



Excellence • Scholarship • Tradition

Missouri Chapter of Keramos

2021 Annual Report



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I. Chapter Advisor Executive Summary

This is the most difficult advisor report I have had to write in a great many years. It has been a year like no other. Typically, I go on and on about the wonderful accomplishments the Missouri chapter has had. That was a product of how things were designed here in Rolla. Over a decade or more the executive boards had established a core group of professional development, outreach and social activities and they had honed them to a point where things would function almost on autopilot. That freed each new board to be creative and try to come up with new and interesting ways to further the mission of Keramos. Year after year, I watched the crews do such a good job that it made me proud to be a member of Keramos and to be their advisor. I often ended my report with those exact words.

This past year was extremely different. This past year, the executive board struggled to find ways to engage the membership. The activities that had been so smoothly provided in years past seemed impossible to provide. Student engagement was at an all time low as students were scattered all over, holed up and just hoping to ride out the storm. I too was far less involved at a time where my involvement likely would have been most valuable. They soldiered on, led by the motivator and cheerleader, Tony Luebbert. He was the only leader that could have successfully steered Keramos through the storm. His mixture of seriousness regarding the Covid situation, drive related to not allowing this to compromise the mission of Keramos and enjoyable nature that saw these as fun puzzles that we could solve together is what salvaged what could well have been a last year. Instead Keramos had zoomed etiquette dinners and socials and even the department banquet. They provided co-op presentations and aided in outreach activities as well. It was impressive to observed first-hand. It wasn't just Tony as the entire board stepped up and found a way to engage the membership, providing them some semblance of normalcy, a normalcy that all of us needed and still need even today.

I am proud to be a member of Keramos. I am grateful to have met this crew of truly outstanding people and I am confident that they will be able to manage any situation they face in the future. Keramos is in good hands with members such as them.

II. Annual Plan for Upcoming Year

The past year has been a challenging one for everyone, including the Missouri University of Science and Technology's Keramos chapter. Even with all the changes and new regulations, we were still able to carry out most of our activities and beloved traditions. While we couldn't be in person for everything such as the etiquette dinners, Lunch and Learns, and the spring banquet, we were still able to get together, learn, and share some laughs. I am honored to serve as the president of our Keramos chapter this year, and I hope to increase student involvement as the restrictions are slowly being removed. I also want to have an improved level of communication between the Materials Science department organizations, a focus on department outreach, and a strong showing at the MS&T conference.

Each organization has its own set of goals and activities, but I think that more can be accomplished if we work together. Events like cross casting between Keramos, AFS, and now CAST (Ceramic Artists of S&T) are a great way to build friendships and strengthen department ties. These events put us with people we might not always work with so that we can get to know each other and exchange ideas. Teaming up with the other Materials Science department organizations can also be rather helpful with bringing in prospective students. Open houses that include demos from these organizations would show high school students the extracurricular activities we offer on top of the exceptional academic programs.

I would also like to bring back a Materials Bowl like what was done in the past. It would be an event for the local high schools to get together and compete in materials science themed trivia questions. Of course, this could only happen if the situation allows for it. Another possible outreach opportunity was created by the previous Student Council President called the Champions program. It involves sending students back to their high schools to talk about Missouri S&T which I think would be worth looking into. This kind of program would be helpful for the department as well as Keramos.

Our performance in the MS&T conference competitions has not been as good as it could have been in the previous year. Part of this was due to the circumstances but organizing the projects ahead of time would allow for a better showing. An archive will also be set up for the competitions which allows the next group of students participating to have a good starting point. Teams for each project should also be set up well before the conference so that they can have adequate time to prepare.

I look forward to a productive year that hopefully includes some seminar donuts.

~Jacob M. Stacy, 2021-2022 MST Keramos President

III. List of Officers for Upcoming Year

Name: Jacob Stacy* Office: President Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]	Name: Krista Hilmas* Office: Vice President Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]
Name: Elizabeth Sayre Office: Secretary Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]	Name: Julie Johnston Office: Treasurer Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]
Name: Catherine Colletti Office: Herald Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]	Name: Michelle Woodley Office: Historian Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]
Name: Sarah Thornton Office: Nominations Chair Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: [REDACTED]	Advisor: Dr. Jeff Smith Address: [REDACTED] Phone Number: [REDACTED] E-mail Address: jsmith@mst.edu

*Delegates for 2021 Convocation

IV. List of Active Members

<u>November 12th, 2020 Initiates</u>		
Wannenmacher, Jacob	Woodley, Michelle	Pizzo, Erica
O'Dell, Josie		
<u>April 16th, 2021 Initiates</u>		
Reed, Zoe	Kimsey, Karson	Vortmeier
Pallett, Michelle	Malins, Lukas	
<u>Undergraduate Members</u>		
Abbott, Ashleigh	Grier, Sophie	Sabata, Clare
Asbury, Meredith	Hilmas, Krista	Sayre, Elizabeth
Basler, Grace	Hopper, Danielle	Schneider, Anna
Bax, Alyssa	Johnson, Caelen	Schottel, Jaden ²
Blatt, Nathan ²	Johnston, Julia	Schuman, Jared

