

PENNSTATE



The Pennsylvania Chapter of Keramos

Annual Report

April 2015



Dr. R. Allen Kimel

Associate Head for Undergraduate Studies
Material Science and Engineering
College of Earth and Mineral Sciences

The Pennsylvania State
University
124 Steidle Bldg.
University Park, PA 16802

April 17, 2015

National Keramos Officers:

It has been my pleasure to advise The Pennsylvania Chapter of Keramos during the academic year 2014-2015. Over the past year the Penn State chapter has made great strides in facilitating the student population involvement in Keramos.

We began the year with the annual tradition, Keramos Industry Tour. We took 28 students, by coach, on a 5 day trip to ArcelorMittal, Arkema, and Schott Glass. The trip took place the week before the start of the fall semester. Arcelor definitely got a couple of new employees out of the visit. Other traditional events continued as well. We hosted industry info sessions and a graduate school discussion panel. The annual "Break Stuff Night" before fall finals week is always a big hit (no pun intended... yes it was). Finally, we had beautiful weather for our annual Blue-White Alumni tailgate which was welcomed as weather on Blue-White weekend is usually poor 4 out of 5 years.

Two new events were created this year. Keramos hosted a 3-D printing informational night to introduce the new department 3-D Printing lab and get some excitement going for student engagement. The department's design capstone course has students presenting proposals to an external board of alumni. Keramos hosted a reception for the external board and students in the course to provide an opportunity for networking and more targeted feedback. The reception was a big hit with both the alumni and students and will now become an annual event.

In closing, I hold the achievement of the past year of The Pennsylvania Chapter of Keramos in highest regard. The officer/leadership core is getting younger and as a consequence, participation and enthusiasm are growing. I look forward to working with the new officers in the coming year.

Sincerely,



R. Allen Kimel, Assistant Professor and
Associate Head for Undergraduate Studies
Materials Science and Engineering

Annual Plan for the Upcoming Year

Reflecting back upon our annual plan from this past year I feel that we did a great job meeting most of our goals, although some areas did fall short. In the coming school year the new executive board of Keramos would like to carry on with the events that worked well, while continuing to implement and tweak some of the other objectives where we did not see as much success. Over the coming two semesters we plan to work on increasing our involvement across the board with a heavy focus on underclassmen participation and membership. As it currently stands, the vast majority of our affiliates are in the second half of their college career and we are lacking the younger students to replace them as they begin to transition into industry or graduate school. Our first task in tackling this problem will be improved recruitment, followed by retention and sustained interest throughout subsequent years.

As an executive board, we plan to improve our recruitment of Materials Science and Engineering (MatSE) students into Keramos by reaching out to professors in the college of Earth and Mineral Sciences (EMS) who teach courses specifically targeted at freshmen and sophomores. In doing so, we hope to increase awareness of Keramos throughout the college, as well as showcase the opportunities that are available through joining our society. Furthermore, we plan to work with our advisor, Dr. Kimel, who is also the associate head of the undergraduate department, to set up engaging outreach events and propaganda to further increase our visibility and spark interest among potential new members. Such events include but are not limited to; materials science demonstrations, career fair prep sessions, finals week de-stress events, and flyers in our computer lab and student lounge.

Following our push for membership rejuvenation, we feel that building and sustaining involvement among our members will be the next key to our continued and enhanced success as a society. One major difficulty that we have seemed to face is differentiation from Materials Advantage (MA) due to the vast overlap in interests along with participants. In an effort to mitigate this problem without taking away from MA we are planning two new events for the upcoming year. The first will entail a series of slip casting events, which we were unable to arrange prior to MS&T last year, so that we can participate in the mug drop as well as the disk golf competition. Secondly, we are planning to host a glass blowing seminar prior to our annual glass flower sale so that we may build participation in an event that has always gone over exceptionally well. In addition to these new events, we also plan to continue hosting all of our traditional events which have seen success in past years.

Over the past few years Keramos has thrived but it currently feels as though we may have reached a plateau. Some people would be content with maintaining said plateau, but I feel that this should be looked at as an opportunity for growth. In conclusion, the new executive board of Keramos is looking forward to an exciting and action packed year that we feel will provide a pivotal turning point to take us to the next level.

