxide nanostructures for sensing, batteries, and water splitting applications

Room: Sandpiper C

Session Chair: Donglu Shi, University of Cincinnati

1:30 PM

(GFMAT-S2-001-2026) Plasma-driven engineering of functional oxides for photonic and energy applications (Invited)

M. Chaker*[1]

1. Institut national de la recherche scientifique, Energie materiaux télécommunications, Canada

2:00 PM

(GFMAT-S2-002-2026) Hybridization of graphene and molybdenum oxide with the field-effect transistor for volatile organic compound gas sensing

O. Okanishi*[1]; A. Katsura[1]; Y. Hirose[1]; N. Nagamura[3]; T. Ono[2]; T. Uemura[2]; T. Sugahara[1]

1. Kyoto Kogei Sen'i Daigaku, Japan
2. Osaka Daigaku, Japan
3. Busshitsu Zairyo Kenkyu Kiko, Japan

GFMATS2- Nanomaterials for energy conversion, storage, and catalysis

Room: Sandpiper C

Session Chair: Giovanni Fanchini, University of Western Ontario

2:20 PM

(GFMAT-S2-003-2026) Rational Design of Perovskite Oxide Catalysts for Efficient CO_2 Methanation (Invited)

B. Koo*[1]

1. Sungshin Women's University, School of Chemistry and Energy, Republic of Korea

2:50 PM

Break

3:10 PM

(GFMAT-S2-004-2026) Solar photothermal energy generation through multiple transparent Fe_3O_4–$Cu_{2-x}S$ thin films for building utility heating (Invited)

D. Shi*[1]; M. Gandharapu[1]; A. Katepalli[1]; A. Harfmann[2]; M. Bonmarin[3]; J. Krupczak[4]

1. University of Cincinnati, Mechanical and Materials Engineering, USA
2. University of Cincinnati, Architectural Engineering, USA
3. ZHAW Zurcher Hochschule fur Angewandte Wissenschaften, Engineering, Switzerland
4. Hope College, Engineering, USA

GFMATS2- Transition metal chalcogenides, carbon nanostructures, 2D materials

Room: Sandpiper C

Session Chair: Alberto Vomiero, Lulea University of Technology

3:40 PM

(GFMAT-S2-007-2026) How to not make high temperature ceramics: The curious case of 2D auxetic semicarbides (Invited)

G. Fanchini*[1]

1. University of Western Ontario, Physics and Astronomy, Canada

GFMAT-3 Symposium 3- Novel, Green, and Strategic Processing and Manufacturing Technologies

GFMATS3- Novel, Green, and Strategic Processing and Manufacturing Technologies II

Room: Sandpiper D

Session Chairs: Tohru Suzuki, National Institute for Materials Science; Shen Dillon, University of California, Irvine

1:30 PM

(GFMAT-S3-008-2026) Clay-based ceramics for hydrogen production and gas separation (Invited)

I. Reimanis*[1]; O. Olaleye[1]; R. McGinnis[1]; S. Ricote[2]; G. Coors[3]; R. Marder[4]; W. D. Kaplan[4]

1. Colorado School of Mines, Metallurgical and Materials Engineeering, USA
2. Colorado School of Mines, Mechanical Engineering, USA
3. Hydrogen Helix, USA
4. Technion - Israel Institute of Technology, Dept. of Materials Science and Engineering, Israel

2:00 PM

(GFMAT-S3-009-2026) Immobilization of laccases on CuO and ZnO nanoparticles: Enhanced stability and catalytic performance for water bioremediation applications (Invited)

O. A. Graeve*[1]; F. Suarez[1]; R. Vazquez-Duhalt[2]

1. University of California, San Diego, Mechanical and Aerospace Engineering, USA
2. Universidad Nacional Autonoma de Mexico, Centro de Nanociencias y Nanotecnologia, Mexico

2:30 PM

(GFMAT-S3-010-2026) Lignin-based polymer precursors for advanced ceramic systems (Invited)

D. Gilmer*[1,2]; R. Walker[1]; J. Fischer[1]; J. Brown[1]; T. Nelson[3]; D. Harper[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Material Science and Engineering, USA
2. Oak Ridge National Laboratory Energy Science and Technology Directorate, USA
3. University of Tennessee Oak Ridge Innovation Institute, USA

3:00 PM

Break

3:20 PM

(GFMAT-S3-011-2026) 3D printable ceramics from glass and pre-ceramic polymers: From molecular design to additive manufacturing (Invited)

M. Sobczak[1]; K. Song*[1]

1. University of Georgia, Mechanical Engineering, USA

3:50 PM

(GFMAT-S3-012-2026) Binder Jet additive manufacturing of recycled glass to form trim tools *WITHDRAWN*

