

Keramos Fraternity  
University of Arizona 2012-2013 Annual Report



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Submitted on:

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# Contents

<b>1 Chapter Adviser Executive Summary</b>	<b>3</b>
<b>2 Annual Plan for the Upcoming Academic Year</b>	<b>4</b>
2.1 Goals . . . . .	4
2.2 2013 Officer Orientation . . . . .	4
2.3 MS&T 2013 . . . . .	4
2.4 Introduction to Engineering Night . . . . .	5
<b>3 List of Officers, Delegates, and Alternates for the Coming Academic Year</b>	<b>6</b>
<b>4 List of Active Members</b>	<b>7</b>
<b>5 Treasurer’s Report</b>	<b>8</b>
<b>6 Chapter’s Activities</b>	<b>9</b>
6.1 Keramos Website (Keramos.arizona.edu) . . . . .	9
6.2 MSE BBQ . . . . .	9
6.3 Fund Raising . . . . .	10
6.3.1 Glass Flowers Sale . . . . .	10
6.4 Outreach . . . . .	11
6.4.1 Cholla High School . . . . .	11
6.4.2 Catalina Foothills . . . . .	12
6.5 Raytheon Tour . . . . .	12
6.6 MSE Homecoming . . . . .	12
6.7 Introduction to Engineering (ENG102) . . . . .	13
<b>7 Summary</b>	<b>13</b>

# 1 Chapter Adviser Executive Summary

The University of Arizona Chapter of Keramos had a strong 2012-2013 academic year. It continued its focus on fund-raising, outreach, and tutoring, and it is poised to continue to have a major continuous positive impact on the Department of Materials Science and Engineering.

The organization has instituted a new policy for its officers to ensure smooth transitions and continuity when officers graduate, and this promises to improve the efficiency of the organization by reducing the fraction of time during which officers are getting their bearings.

The chapters outreach activities have been especially active, with a broad strategy of interacting with several age groups to educate students and to promote materials science and engineering as a possible major. Given the relatively small percentage of incoming high-school students who have ever heard of MSE as a possible career path, these outreach activities can have a particularly large impact. In coordination with our local chapter of Material Advantage, the chapter engaged with students at local elementary schools, middle schools, and high schools to educate them about what the field has to offer. Additionally, the chapter works closely with MSE faculty to assist in on-campus outreach activities such as the annual Meet Your Major fair, the freshman engineering Open House for engineering majors who have not chosen a specific engineering discipline, and other activities intended to increase the visibility of the major within the campus community. The consequence is that undergraduate enrollment in MSE is up more than 40% from last year.

For existing students, tutoring was again a popular service having a significant impact within the MSE student body as well as with students minoring in the field. These outreach efforts have had an impact in both the student morale and enrollment numbers for the department.

The chapter also continued its participation in the annual MS&T conference and the Mug Drop competition held there, and it will send members again this year.

Thus, the University of Arizona Chapter is in an excellent position, and I look forward in the coming years to further assisting the chapter in my role as Faculty Advisor.

Asst. Prof. Robert G. Erdmann  
Department of Materials Science and Engineering  
University of Arizona

## **2 Annual Plan for the Upcoming Academic Year**

### **2.1 Goals**

Serving the community has always been the ultimate goal of the University of Arizona chapter of Keramos and also its continuation. As members graduate and go on to different parts of their life, new members will revitalize and continue the professional development and scholarship of students here at the University of Arizona.

Another goal of our chapter is attendance at the national chapter meeting. The previous year's funding was secured through the university's ASUA organization, which helps fund student organizations for such events. Other funding came from fund raising events conducted throughout the year. We send four members to last year's MS&T, making it our highest attendance yet.

Outreach and community involvement are key components of our mission. We perform an increasing number inter-college and high-school outreach events, one side effect of which is a continuing rapid increase in the number of students joining the MSE program here at the University of Arizona.

As new members are inducted and senior members relinquish their roles as officers, there is a constant need to teach and initiate new leaders to ensure continuity. We have devised a way of having the new officers "shadow" the current office-holders Keramos for a period. This will help ensure they are up-to-date and ready to perform their duties with minimal down-time, thereby increasing the efficiency of the entire organization.

### **2.2 2013 Officer Orientation**

We have decided to hold officer elections in the fall instead of spring. This ensures that there will be one semester during which outgoing and incoming officers are both present, enabling a longer period for training and transfer of knowledge. Once the former officers graduate, incoming officers will be completely prepared to assume their new roles.

### **2.3 MS&T 2013**

MS&T has always been an indispensable way for students to see cutting-edge MSE research and to network with the materials community from both academic and industrial backgrounds. Last year, we sent four representatives, we we plan on sending the same number or more to MS&T in Quebec Canada this year.

