

PENNSTATE



The Pennsylvania Chapter of Keramos

Annual Report

April 15, 2010



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.
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April 15, 2010

National Keramos Officers:

It has been my pleasure to advise The Pennsylvania Chapter of Keramos during the academic year 2009-2010. Over the past year the Penn State chapter has made great strides in re-invigorating the student population involvement in Keramos.

The chapter took 27 students to MS&T in Pittsburgh in the fall. Due to tight budgets within the department, the students took on the challenge of raising the monies to cover the cost of the trip. In total, \$2700 was raised through fundraising efforts and students individually applying for funding from external sources. In fact, three students had individual scholarships supporting their travel, which they decided to share with the entire group. The fundraisers used were a Five Guys Burger Night, where Five Guys shared with us 15% of their profits for one night, soda and snack sales, and art poster sales (the posters being the winners from the Materials Visualization Competition 2009). The chapter also began hosting option nights this spring. The idea was to engage freshmen and sophomores in the department as well as outside the department in a manner that would help them decide which option they might choose within the department. The chapter secured faculty members and one industry representative for each of the four option nights. Additionally the chapter also started a weekly upperclassmen study session every Sunday evening to allow underclassmen as well as fellow classmates to come in and get assistance with their studies. The chapter partnered up with department graduate students to raise money for cancer research through a Relay for Life event. The group successfully completed the 24 hour relay walk-a-thon and raised over \$2000.

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

It is the aim of the newly elected executive board to plan events that will allow Keramos members to meet more frequently than in previous years. In addition to the current biannual Keramos Student/Faculty Luncheons, the Keramos executive board is planning to host an ice cream social early in the fall semester to allow the current members to become better acquainted with the recent inductees. Other plans include continuing to host option nights for undecided freshmen and sophomores in the major and assisting Ohio State with reinvigorating their chapter of Keramos.

While the executive board hopes to reach out to current members within the chapter, the goal of educating younger students (middle and high school) about materials science is also important. Extensive work will be done to aid faculty with outreach activities and recruiting. One possible idea is to improve on past demonstrations by compiling a “materials kit” – a self-contained set of fun, hands-on demonstrations to illustrate the significance of materials science and engineering. The executive board of the Penn State Chapter of Keramos is very optimistic about the 2010-2011 academic year and hopes to achieve and exceed these goals of chapter camaraderie and materials outreach.

List of Officers

Officers for the 2009-2010 Academic Year

President

Helen Larsen
500 W. College Ave.
Apt. #4
State College, PA 16801
hb15004@psu.edu

Vice President

Laura Jean Lucca
6 Halley Lane
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Secretary

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Treasurer

Craig Shaner
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Warrington, PA 18976
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Herald

Nick Dietz
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Port Matilda, PA 16870
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Officers for the 2010-2011 Academic Year

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Vice President

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Secretary

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Treasurer

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Bensalem, PA 19020
mjc5169@psu.edu

Herald

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pjh5139@psu.edu

Delegates for the 2010 Annual Meeting

Laura Schell and Craig Shaner

Alternate Delegates for the 2010 Annual Meeting

Erica Marden and Patrick Hricko

Membership

New inductees for the 2009-2010 academic year are noted in italics*

Undergraduates

Kyle Bryson

Michael Callahan (Fall 2009)

Nicholas Dietz

Rachel Duran (Fall 2009)

Christopher Elwell (Fall 2009)

Cody Fastzkie (Fall 2009)

Henry Guth (Fall 2009)

Erik Haussmann (Fall 2009)

Scott Hills

Patrick Hricko

Jake Kerr

Dan King

Helen Larsen

John Lazarz (Fall 2009)

Anne Ling

Laura Jean Lucca

Daniel Magagnosc

Patrick Mangiagli

Erica Marden (Fall 2009)

Elizabeth Miller

Edward Mily

Elyssa Okkelberg (Fall 2009)

Michael Policelli (Fall 2009)

Brian Poole (Fall 2009)

Zachary Royer (Fall 2009)

Laura Schell

Craig Shaner

Lauren Skrabski (Fall 2009)

Bruce Stevenson (Fall 2009)

Kaylan Wessels

Graduate

Charles Brooks

Sarah Eichfeld

Matthew Gross

Dave Hartwich

Brad Hasek

Jane Howell

Hyeran Noh
Robert Pavlacka
Suphanee Pongkitwitoon
Stephen Poterala
Patrick Raynaud
Brandon Ribic
Jen Rygel
James Saal
Arkapol Saengdeejing
Jess Serra
Dennis Shay
Nevin Sherlock
Adam Stevenson
Amra Tabakovic
Chelsey Zacherl

Faculty

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

Honorary Member

Dr. Douglas Weirach

*Note: Spring 2010 initiates will be inducted on April 20th, 2010.