List of Officers

Officers for the 2014-2015 Academic Year

President

Nicole Sitler

[REDACTED]
State College, PA 16801
[REDACTED]
[REDACTED]@psu.edu

Vice President

Alexander Hall

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Secretary

Rohan Mohana Krishnan

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Treasurer

William Salem

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Herald

Peter Robinson

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Officers for the 2015-2016 Academic Year

President

Alexander Hall

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]@psu.edu

Vice President

Hunter Rauch

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Secretary

TBD

Treasurer

Alexander High

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Herald

TBD

Delegates for the 2015 Annual Meeting

Alex Hall and Hunter Rauch

Alternate Delegates for the 2015 Annual Meeting

Alex High

Membership

2014-2015 Inductees

Nicole Kirchner
Rachel Sherbondy
Paige Stetson
Rafael Vila
Sarah Newby
Alex High
Jacob Cordell
Alex Chichester
Shawn Mahabir
Hunter Rauch

Undergraduate Members

Adam Fink
Mohammed Abu Al-Saud
Jawaher Muthaq Almuthaq
Michael Brova
Chris Camilli
Erika Kolhaas
Emily Cimino
Ethan Lucas
Jennifer Distefano
Joseph Fignar
Emily Fucinato
Ramya Gurunathan
Alexander Hall
Shelby Miller
Nathan Kistler
Rohan Mohana Krishnan
Jie Mou
Kathleen Murzynski
Nicholas Simonson
Patrick Walker
Tyler Merica
Rebecca Rugh
Caroline Hallowell
Peter Robinson
Hansheng Ye
Neal Lewis

Tianjiao Zhang
Andrew Stotler
Nicole Sitler
Lorraine Hossain
Brittany Bartel
Christopher Erdely
William Salem
Beecher Watson
Yingwei Wu
Yihuang Xiong
Zak Khayat

Graduate Members

Jason Lapano
Frederick Lia
Charles Brookes
Jane Howell
Arkapol Saengdeejing
Dennis Shay
Amra Tabakovic
Stephen Weitzner
Martin Antensteiner
Angela Leone

Faculty members

James Adair
Susan Trolier-McKinstry
Karl Spear
David Shelleman
Carlo Pantano
Clive Randall
Paul Painter
Suzanne Mohny
Gary Messing
Zi-Kui Liu
R. Allen Kimel
John Hellmann
Venkatraman Gopalan
L. Eric Cross
Long-Qing Chen
Paul Brown
James Runt

Honorary Member

This year, the Penn State Chapter was unable to nominate an honorary member, and this will be something the new executive board for 2014-2015 will look to do as it is an important part of thanking those who devote themselves to ceramics.

Treasurer's Report

For the 2014-15 academic school year The Pennsylvania Chapter of Keramos raised \$402.86 from two primary sources. Most of the money came from dues from new members and convocation travelling reimbursement. Unfortunately, we didn't have a glass flower sale which was the biggest source of income last year. We plan to bring back the glass flower sale along with other creative materials ideas next year. The remaining revenue came from organizational interest within Penn State.

The total expenses for programs hosted by our Chapter totaled \$362.07. The final balance of our Chapter was \$3,131.53

Beginning Balance:	\$3,090.74
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Costs

Awards and Prizes at Holiday Banquet	\$116.43
Food for Meetings	\$245.64
Total:	\$362.07

Income

Convocation Travel Reimbursement	\$200.00
Dues	\$200.00
PSU Organizational Interest	\$2.86
Total:	\$402.86

Final Balance:	\$3,131.53
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Chapter Activities

Professional Development

Industry Trip

September 2014

For the past few years, Material Advantage has had the privilege of having the resources to organize an annual industry trip which is available to students typically the week before classes start for the fall semester. From August 18 - 20, 2015, we were able to visit three companies, ArcelorMittal, Arkema, and Schott Glass. The students all traveled by bus, and visited one company each day. Guided tours of each company's facilities as well as question and answer sessions with industry professionals make this one of our best events every year. Students are able to grasp some ideas regarding what companies look for in employees,

The logo for SCHOTT, featuring the word "SCHOTT" in a bold, blue, sans-serif font. The letter "O" is stylized with a white circle inside it.

and just as importantly, what to look for in potential employers. This is also a huge opportunity for students to get a view into the real world jobs that they will most likely be applying for after graduation. This is one of our most attended events each year (typically 25-40 students), and for good reason. Many students comment that this trip is sometimes what mostly inspires what division of materials science they want to pursue.



ArcelorMittal Informational Session

October 2014

In the fall semester, Rachel Smithers gave a presentation about the ArcelorMittal for specifically materials science students. Ms. Smithers has a strong presence in the Materials Science department as a member of the Executive Alumni Board (EAB) and as head recruiter for ArcelorMittal at all of Penn State.