T. Prum*[1]; D. Gilmer[1]; A. Stiles[2]; R. Walker[1]

1. The University of Tennessee Knoxville Tickle College of Engineering, Materials Science and Engineering, USA
2. Vitriform3D, USA

4:10 PM

(GFMAT-S3-013-2026) Hydrothermal processing of nanostructured oxide coatings for self-cleaning surfaces

J. Cho*[1]

1. Binghamton University, Mechanical Engineering and MSE, USA

4:30 PM

(GFMAT-S3-014-2026) Design at nanoscale of thermostable hybrid sol-gel bondlayer to functionalize aeronautical CFRP by thermal spray

S. Senani - de Monredon*[1]; L. Rozes[2]; A. Joulia[3]; G. Penvern[4]

1. Safran Electronics & Defense Massy, Head of Operations Dpt, France
2. Sorbonne Universite, LCMCP, France
3. Safran Tech, PFX, France
4. Safran Tech, Composites, France

GFMAT-3 Symposium 6- Advanced Batteries and Supercapacitors for Energy Storage Applications

GFMAT-S6- New and Emerging Electrochemisty

Room: Tidepool 1

Session Chairs: Vallabha Rao Rikka, Underwriters Laboratories Inc; Palani Balaya, National University of Singapore

1:30 PM

(GFMAT-S6-029-2026) High-capacity intercalation-type cathode materials using anionic redox for all-solid-state fluoride-ion batteries (Invited)

K. Yamamoto*[1]

1. Nara Women's University, Japan

2:00 PM

(GFMAT-S6-030-2026) Accelerating the development of high-performance battery materials through human-in-the-loop active learning and generative design (Invited)

I. Park*[1]

1. Daegu Gyeongbuk Institute of Science & Technology, Department of Energy Science and Engineering, Republic of Korea

2:30 PM

(GFMAT-S6-031-2026) Electrolyte design for Li metal batteries: Toward improving cycle stability (Invited)

M. Kim*[1]

1. Kwangwoon University, Republic of Korea

3:00 PM

Break

3:20 PM

(GFMAT-S6-032-2026) Binder-enabled solvation control suppresses SEI invasion in silicon anodes (Invited)

V. Rikka*[1]; W. Tang[1]; J. Jeevarajan[1]

1. Underwriters Laboratories Inc, Electrochemical Safety Research Institute, USA

3:50 PM

(GFMAT-S6-033-2026) Phosphorus doping led improvement on the electrochemical property of rGO with SiO_x composite as anode material for lithium-ion battery (Invited)

J. Huang*[1]

1. National Cheng Kung University, Materials Science and Engineering, Taiwan

4:20 PM WITHDRAWN

(GFMAT-S6-034-2026) Ceria-carbonate heterostructure reinforced PBI composite membranes for enhanced performance and durability in high-temperature PEM fuel cells (Invited)

P. Singh*[1]

1. Indian Institute of Technology(BHU), Physics, India

GFMAT-3 Symposium 11- Ceramics and Glasses for Bio-Medical Applications

GFMATS11- Ceramics and Glasses for Bio-Medical Applications

Room: Sandpiper A

Session Chairs: Pelagia-Irene Gouma, The Ohio State University; Cristina Balagna, Politecnico di Torino

1:30 PM

(GFMAT-S11-004-2026) Design of calcium phosphate invert glasses for biomedical applications (Invited)

S. Lee*[1]

1. National Institute of Advanced Industrial Science and Technology (AIST), Japan

2:00 PM

(GFMAT-S11-005-2026) Sustainable antimicrobial composite coatings for air filtration and biomedical applications (Invited)

C. Balagna*[1]; A. Luceri[2]; F. Gattucci[2]; M. Donalisio[4]; D. Lembo[4]; M. Ferraris[3]

1. Politecnico di Torino, Dept. Applied Science and Technology, Italy
2. Politecnico di Torino, DISAT, Italy
3. Politecnico di Torino, Department of Applied Science and Technology, Italy
4. Universita degli Studi di Torino, Italy

2:30 PM

(GFMAT-S11-006-2026) Ceramic-polymer composites – different manufacturing approaches but the same goal to regenerate bone and osteochondral tissue defects (Invited)

E. Pamula*[1]

1. AGH University of Krakow, Faculty of Materials Science and Ceramics, Department of Biomaterials and Composites, Poland

3:00 PM

Break

3:20 PM

(GFMAT-S11-007-2026) Coacervate–hydroxyapatite hybrids for bone repair (Invited)

J. J. Chung*[1,2]

1. Seoul National University Hospital, Transdisciplinary Medicine, Republic of Korea
2. Seoul National University College of Medicine, Medicine, Republic of Korea

3:50 PM

(GFMAT-S11-008-2026) Evaluation of amorphization mechanism of β-tricalcium phosphate by bead milling