Treasurer's Report

During the 2009-2010 academic year, The Pennsylvania Chapter of Keramos raised \$456.11 through fundraising efforts. Fundraisers organized and run by Keramos members included a soda and snack sale, a poster sale, and a night at a local restaurant (Five Guys), where 15% of the profits the restaurant made during dinner hours went to our chapter.

Overall programs sponsored by the chapter totaled \$1361. These programs included the annual luncheon for Keramos students and faculty and a pig roast, to be held on April 24th, 2010. There was also some cost incurred from the startup of the poster sale and soda/snack sale fundraisers.

The budget of the chapter stands at \$717.76.

Costs	
Annual Luncheon	\$105.00
Poster Sale Initial Cost	\$358.84
Soda and Snack Sale Initial Cost	\$162.50
Penn State Keramos Polos	\$594.66
Dues to National Board	\$140.00
Pig Roast	TBD
Total	\$1361.00

Income	
Dues	\$280.00
Penn State Keramos Polos	\$350.00
Keramos Delegate Travel	\$140.00
Material Advantage Rebate	\$390.00
2009 Pig Roast Donations	\$110.15
Poster Sale	\$190.00
Soda and Snack Sale	\$363.19
Five Guys Night Out	\$255.42
Total	2078.76

Final Balance	\$717.76
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Chapter Activities

Education

Faculty Presentations:

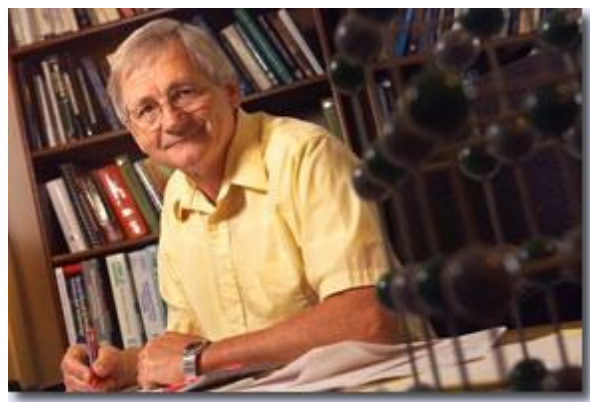
This year the Keramos-sponsored faculty talks were more intimate. The faculty members were encouraged to speak about their past experiences and how they have brought them to where they are today. This has enabled the students to learn about the various opportunities within the field and also to develop a plan for their futures. Students are now more likely to approach these faculty members candidly to discuss MatSE courses, research opportunities and future career plans.

Listed below are the speakers and a short summary of their talks.

Dr. Paul Howell

October 10

Dr. Howell spoke about his undergraduate and graduate work at Cambridge working with field ion microscopy. He now serves at Penn State as an expert in TEM and as the undergraduate student advisor for incoming freshman and all metals students. His research currently involves phase transformations in metals and work with metallic meteorites.



Dr. John Hellmann

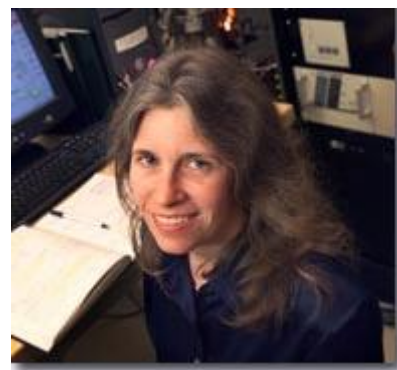
January 20

Dr. Hellmann spoke to our group about undergraduate and graduate experiences here at Penn State. It was a great opportunity for the students in our chapter to interact with one of the Deans of our College and also the current President of the National Keramos Board.