She overviewed the strong market presence of her company, company values, and opportunities available for our students including internships and full time jobs.



Graduate Student Panel

December 2014

As new life decisions were coming to the forefront for many of our graduating seniors and juniors thinking about the future, Keramos hosted a grad student panel to get all of their questions answered. The panel included three grad students, each from a different funding source (fellowships, and research or teaching assistantships). Questions were fielded from workload expectations to finding a professor and research group that really fits the student's personality. The panel meeting was a terrific way to enjoy a casual dinner and calm any fears about making the leap to grad school.



3D Printing Informational Session

September 2014

In our first meeting of the year, our department's resident polymer and 3D printing expert, Dr. Michael Hickner, gave a presentation on exciting 3D printing opportunities in our department. He first explained the exciting new applications that have come about to stir up excitement. He then talked about how anyone with AutoCAD experience can quickly learn how to program parts for the printer to make. He explained that some students in his lab are now making experimental 3D printers with not only polymers, but they hope to experiment with a clay-based filament once they can build a printer to do that. Hopefully in the near future the Penn State chapter of Keramos will be able to print the Keramos crest with a 3D printer or maybe even one day a mug for the mug drop competition.

492W Reception

September 2014

Beginning last year, the MatSE department restructured a 400 level writing course, required by all students, into a mock competition style course centered on providing a materials solution to one of the 14 Grand Challenges put forth by the National Academy of Engineering. Following an elevator pitch, students are formed into teams and work to complete a white paper and subsequently a full proposal for funding, which they present to the Graduate of Earth and Minerals Sciences (GEMS) Board of Directors. The GEMS board is comprised of 16 distinguished individuals from diverse backgrounds within the earth and mineral science industry whom provide valuable insight to the college. Following the white paper presentations, Keramos sponsored a reception in which students were able to speak with the GEMS Board and become acquainted over food and beverages. The relaxed setting allowed for students to ask questions regarding the development of their proposals, as well as gain beneficial networking experience.

Student Faculty Luncheon

April 2014

New this year, Keramos arranged a student faculty luncheon that yielded great success with approximately 30 attendees between professors and students. The luncheon was catered and held in the commons area of our Millennium Science Complex Building which houses the Materials Research Institute at Penn State. Over lunch, students were able to become acquainted with faculty on a more personal level than is capable in the classroom. Building relationships such as these will prove valuable when looking for future research opportunities, or recommendation letters for jobs, scholarships, and grad school.



Service

Student-Faculty Holiday Luncheon

December 2014



Similar to last year, Keramos helped coordinate the canned food and toy drive for the departments' holiday luncheon. Students and faculty were asked to bring canned food to the event for the local food bank or a toy for the *Toys for Tots foundation*. We added a little bit of competition this year by having the undergraduates and graduates face-off for who could collect the most donations. This year the undergraduates were victorious.

Department Materials Science and Engineering Awards Banquet

April 2015

Every year the department puts on a banquet for awards in materials science and engineering at the Nittany Lion Inn. It is an awards banquet to recognize excellence in student's faculty and staff in the department. Keramos also helped collect nominations for the outstanding faculty award and organized students to man the registration table and hand out awards

We are proud to announce that several Keramos members won awards this year at the Annual MatSE Banquet: Lorraine Hossain received the GEMS Diamond award which is the most prestigious senior award in the Earth and Mineral Sciences college; Jennifer Distefano won

the most outstanding academic award (highest GPA in the major) and also won second place in the student poster competition; Erika Kohlhass won the award for excellence in the metals option and Peter Robison won the award for excellence in the ceramics option; and Nicole Kirchner received the George W. Brindley Award in Nonmetallic Crystal Chemistry.

Alumni Relationships

Blue-White Tailgate

April 2015

Blue-White Game is Penn State's annual football scrimmage. Our chapter hosted a catered tailgate in the stadium parking lots before the scrimmage for the second year in a row. The event was open to alumni, faculty, graduate students, staff, and undergraduate students. Thanks to warm, sunny weather the Blue-White tailgate was our chapter's biggest event of the year with about 100 people attending from start to kickoff. Students enjoyed talking to faculty in a setting outside the classroom to get to know each other better. Faculty also brought their families to let loose, eat, and play games. Members were able to network with alumni now in industry to get a feel of what the "real world" is like in the relaxing setting of a tailgate. The Blue-White tailgate was a fun day for material scientists of all ages.