Y. Tsuji*[1,2]; M. Sakurai[2]; T. Kasuga[3]; F. Nagata[1]; S. Lee[1]

1. Sangyo Gijutsu Sogo Kenkyujo Chubu Center, Japan
2. Chubu Daigaku, Department of Applied Chemistry, Japan
3. Nagoya Kogyo Daigaku, Japan

4:10 PM

(GFMAT-S11-009-2026) Cytocompatibility evaluation of PVDF-$(Na,K)NbO_3$ composite fibers for neural tissue engineering applications

T. Nafis*[1]

1. Indian Institute of Technology BHU Varanasi I-DAPT HUB Foundation, CERAMIC DEPARTMENT, India

Young Professionals Forum

HTCMC-GFMAT-YPF- Non-destructive testing

Room: Sandpiper B

Session Chairs: Jing Liu, University of Alberta; N. Ahmad

1:30 PM

(YPF-013-2026) Real-time monitoring of ceramic sintering and high-temperature behavior via the impulse excitation technique (Invited)

P. Springer Simonova*[1,2]; E. Gregorova[2]; W. Pabst[2]; N. Langhof[1]; S. Schafföner[1]

1. University of Bayreuth, Chair of Ceramic Materials Engineering, Germany
2. University of Chemistry and Technology, Prague, Department of Glass and Ceramics, Czechia

2:00 PM

(YPF-014-2026) Synchrotron X-ray multiscale tomography for revealing heterogeneous microstructures and defects in ceramics (Invited)

G. Okuma*[1]

1. Busshitsu Zairyo Kenkyu Kiko, Japan

HTCMC-12 Symposium 1- Computational Modeling and Design of New Materials and Processes

HTCMCS1- Computation of mechanical, thermal and thermomechanical properties I

Room: Osprey

Session Chairs: Frank Zok, University of California Santa Barbara College of Engineering; Dong Liu, University of Oxford

1:30 PM

(HTCMC-S1-001-2026) Spatial autocorrelation of fiber fracture in ceramic composites: Theory and practice (Invited)

F. W. Zok*[1]; N. Han[2]

1. University of California Santa Barbara College of Engineering, Materials, USA
2. UCSB, Materials, USA

2:00 PM

(HTCMC-S1-002-2026) A subvolume homogenisation framework to determine thermo-mechanical properties of SiC/BN/SiC CMCs

A. Soni*[1]; P. Foster[1]; V. Dubey[1]; L. Kawashita[1]; G. Allegri[1]; S. Hallett[1]

1. University of Bristol, Civil aerospace and design engineering, United Kingdom

2:20 PM

(HTCMC-S1-003-2026) Characterization of CVI-SiC CMC microstructures using xCT CNN segmentation

B. Lenz*[1]

1. Pratt & Whitney, USA

2:40 PM

(HTCMC-S1-004-2026) Determination of the mechanical properties of 2D woven plies in ultra-high temperature ceramic composites

T. Rumen*[1,2]; A. Este[1]; M. Montemurro[3,5]; A. Cosculluela[1]; M. Bouchez[4]; A. Catapano[6,2]

1. Commissariat a l'energie atomique et aux energies alternatives Centre d'etudes scientifiques et techniques d'Aquitaine, France
2. Institut de Mecanique et d'Ingenierie, France
3. Ecole Nationale Superieure d'Arts et Metiers, France
4. MBDA France SAS, France
5. Institut Universitaire de France, France
6. Bordeaux INP, France

3:00 PM

Break

HTCMCS1- Computation of mechanical, thermal and thermomechanical properties II

Room: Osprey

Session Chair: Frédéric Laurin, ONERA

3:20 PM

(HTCMC-S1-005-2026) An embedded-fiber approach to modeling the non-linear behavior of ceramic-matrix composites (Invited)

G. Couégnat*[1]; A. Vassalié[1,2]; C. Le Bras[1]; S. Denneulin[2]

1. Laboratoire des Composites Thermostructuraux, France
2. Safran SA, CERAMICS, France

3:50 PM

(HTCMC-S1-006-2026) In situ CT-Scan observation and modelling of damage in oxide/oxide composites (Invited)

F. Laurin*[1]; T. Drouin[2]; F. Guillet[2]; A. Sauvet[2]; G. Couegnat[3]

1. ONERA, Paris-Saclay University, DMAS, France
2. Commissariat a l'energie atomique et aux energies alternatives Siege administratif, CEA Le Ripault, France
3. Laboratoire des Composites Thermostructuraux, France

4:20 PM

(HTCMC-S1-007-2026) Benchmark of 2D woven carbon-fiber composites constitutive models with respect to notched plate tests