Dr. Susan Trolier-McKinstry:

February 25

Dr. Trolier-McKinstry spoke about her education at Penn State and her extensive work with Dr. Newnham throughout her career. She informed us about her experience remaining at one academic institution for her whole career and talked about how she learned to teach.



MatSE Option Nights:

March 18 & 22, April 8 & 13

A new initiative that was taken this year by Keramos executive board members was to create a series of option nights. These nights were designed to help Materials Science and Engineering (MatSE) underclassmen choose an option from the four that are offered in the program: Metals, Ceramics, Polymers, and Electronic and Photonic Materials. Each night offered presentations by faculty members and industrial representatives and had demonstrations to help students get an idea of what each option encompasses. Companies included Alcoa and ArcelorMittal.



Service

Haiti Relief Drive

January

In light of the tragedy in Haiti, the Chapter organized a drive for necessities. Over the course of a week, enough donations were gathered to fill a station wagon to the brim.



Departmental Tutoring

Ongoing

A new service offered during this year by the Penn State Chapter was peer tutoring. During the Fall semester, we hosted exam cram sessions for major prerequisite classes. This, however, did not spark much interest, so during the Spring semester, we hosted weekly office hours on Sunday nights from 6-8 PM where students could drop in and ask questions about any class.



Relay for Life

April 9 - 10

For the third year, The Penn State Chapter sponsored two teams at Relay for Life with both undergraduate and graduate MatSE students. Trivia nights, a glass raffle, and a variety of other fundraisers were held throughout the year to raise money for the event. A total of \$2,200 was raised by our two teams.

Outreach

February 27

The largest outreach event of the year is the Earth and Mineral Sciences Exposition, or EMEX. EMEX is an annual recruitment event sponsored by the College of Earth and Mineral Sciences, which hosts the MatSE program. The Keramos chapter staffs a series of facility tours, demonstrations, and speakers designed to inform prospective students about the wonders of Materials Science and Engineering.

Ceramic Activities

Mug Drop:

Ongoing

Efforts were continued from previous years to create a winning mug for the mug drop competition at MS&T. This year, we attempted to make a ceramic mug instead of a glass mug, which has been made in years past. Unfortunately, the mug that was created was not sufficient and was not entered into the competition. There was a lot of interest from the underclassmen, Keramos members and nonmembers alike. We are confident that next year's entry will be a competitive mug because of the excitement that exists within our chapter. We are also excited because this competition has peaked interest from students who were otherwise unaware of Keramos. This year, we are going to elect a mug-drop chair, whose sole responsibility will be to organize mug drop meetings and work with faculty on the development of the mug.



Fundraising

Five Guys Night Out: \$255.42

September 17

Keramos sponsored a night out at a local restaurant, Five Guys Burgers and Fries, in order to raise funds for chapter activities. Keramos members were encouraged to come to the event, as well as bring friends and family to boost the sales for the restaurant. A portion of the night's profits was donated to our chapter, coming to over \$200.

Poster Sale: -\$168.84

Ongoing

After seeing all of the winning images from the Materials Visualization competition in spring of 2009, it was decided that we would print the images as posters and sell them as a fundraiser. We also included a short, easy to understand description of the image on the poster and how the science applies to everyday life. So far, the poster sale has had little response, but we hope that the 2010 Materials Visualization Competition will peak the interest of the students and faculty.

Soda/Snack Sale:\$200.69

Ongoing

Another fundraising initiative that was started this year is a soda sale. Cans of soda are available in the refrigerator in the student commons room and are sold for 75 cents each. This fundraiser requires little time or effort to be expended by the student officers of Keramos and brings in money quickly.

Professional Development

Nucor Steel Dinner:

September 14

Nucor Corporation came to visit Penn State and talk about what role the company plays in the global metals market. Students were treated to dinner and got the opportunity to interact with engineers.

Materials Science and Technology (MS&T) Conference 2009:

October 24 – 27

Before the conference undergraduates from Rutgers University visited Penn State, touring our labs and interacting with students. This year, Keramos and the Material Advantage Club combined to send 26 undergraduates to MS&T 2009 in Pittsburgh, PA. Students participated in mock interviews, resume building sessions, and career/graduate school info sessions. Keramos member, Ed Mily represented Penn State in the Material Advantage student speaking competition, making it to the final round. Five Penn State Keramos members presented their research at technical talks. Penn State students also met and networked with materials students from many other universities, forming new friendships and exchanging ideas for Keramos activities.