MS&T Penn State Alumni Reception

April 2015

Penn State consistently brings upwards of 40 undergraduate students from Keramos and MA, along with numerous other professors and faculty, to the annual MS&T conference every fall. The conference provides a phenomenal opportunity for students to gain exposure to the world of materials science outside the classroom along with expanding their network. Towards the end of the conference, Keramos students attended a student faculty reception exclusively for Penn State affiliates where they were able to engage with their peers, professors, and alumni. The reception provided students with a perfect opportunity to meet professors who are currently performing research in their area of interest, in addition to alumni with a vested interest in the success of Penn State MatSE students.

Annual Convocation

Materials Science and Technology (MS&T) Conference

October 2014

Penn State again had a strong presence at the Materials Science and Technology conference in Pittsburgh, bringing about 40 undergraduates. Keramos and Materials Advantage members enjoyed supporting one of our members, Jennifer Distefano, who won the student speaking competition this year. Students attended various talks and enjoyed a dinner with Alcoa to learn more about their company.

Keramos President Nicole Sitler and Vice President Alex Hall represented our chapter in the annual Keramos Convocation. We communicated our issue of not having a specific niche in our department (because Material Advantage and the department sponsor a lot of events already). We also got suggestions and ideas about increasing attendance and fun ideas for chapter events.

Interchapter Communication

Again this year, the entire board had classes during the time that the monthly teleconferences. We provided a small summary to the student representative, but I feel that we definitely missed out on some deadlines and interesting chapter stories. Hopefully next year we can have one of our members available for the teleconference or hopefully we can find a way to get a summary of what goes on during the meetings.

Social Activities

Back to School Picnic

August 2014

We started off the semester with a “Welcome Back” picnic to transition our members back into the school year. The weather was very sunny while we grilled burgers and hot dogs. Students also played corn hole and Frisbee to relax and catch up with friends after summer vacation.



Break-Stuff Night

December 2014

Keramos again hosted Break-Stuff Night right before finals week in the fall semester to allow students to relieve some stress. Students brought various items such as apples, mini marshmallows, old electronics, and the most entertaining: a mannequin head. It was interesting

to see the inner workings of various items frozen and smashed. About 15 students attended this year and we hope to keep this tradition going next year.

College of Earth and Mineral Sciences Casino Night

January 2015

Like previous years, Keramos had a good showing at the College of Earth and Mineral Sciences casino night. This year's theme was James Bond! Students enjoyed a delicious dinner at the Penn Stater, good music, a goofy photo booth, and many casino games geared towards winning raffle prizes.



Summary

This year the Pennsylvania Chapter of Keramos was very active in the department connecting students to faculty, alumni, and industry leaders. Most of the focus this year was on inter-department activities and being a unifying source for Materials Science Student.

Education and Outreach

This year, we struggled in the education and outreach portion of our club because we mostly focused on inter-department activities. In previous years, Keramos played an active role in helping with EMEX, an orientation for accepted students for the college and giving tours of our new facilities. Hopefully next year, we will again engage in that.

Professional Development

Keramos did many events in professional development this year. We did a good job of really connecting students to the faculty, graduate students, and alumni more so than other years. However, this year there was less of a role of industry in our club. Hopefully next year there will be more opportunities to interact with industry professionals while keeping a strong relationship with Materials Scientists in the department.

Service

Keramos enjoys helping the department when events are set up to make things run more smoothly. This year we continued the tradition of promoting the toy and food drive at our holiday luncheon, but I think this is an area we can easily expand in our chapter.

Alumni Relations

The most notable alumni event that we did for the second year in a row is the Blue & White tailgate. Previously, we held a pig roast across campus, but these past two years, we have put together a catered tailgate right next to the stadium which appeals to many of the students, faculty and alumni. We will continue to reach out to alumni to further chapter bonding inside and outside of Penn State.

Interchapter Activities

For another year, our chapter has not been able to attend many teleconferences. I think that communicating with other chapters monthly would help our chapter achieve our goals for next year. We will again have delegates at the annual convocation which really helped our chapter this year set our goals and get ideas for the future.

Chapter Bonding Activities

This year, our department officially moved to a new location in the middle of the year. This had a negative impact on our ability to easily organize events as we do not have the lab space or classrooms as easily available. Luckily, next year the new building should be completed and our chapter will again have a home for chapter bonding activities.