M. Guiho*[1]; J. Bénézech[2]; C. Léger[2]; A. Derrien[1]; J. Maire[2]; F. Laurin[2]

1. MBDA Holding SAS, France
2. Office National d'Etudes et de Recherches Aerospatiales, DMAS, ONERA, Université Paris-Saclay, France

4:40 PM

(HTCMC-S1-008-2026) A multiscale modelling framework for mechanical, temperature and oxidation-dependent behaviour of SiC/BN/SiC CMCs

V. Dubey*[1]; P. Foster[1]; A. Soni[1]; L. Kawashita[1]; G. Allegri[1]; S. Hallett[1]

1. University of Bristol, Aerospace Engineering, United Kingdom

5:00 PM

(HTCMC-S1-009-2026) Pyrolytic carbons: Structure-mechanical properties relationships studied by modeling and experiments

J. Leyssale[2]; B. Farbos[1]; M. Lalanne[5]; F. Polewczyk[2,3]; P. Aurel[2]; P. Weisbecker[5]; J. Da Costa[4]; P. Lafourcade[3]; A. Bident[1]; G. Chollon[5]; S. Jacques[5]; S. Jouannigot[5]; G. Couégnat[5]; G. L. Vignoles*[1]

1. University Bordeaux, LCTS - Lab for ThermStructural Composites, France
2. CNRS., ISM - Inst. Sciences Moléculaires, U. Bordeaux, France
3. Commissariat a l'energie atomique et aux energies alternatives Siege administratif, DPTA, France
4. Bordeaux Sciences Agro, IMS - Insitute from Materials to Systems, U. Bordeaux, France
5. CNRS, LCTS, France

HTCMC-12 Symposium 2- Fibers, Preforms, and Interphases

HTCMCS2-New Developments in Oxide and Non-Oxide Ceramic Fibers

Room: Shorebreak 1

Session Chair: Kazuya Shimoda, National Institute for Materials Science (NIMS)

1:30 PM

(HTCMC-S2-009-2026) Development of a pyrolysis method for SiC fibers with protection against oxygen exposure (Invited)

T. Goto*[1]; K. Hofuku[1]; R. Iuchi[1]

1. Kabushiki Kaisha Kureha Chuo Kenkyujo, New Business Development Department, Japan

2:00 PM

(HTCMC-S2-010-2026) General atomics SiGA™ SiC fiber overview

J. Brown[1]; D. Wegrzyn[1]; H. Park[1]; S. Fan[1]; J. Hepp[1]; I. Ivanov*[1]; H. Khalifa[1]

1. General Atomics Electromagnetic Systems Group, Nuclear Technologies and Materials (NTM), USA

2:20 PM

(HTCMC-S2-011-2026) Integrated development of oxide and nonoxide ceramic fibres from precursor to pilot scale at Fraunhofer ISC Center HTL (Invited)

J. Maier*[1]

1. Fraunhofer-Zentrum fur Hochtemperatur-Leichtbau HTL, Germany

2:50 PM

(HTCMC-S2-012-2026) Metal oxide nanowires, nanofibers, and 3D non-woven mats by high-throughput electrospinning

P. Gouma*[1]

1. The Ohio State University, MSE, USA

3:10 PM

Break

HTCMCS2- Performance of Interfaces/Interphases in Extreme Environments

Room: Shorebreak 1

Session Chair: Elizabeth Opila, University of Virginia

3:30 PM

(HTCMC-S2-013-2026) Performance of crystalline, amorphous, and Si-doped BN coatings in steam environments (Invited)

F. W. Zok*[1]; V. Christensen[1]

1. University of California Santa Barbara College of Engineering, Materials, USA

4:00 PM

(HTCMC-S2-014-2026) Corrosion of BN/SiC coated SiC fibers in a silicon melt infiltration process

J. Schmidt*[1]; A. Konschak[1]; J. Maier[1]

1. Fraunhofer-Zentrum fur Hochtemperatur-Leichtbau HTL, Germany

4:20 PM

(HTCMC-S2-015-2026) Use of silicon alloys to preserve BN-SiC interphases in SiC/SiC mini-composites processed by liquid silicon infiltration

K. Postler*[1]; J. Moosburger-Will[1]; D. Koch[1]

1. Universitat Augsburg, Institute of Materials Ressource Management, Germany

4:40 PM

(HTCMC-S2-016-2026) Intermediate temperature oxidation of SiC/BN/SiC CMCs

S. Holles*[1]; E. Opila[1]

1. University of Virginia, USA

HTCMC-12 Symposium 4- Innovative Design, Advanced Processing and Manufacturing Technologies in Non-oxide and Oxide Composites