Field Trip to State of the Art, Inc:

November 12

25 Undergraduate and graduate students visited local business, State of the Art, Inc last semester to see what business is like in the niche market of high-end resistors. Students were able to see processes that they learn about in class being used in the real world, such as tape casting, electro-deposition, and laser trimming.

Alumni Relationships

Annual Pig Roast:

April 24

The annual pig roast will be held on Saturday, April 24th, 2010, and will be co-sponsored by our Keramos chapter. Alumni, faculty, staff, and students will be in attendance, and it will be an excellent opportunity for Keramos members to reunite.

In Summary, The Pennsylvania State Chapter of Keramos, currently comprised of 77 members, is dedicated to serving the local materials community, as well as society at large. Each year, programming is focused on five main areas: professional development, outreach, service, fundraising, and social events. This year an emphasis has been placed on increasing the amount of service and fundraising events sponsored by the Chapter.

Professional Development



Each year, Keramos students Penn State travel to the MS&T Conference, where members present research, attend technical talks, and network with peers. This spring, Keramos, in conjunction with Material Advantage, has hosted the first annual series of option exploration nights designed to help Materials Science and Engineering (MatSE) undergrads choose an option from the four that are offered in the program: Metals, Ceramics, Polymers, and Electronic and Photonic Materials. Each night featured presentations by faculty members and industrial representatives as well as demonstrations to help students get an idea of what each option encompasses.

Service

For the third year, The Penn State Chapter has sponsored a team at Relay for Life with both undergraduate and graduate MatSE students. Trivia nights and a variety of other fundraisers were held throughout the year to raise money for worthy causes. In light of the tragedy in Haiti, the Chapter organized a drive for necessities. Over the course of a week, enough donations were gathered to fill a station wagon to the brim. A new service offered this year by the Penn State Chapter is peer tutoring, including exam cram sessions for major prerequisite classes as well as weekly office hours.



Outreach

The largest outreach event of the year is the Earth and Mineral Sciences Exposition, or EMEX. EMEX is an annual recruitment event sponsored by the College of Earth and Mineral Sciences, which hosts the MatSE program. The Keramos chapter staffs a series of facility tours and demonstrations designed to inform prospective students about the wonders of Materials Science and Engineering.



Fundraising

A variety of fundraising events are held each year to cover the cost of traveling to conferences, social events, and other expenses. A new event sponsored this year was a night out at a local restaurant where the chapter received a portion of the profits. There is also an ongoing soda sale, which has already raised over one hundred dollars with little time expended by the students. Finally, the Chapter is selling winning prints from a scientific image competition sponsored by the department.

Social Events

In addition to outreach and service events, the Chapter plans social activities to help the members of Keramos to become better acquainted. One event that was a hit this year was a bowling night, where twenty of the members competed for the highest score. We are excited for the upcoming pig roast, where students, faculty and alumni will get the opportunity to interact.



Letter from the President

Dear National Keramos Officers,

Greetings from the Pennsylvania Chapter of Keramos! As I finish my first and only term as chapter president, I am very proud of our accomplishments over the past year. Whether involved in outreach and service, professional development, or social events, our schedule has remained full over the course of the academic year. Of course, I could have never coordinated all of these events without the help of the other Keramos officers– Laura Jean, Anne, Craig, and Nick. Thank you!

Our chapter continues to find dedicated and qualified candidates for membership within the Department of Materials Science and Engineering. Indeed, many of our new officers for the 2010-2011 academic year are rising sophomores and juniors, and will provide a fresh perspective on our chapter activities.

In addition to our core function of inducting and recruiting new members, I am pleased with the number of professional development and materials-related events we have held. I am also proud to say that Penn State Keramos members are not only the people who are planning and attending Keramos events. Our members are the students who nominate and recommend faculty and staff for university awards, provide leadership for other on campus student groups, and organize improvements to everyday life in the department (such as researching and requesting the installation of a water filtration system in the commons room).

With everything we have accomplished over this past year, it is my privilege to present the annual chapter report. If you have any questions or suggestions, I encourage you to contact me at hb15004@psu.edu.

Fraternally,

A handwritten signature in cursive script that reads "Helen Larsen".

Helen Larsen