International travel might prove to be a financial challenge. This interest in attending MS&T has driven us to find different ways in finding funding.

Funding for travel has been found from the University of Arizona's ASUA which is a student organization dedicated towards funding student clubs for events such as these. This funding has significantly helped our last trip but was not enough. The generous funding received at MS&T 2012 at the national Keramos chapter gathering helped one more member attend the conference. Also, fund-raising events such as selling hand-made glass flowers helped. Accommodations for MS&T were done four months in advance, which proved useful in preparing to navigate public transportation and other logistical details. Therefore, MS&T 2013 will be prepared and organized within four months of traveling to Quebec, Canada. Aside from funding, students were able to network with possible employers and researchers from around the world. This experience helped one of our members in choosing a graduate school.

## 2.4 Introduction to Engineering Night

Introduction to Engineering Night is a bi-annual event hosted by the College of Engineering at the University of Arizona to give undecided undergraduates a better understanding of majors and curricula within the college. The event was run by students and has proven to be a great recruitment opportunity for Keramos and the MSE department. As a collaborative effort between the department of MSE and Keramos, incoming freshman gain a look into the field from the viewpoints of both MSE professors and student members of Keramos. Some of the demonstrations include glass blowing, casting of aluminum, superconductor-based magnetic levitation, an array of different materials samples and an inspiring speech by a department professor.



Figure 1: Student demonstrating glass molding of the wildcat A.

### 3 List of Officers, Delegates, and Alternates for the Coming Academic Year

Table 1: Officer elections in Fall 2013.

Office	Name	Phone	Email	Address
President	Garrett Coleman	[REDACTED]	[REDACTED]	[REDACTED]
Vice President	Brendan Tobin	[REDACTED]	[REDACTED]	[REDACTED]
Treasurer	Stephanie Greiner	[REDACTED]	[REDACTED]	[REDACTED]
Secretary	Victoria Marotto	[REDACTED]	[REDACTED]	[REDACTED]
Herald	Rita Weinzettle	[REDACTED]	[REDACTED]	[REDACTED]

## 4 List of Active Members

Our chapter has 16 active members in total. This number includes four faculty members, and twelve student members. Our chapters activities routinely include the University of Arizona Materials Advantage chapter as well, resulting in participation by non-members in many club activities.

Table 2: Officers, Delegates, and Alternates (Alphabetic)

Name	Title	
Dr. Robert Erdmann	Chapter Adviser	
Dr. Erica Corral	Faculty Member	
Dr. Pamela Vandiver	Faculty Member	
Dr. B. G. Potter	Faculty Member	
Garrett Coleman	President	Delegate
Brendan Tobin	Vice-President	
Rita Weinzettle	Herald	
Victoria Marotto	Secretary	
Stephanie Greiner	Treasurer	
Vanda Ngo		
Autumn Eaton		
Sean Ji		
Bradley Rubin		
Ivy Hasman*		
Andrew Schawb*		
Diane Haiber*		
Thomas Wisbey*		
Chance Fribbs*		
Ariel Rieffer*		

\* Will be inducted April 19th 2013.

## 5 Treasurer's Report

Table 3: Transactions for the past Academic Year

Date	Transaction	Income	Outflow	Balance
09/07/12	Starting Balance			372.46
09/07/12	Meeting Food		20.00	372.46
03/07/11	Meeting Food		30.00	352.46
03/31/11	Keramos Travel Check	332.00		332.46
04/20/11	Other Travel Income	10.00		654.46
05/04/11	ASUA Travel Funding	1376.00		664.46
05/10/11	Flight Reimbursement		780.00	2040.46
06/01/11	Other Travel Income	100.00		1260.46
09/07/11	Flight Reimbursement		1150.00	1360.46
09/14/11	Glass Flower Profit	225.00		210.46
09/21/11	Lounge Supplies		63.22	435.46
05/22/12	Current Balance			372.24



## 6 Chapter's Activities

### 6.1 Keramos Website ([Keramos.arizona.edu](http://keramos.arizona.edu))

Currently, only a few chapters have put the effort into creating a website. Among those that exist, only a few feature current information. This highlights the need for a website to share the opportunities a student can have by joining Keramos and to keep other chapters informed on our activities. Our website is located at <http://keramos.arizona.edu> Address and is hosted by the University of Arizona.

The website is not only for members to know what events are going on but is also a great resource for current and potential members for professional development. One such development is the exhaustive list of scholarships ranging from undergraduate to graduate and even post-doctorial fellowships. The website also serves as a great way for learning about the chapter's activities.

Three pages are dedicated to a slide-show, hosted by Picasa, of our cross-country travels, group bonding events and interactive outreach activities. These images are constantly being updated with new ones; the constant new information serves as another incentive for prospective students.