HTCMCS4- Characterization and damage assessment

Room: Silver Pearl 1

Session Chair: Masaki Kotani, Uchu Koku Kenkyu Kaihatsu Kiko Koku Gijutsu Bumon

1:30 PM

(HTCMC-S4-036-2026) Material properties of high temperature resistant CMC (Invited)

T. Nakamura*[1]; N. Yamazaki[1]; H. Hirano[1]

1. IHI Corporation, Japan

2:00 PM

(HTCMC-S4-037-2026) Ultra-high and high temperature ceramic matrix composites aimed for hypersonic applications (Invited)

L. Baier[2,1]; M. Friess*[2,1]; I. Petkov[2,1]; O. Schatz[2,1]; O. Hohn[2]

1. DLR - German Aerospace Center, Institute of Structures and Design, Germany
2. Deutsches Zentrum fur Luft- und Raumfahrt DLR, Germany

2:30 PM

(HTCMC-S4-038-2026) Ultra-fine and ablation-resistant UHTC composites for rocket nozzle applications (Invited)

S. Lee*[1]; K. Kim[2]; V. Nguyen[1]

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

3:00 PM

Break

3:20 PM

(HTCMC-S4-039-2026) Chemophysical crack-healing mechanisms through N_2 annealing in SiC coatings on C/C composites

J. Baek[3]; Y. Zhang[3]; B. Lim[1]; H. Jung[2]; I. Sihn[1]; S. Lee*[3]

1. DaiYang, Republic of Korea
2. SPACEPRO, Republic of Korea
3. Purdue University, USA

3:40 PM

(HTCMC-S4-040-2026) Ultrasonic Machining (Ultrasonic Impact Grinding) of SiC/SiC CMCs

E. Norton*[1]

1. Bullen Ultrasonics Inc, R&D, USA

HTCMC-12 Symposium 6- Carbon/Carbon – Carbon Fiber Reinforced Carbon Composites

HTCMCS6- Mechanical and thermal properties, Application and performance

Room: Pelican

Session Chair: Matthias Krodel, ECM - Engineered Ceramic Materials GmbH

1:30 PM

(HTCMC-S6-001-2026) Studying and prediction of microstructures and mechanical properties of C/C-materials (Invited)

N. Langhof*[1]; F. Wich[1]; M. Moos[3,1]; S. Schafföner[2,1]

1. University of Bayreuth, Ceramic Materials Engineering, Germany
2. University of Bayreuth, Chair of Ceramic Materials Engineering, Germany
3. Universitat Bayreuth, Germany

2:00 PM

(HTCMC-S6-002-2026) Dependence of graphitization kinetics on atomic mobility in hard and soft carbon via XRD

C. R. Dixon*[1]; J. Wiggins[2]

1. University of Southern Mississippi, Polymer Science and Engineering, USA
2. University of Southern Mississippi College of Arts and Science, Polymer Science and Engineering, USA

2:20 PM

(HTCMC-S6-003-2026) Altering crystallite dimensions in benzoxazine derived carbon through iron catalyzed graphitization

T. Schneider[1]; C. R. Dixon*[1]; J. Wiggins[2]

1. University of Southern Mississippi, Polymer Science and Engineering, USA
2. University of Southern Mississippi College of Arts and Science, Polymer Science and Engineering, USA

2:40 PM

(HTCMC-S6-004-2026) Test and progressive failure analysis of a 2.5D carbon-carbon brake disk

G. J. Janszen*[1]; A. Airoldi[1]; E. Novembre[1]; M. Gallo[1]; R. Passoni[2]; A. Tasca[2]

1. Politecnico di Milano, Department of Aerospace Science and Technology, Italy
2. Brembo NV, Italy

3:00 PM

Break

HTCMCS6- Material, process development

Room: Pelican

Session Chair: Matthias Krodel, ECM - Engineered Ceramic Materials GmbH

3:20 PM

(HTCMC-S6-005-2026) Pathways to high-interlaminar shear strength carbon-carbon (Invited)

B. Goodman*[1]

1. Goodman Technologies, LLC, USA

3:50 PM

(HTCMC-S6-006-2026) Near-net shape Noobed 3D fabric pre-forms - Key to accelerate wider adoption of CMCs (Invited)

P. Khokar*[1]; N. Khokar[1]

1. Fureho AB, Sweden

4:20 PM

(HTCMC-S6-007-2026) A novel high-char-yield thermoplastic precursor route for potential net-shape carbon–carbon composites fabrication (Invited)

R. Downes*[1]

1. FSU, Industrial and Manufacturing Engineering, USA

4:50 PM

(HTCMC-S6-008-2026) Low-density carbon nanotube yarn graphitized Laminates (Invited)

C. Evers*[1]

1. Florida State University, USA

HTCMC-12 Symposium 9- Joining and Integration Technologies for Ceramic Matrix Composites