### 6.2 MSE BBQ

The Materials Science and Engineering Department at the University of Arizona has a long history of parties and other events that bring students and faculty together, but it has long been lost. Hidden within the closets at the off campus research facility, Arizona Material Laboratory (AML), pictures from past decades show myriad events that allowed students and faculty to bond and grow.

As the years passed, focus partially shifted away from the AML facility as more professors conducted research on campus. If asked, most undergraduate students wouldn't know of their professor's research at AML. Keramos wanted to change this lack of knowledge and help them understand what graduate school is really about with exposure to the facility at AML.

The solution was to hold a BBQ event at AML, attended by professors, staff, and undergraduate and graduate students. The BBQ featured game, grilled food, and tours of the AML facility. This event had over 50 attendants and from the positive feedback will help retention rates and future recruiting efforts.



Figure 2: The BBQ brought over 50 professors, students and faculty together into one place. The event was entirely run by students but funded by the department.

## 6.3 Fund Raising

### 6.3.1 Glass Flowers Sale

This fund raising event consisted of selling student made glass flowers during Valentine's day. The outcome was a profit of \$500. The flowers were made from a boro-silicate base and incorporated coloring for an additional fee.

The popularity of the event came from the unique, affordable idea and promotion. For hours students worked hard at making the flowers in having them be a sign of love and care between people at a reasonable cost. The flyer was made by a graphic designer that traded his work for a flower.

**Clearly Thoughtful**  
Handmade glass flowers from  
the Keramos fraternity

**\$10 clear**  
**\$15 colored**




These handcrafted glass flowers are the perfect gift for Valentines Day, anniversaries , or whenever you just want to show that special someone in your life that you care. All profits from these flowers go to funding student activities within the fraternity such as field trips, community events, and workshops.

To purchase please contact:  
keramosuo@gmail.com

<http://keramos.arizona.edu>

Figure 3: The flyer used to distribute information pertaining towards the sale of glass flowers.



Figure 4: The production line of the flowers where students spent many hours manufacturing glass flowers.

## 6.4 Outreach

### 6.4.1 Cholla High School

Every semester, Keramos hosts an outreach event at Cholla High School, a low funded high school. We believe that scholarship and success cannot only blossom from the financially endowed schools but also the less fortunate ones. Therefore, it is important for us to visit these schools to give students the hope and desires to attend a university and create a better life for their whole family.



Figure 5: Garrett Coleman shaking the hand of Cholla High School Science Teacher Brian Candee.

### 6.4.2 Catalina Foothills

Catalina Foothills High school serves as a prime source of incoming students to the MSE Department at the University of Arizona. A Catalina Foothills alumnus with access to the contact information of a teacher created and conducted two captivating demonstrations. The demonstrations are scheduled every semester.



Figure 6: Ivy Hasman demonstrating a levitating magnet on a superconductor.

### 6.5 Raytheon Tour

The Material Advantage club at Arizona State University and Keramos at the University of Arizona have scheduled a joint tour of the Raytheon facility. The time of this event will be after the submission of this document so details will be included in next year's report. However, this collaboration between universities is a great first step toward more engaging and professional opportunities available to members.

### 6.6 MSE Homecoming

MSE Homecoming, a newly-revived event, is a collaboration of the department of MSE and Keramos. This event is directed toward bringing alumni back to the school in order that the department can maintain constant contact with them. Many of the Keramos members had opportunities to interact with MSE alumni who are currently at Raytheon, Honeywell, and other large companies. One distinguished guest was a gentleman who graduated in 1954, long before MSE was created as a major. The gentleman told great stories of his time in the then-metallurgy department's building.



Figure 7: Brendan Tobin demonstration glass blowing, MSE alumnus and his daughters, and 1954 alumni from left to right.

## 6.7 Introduction to Engineering (ENG102)

This introductory class for freshman at the University of Arizona has always been the prime source of new members of Keramos and the materials science and engineering major. Students here learn about the different engineering degrees and what they entail. Keramos and its faculty adviser participate in demonstrations at the two events. One of these two events was Engineering Open House. A total of nine students helped our Adviser with demonstrations ranging from casting off aluminum, levitating a magnet over a superconductor, glass blowing and several other demonstrations. The second event was called New Student Welcome, featuring booths from each major designed to teach new students about the possible engineering majors and related clubs. Keramos assisted in running the MSE table, as it has in past years.

## 7 Summary

The University of Arizona chapter of Keramos had a successful year and is poised to continue its record of excellent service to the discipline and to the department of MSE. Several new events, continuation of long-standing recurring outreach events, attendance at the MS&T conference, and the creation of a new website are among the chapter's achievements.