HTCMCS9- Joining of CMCs to CMCs or ceramics

Room: Silver Pearl 2/3

Session Chairs: Carla Malinverni, Politecnico di Torino; Monika Tatarkova, Ustav anorganickej chemie Slovenska akademia vied

1:30 PM

(HTCMC-S9-001-2026) Joining of SiC and SiC_f/SiC: Focused on Si-C reaction bonding (Invited)

S. Park[1]; S. Joo[1]; J. Jung[1]; D. Yoon*[1]

1. Yeungnam University, School of Materials Science and Engineering, Republic of Korea

2:00 PM

(HTCMC-S9-002-2026) Investigation of joining and repair techniques for oxide-oxide ceramic matrix composites

J. Alexander*[1]; J. Binner[2]

1. University of Birmingham, United Kingdom
2. University of Birmingham, Ceramic Science & Engineering, United Kingdom

2:20 PM

(HTCMC-S9-003-2026) Novel joining of high-entropy ceramics (HfTaZrNbTi)C and Cf/SiC composites with high-entropy alloy interlayers

N. Hosseini[1]; S. Gambaro[2]; F. Valenza[2]; S. sahin.ates@tubitak.gov.tr[5]; Z. Chlup[4]; A. Kovalcíkova[3]; M. Tatarkova[1]; I. Dlouhy[4]; P. Tatarko*[1]

1. Ustav anorganickej chemie Slovenska akademia vied, Ceramics, Slovakia
2. Istituto di Chimica della Materia Condensata e di Tecnologie per l'Energia Consiglio Nazionale delle Ricerche Sede di Genova, Italy
3. Ustav materialoveho vyskumu Slovenskej akademie vied, Slovakia
4. Ustav fyziky materialu Akademie ved Ceske republiky, Czechia
5. Tubitak Marmara Arastirma Merkezi, Turkey

2:40 PM

(HTCMC-S9-004-2026) Development and integration of high-temperature ceramic matrix composites using refractory transition metals-based alloys

M. Tatarkova*[5]; H. Ünsal[5]; S. sahin.ates@tubitak.gov.tr[2]; F. Valenza[1]; X. Zhou[4]; V. Casalegno[3]; P. Tatarko[5]

1. Istituto di Chimica della Materia Condensata e di Tecnologie per l'Energia Consiglio Nazionale delle Ricerche Sede di Genova, Italy
2. Marmara Universitesi, Turkey
3. Politecnico di Torino, DISAT, Italy
4. Chinese Academy of Sciences Ningbo Institute of Materials Technology and Engineering, China
5. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Department of Ceramics, Slovakia

3:00 PM

PPP- Effects of filler composition on the joint properties of SiC joined by Si-C reaction bonding

3:02 PM

Break

HTCMCS9- Design and Modeling

Room: Silver Pearl 2/3

Session Chair: Dang-Hyok Yoon, Yeungnam University

3:22 PM

(HTCMC-S9-005-2026) Evaluating CMC assemblies using a discrete model for composite (DM4C) approach (Invited)

M. Flores*[1]; A. Deleo[1]; S. Phenisee[1]; D. Pelessone[1]

1. ES3, USA

3:52 PM

(HTCMC-S9-006-2026) Multiscale characterization of fusion-welded SiC-based UHTCs using an experimental–ICME approach

A. Emdadi*[1]; J. Watts[1]; A. Ayon[1]

1. Missouri University of Science & Technology, Materials Science and Engineering, USA

HTCMCS9- Testing and NDE

Room: Silver Pearl 2/3

Session Chair: Mark Flores, ES3, Inc., USA

4:12 PM

(HTCMC-S9-007-2026) Evaluation of YAS glass-ceramic-joined SiC/SiC CMCs under direct flame exposure for steelmaking applications (Invited)

C. Malinverni*[1]; V. Casalegno[1]; P. Bertrand[2]; J. Maier[3]; C. Prentice[4]; M. Salvo[1]

1. Politecnico di Torino, DISAT, Italy
2. Univ. de Technologie de Belfort-Montbéliard, France
3. Fraunhofer-Zentrum fur Hochtemperatur-Leichtbau HTL, Germany
4. ATL, Archer Technicoat Ltd, United Kingdom

4:42 PM

(HTCMC-S9-008-2026) Improving XCT fidelity for SiC/SiC end-plug joints using super-resolution reconstruction methods

J. D. Arregui-Mena*[1]; A. K. Ziabari[2]; O. Rahman[2]; T. Koyanagi[3]

1. Oak Ridge National Lab, Nuclear Materials Science & Technology Group, USA
2. Oak Ridge National Laboratory, Electrification and Energy Infrastructure Division, USA
3. Oak Ridge National Laboratory, USA

5:02 PM

(HTCMC-S9-010-2026) Design, fabrication, and integration challenges for silicon carbide-based heat exchangers for thermal management applications (Invited) ***See page 35 for authors.***

Friday, June 5, 2026

GFMAT-3 Symposium 5- Porous Ceramics for Advanced Applications Through Innovative Processing

GFMATS5- Porous Ceramics for Advanced Applications Through Innovative Processing

Room: Shorebreak 1

Session Chairs: Jianfeng Yang, Xi'an Jiaotong University; Adriana Joyce, Adva Cera

8:30 AM

(GFMAT-S5-001-2026) Fabrication of porous silicon nitride ceramics with macro-sized pores by organic ball template via gel-casting or die-pressing method (Invited)

J. Yang*[1]; F. Li[1]; J. Li[1]; B. Wang[1]

1. Xi'an Jiaotong University, State Key Laboratory for Mechanical Behavior of Materials, China

9:00 AM

(GFMAT-S5-002-2026) Novel processing method and material properties for nuclear-grade silicon carbide foam

O. Trieu*[1]; J. Zhang[1]; O. Godinez[1]; T. Abrams[2]; G. Jacobsen[1]

1. General Atomics Electromagnetic Systems Group, USA
2. General Atomics, USA

9:20 AM

(GFMAT-S5-003-2026) Control of hierarchical porosity in alumina through additive process design

A. Joyce*[1]

1. Adva Cera, USA

HTCMC-12 Symposium 1- Computational Modeling and Design of New Materials and Processes

HTCMCS1- Simulation of materials degradation

Room: Osprey

Session Chair: Guillaume Couegnat

8:30 AM

(HTCMC-S1-010-2026) Microscale Modeling and Simulation of Machining SiC/SiC Composites Produced by Chemical Vapor Infiltration (Invited)

S. Unseld*[1]; R. Goller[1]; D. Koch[2]

1. Technische Hochschule Augsburg, Mechanical Engineering, Germany
2. Institute of Materials Resource Management, Germany

HTCMCS1- Data mining and first-principles computations

Room: Osprey

Session Chair: Gerard Vignoles, University Bordeaux

9:00 AM

(HTCMC-S1-011-2026) Illuminating early stage oxidation of ZrC from an ab-initio density-functional theory perspective

P. Wurzner[3]; S. Feld[1]; M. Möller[1]; B. Chen[3]; Q. Hong[2]; Y. Tang*[3]

1. Technische Universiteit Delft Faculteit Elektrotechniek Wiskunde en Informatica, Netherlands
2. Arizona State University, USA
3. Technische Universiteit Delft Faculteit Luchtvaart- en Ruimtevaarttechniek, Netherlands

9:20 AM

(HTCMC-S1-012-2026) Data-driven composition screening and experimental validation of single-phase high-entropy UHTCs

E. F. Bermudez[1]; L. F. Morales[1]; A. G. Castellanos*[1]

1. The University of Texas at El Paso, Aerospace and Mechanical Engr. Dept., USA

9:40 AM

(HTCMC-S1-013-2026) Tuning the composition of $(TiCeZrMoMn)O_2$ to enhance the structural, mechanical and thermal stability: First principles studies *WITHDRAWN*

M. Yadav*[1]; Y. Sudha Sistla[1]

1. Shiv Nadar Institution of Eminence, Chemical Engineering, India

10:00 AM

Break

HTCMCS1- Modeling of materials processing

Room: Osprey

Session Chair: Simon Unseld, Technische Hochschule Augsburg

10:20 AM

(HTCMC-S1-014-2026) Modeling thermal-gradient chemical vapor infiltration: The case of SiC deposition using micro-wave heating (Invited)

G. L. Vignoles*[1]; R. Bechara[2]; G. Mangeon[1]; N. Bessouet[2]; S. Jacques[3]; R. D'Ambrosio[4]; G. Annino[5]; Z. Li[6]; J. Binner[7]

1. University Bordeaux, LCTS - Lab for ThermStructural Composites, France
2. Laboratoire des Composites Thermostructuraux, France
3. CNRS, LCTS, France
4. Istituto per i Processi Chimico-Fisici Consiglio Nazionale delle Ricerche, Italy
5. Istituto per i Processi Chimico-Fisici Consiglio Nazionale delle Ricerche Sede Secondaria di Pisa, Dipartimento di Scienze Chimiche e Tecnologie dei Materiali, Italy
6. University of Birmingham, United Kingdom
7. University of Birmingham, Ceramic Science & Engineering, United Kingdom

10:50 AM

(HTCMC-S1-015-2026) Molecular dynamics simulation for quantitative analysis of melt infiltration

K. Oba*[1]; M. Tsuganezawa[1]; K. Nishiguchi[2]; H. Shima[2]; Y. Nakanishi[2]; R. Inoue[1]; Y. Kogo[1]; Y. Arai[1]

1. Tokyo Rika Daigaku, Japan
2. Kabushiki Kaisha Mitsubishi Chemical Holdings, Japan

11:10 AM

(HTCMC-S1-016-2026) Preparation of CMC matrices by in-situ nitridation: Modeling combustion synthesis involving gases

G. L. Vignoles*[1]; E. Demenois[1]; T. Nguyen-Bui[1,3]; C. Descamps[1,2]

1. University Bordeaux, LCTS - Lab for ThermStructural Composites, France
2. Safran Ceramics, France
3. CEA/DAM, France

HTCMC-12 Symposium 6- Carbon/Carbon – Carbon Fiber Reinforced Carbon Composites

HTCMCS6- Processing and applications

Room: Pelican

Session Chair: Bill Goodman, Goodman Technologies, LLC

8:30 AM

(HTCMC-S6-009-2026) Rough laminar pyrocarbon synthesized by CVD in a cold-wall reactor (Invited)

A. Bident[2]; G. Chollon[1]; S. Jacques*[1]

1. CNRS, LCTS, France
2. University of Bordeaux, LCTS, France

9:00 AM

(HTCMC-S6-010-2026) Reducing energy consumption in high-temperature processing of carbon composites (Invited)

J. Schmidt*[1]

1. Schunk Kohlenstofftechnik GmbH, Germany

HTCMC-12 Symposium 9- Joining and Integration Technologies for Ceramic Matrix Composites

HTCMCS9- Brazing

Room: Silver Pearl 2/3

Session Chairs: Michael Halbig, NASA Glenn Research Center; Jose Arregui-Mena, Oak Ridge National Lab

9:00 AM

(HTCMC-S9-009-2026) Joining and integration of ceramic matrix composites to metals for high temperature applications using brazing processes (Invited) *WITHDRAWN*

V. J. Prabhu*[1]; N. Ludford[1]; K. Amin[1]; J. Redman[1]

1. TWI Ltd, United Kingdom

9:30 AM

(HTCMC-S9-010-2026) Design, fabrication, and integration challenges for silicon carbide-based heat exchangers for thermal management applications (Invited) *Moved to Thursday, June 2 at 5:02 p.m.*

M. C. Halbig*[3]; M. Singh[1]; M. Ranaiefar[3]; Y. Zheng[2]

1. Ohio Aerospace Institute, USA
2. Northeastern University, Mechanical and Industrial Engineering, USA
3. NASA Glenn Research Center, USA

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ACerS Executive Director, Mark Mecklenborg, ph 614-794-5829 / email: ExecDirector@ceramics.org
ACerS President, Mario Affatigato / email: ACerSPresident@ceramics.org

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K Potassium	Ca Calcium	Sc Scandium	Ti Titanium	V Vanadium	Cr Chromium	Mn Manganese	Fe Iron	Co Cobalt	Ni Nickel	Cu Copper	Zn Zinc	Ga Gallium	Ge Germanium	As Arsenic	Se Selenium	Br Bromine	Kr Krypton
Rb Rubidium	Sr Strontium	Y Yttrium	Zr Zirconium	Nb Niobium	Mo Molybdenum	Tc Technetium	Ru Ruthenium	Rh Rhodium	Pd Palladium	Ag Silver	Cd Cadmium	In Indium	Sn Tin	Sb Antimony	Te Tellurium	I Iodine	Xe Xenon
Cs Cesium	Ba Barium	La Lanthanum	Hf Hafnium	Ta Tantalum	W Tungsten	Re Rhenium	Os Osmium	Ir Iridium	Pt Platinum	Au Gold	Hg Mercury	Tl Thallium	Pb Lead	Bi Bismuth	Po Polonium	At Astatine	Rn Radon
Fr Francium	Ra Radium	Ac Actinium	Rf Rutherfordium	Db Dubnium	Sg Seaborgium	Bh Bohrium	Hs Hassium	Mt Meitnerium	Ds Darmstadtium	Rg Roentgenium	Cn Copernicium	Nh Nihonium	Fl Flerovium	Mc Moscovium	Lv Livermorium	Ts Tennessine	Og Oganesson

Ce Cerium	Pr Praseodymium	Nd Neodymium	Pm Promethium	Sm Samarium	Eu Europium	Gd Gadolinium	Tb Terbium	Dy Dysprosium	Ho Holmium	Er Erbium	Tm Thulium	Yb Ytterbium	Lu Lutetium
Th Thorium	Pa Protactinium	U Uranium	Np Neptunium	Pu Plutonium	Am Americium	Cm Curium	Bk Berkelium	Cf Californium	Es Einsteinium	Fm Fermium	Md Mendelevium	No Nobelium	Lr Lawrencium

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