Boland, Sydney ²	Kaczmarek, Anna ²	Shellabarger, Stephen
Burkett, Mitchell	Khayat, Michael	Smerek, Kyle
Buznego, Alana	Lenox, Megan	Smith, Steven ²
Childers, Alaina ²	Lewis, Theodore ²	Smith, Tessa ¹
Christian, Jordan	Luebbert, Anthony	Stacy, Jacob
Colletti, Catherine	Malpocker, Sophia	Sutalski, Elliot
Dachroeden, Grant	Meyer, Amber ²	Thomasson, Caitlin
Decker, Michael ²	Miller, Garrett	Vishy, Matthew
Duncan, Katie ²	Mrotek, Jay	Weyrauch, Noah ²
Eagen, Katelin ¹	Phinney, Cole	Wiles, Brooke ¹
Gordon, Joseph	Read, Aaron ¹	Williams, Deja ²
Graber, Allison ²	Reicher, William	Wyand, Robert
<u>Graduate Members</u>		
Brune, Paul	Martin, Hannah	Spratt, Myranda
Cook, Rachel	Murchie, Alec	Stanfield, Austin
Blatt, Rebekah	Pommerenke, Hans	Timme, Nicholas
Jarmann, Jecce	Richards, Tyler	Volz, Steven
Jarvis, Leiren	Scott, Jonathan	Wittmaier, Connor

Lapeyre, Jonathan	Scott, Margaret	
Martin, Austin	Shoaib, Noor	
<u>Faculty</u>		
Dr. Laura Bartlett	Dr. Wayne Huebner	Dr. Mark Schlesinger
Dr. Richard Brow	Dr. Aditya Kumar	Dr. Bob Schwartz
Dr. Anthony Convertine	Dr. David Lipke	Dr. Jeff Smith
Dr. Fatih Dogan	Dr. Scott Miller	Dr. Jeremy Watts
Dr. Bill Fahrenholtz	Dr. Joe Newkirk	Dr. Kelley Wilkerson
Dr. Greg Hilmas	Dr. Ron O'Malley	
<u>Emeritus Faculty</u>		
Dr. Harlan Anderson	Dr. Darrel Ownby	Dr. Dave Van Aken
Dr. Delbert Day	Dr. Mary Reidmeyer	Dr. Von Richards
<u>Honorary Members</u>		
1947 – John C. Hostetter	1986 – Chandra Ray	2005 – Ted Day
1948 – Frederick Norton	1987 – Mohamed Rahaman	2006 – Ron Kosher
1950 – Paul Smith	1988 – Lokeswarappa Dharani	2007 – Eric Bohannan
1953 – Charles Smith	1989 – James Stoffer	2008 – Matt O’Keefe
1961 – William James	1990 – Daniel Armstrong	2009 – Ted Ruppert
1970 – John Arthur	1991 – Larry Heying	2010 – Sam Stang
1970 –John Holt	1992 – Richard Hagni	2012 – Cindy Schwartz
1971 – Harlan Smith	1994 – Daniel Stutts	2013 – S. Jill Glass

1973 – Hector McDonald	1996 – Bill Hibler	2014 – Jaci Huebner
1975 – Leroy Hart	1997 – Kent Peaslee	2015 – Mike Carson
1977 – Manfred Wuttig	1998 – Eric Schramm	2016 – Glen H. Kirby
1978 – Paul Cash	1999 – Ken Goretta	2017 – Kathleen Shugart
1980 – Edward Epstein	2000 – Terry Tiegs	2017 – Mrityunjay Singh
1981 – John Bartel	2001 – William Dawson	2018 - Gary Penell
1983 – Melvin Churovich	2002 – Carl Moody	2019 - John Story
1984 – Don Sparlin	2003 – Scott Miller	2020 - Sylvia Johnson
1985 – John Dial	2004 – Chris Ramsey	2021-David Lay

¹Members Graduating Fall 2020

²Members Graduating Spring 2021

New Members

The Keramos chapter at Missouri S&T selected nine to initiate in the fall and spring semester. Initiation was held on November 12th, 2020 and April 16th, 2021. For the fall semester we were able to hold initiation in-person following COVID-19 protocols, so that everyone was safe and kept their distance. To keep the chapter involved and show support to the new members, we also telecasted the initiation via Zoom, with general members and faculty only. The spring semester was also held in-person and allowed more members and faculty to participate and show their support, as well as offering general members to join via Zoom. We also had a plaque contest for both semesters where faculty joined in the Commons of McNutt Hall and voted for the best plaque.

A bittersweet event also happened the same day and time as the spring semester, in which a fellow MS&T faculty member had received a Nobel Laureate in Chemistry, so some Keramos faculty were invited to attend so they couldn't attend.

The initiation process is similar to that in the past years. Initiates began by submitting an application that allowed the executive board to gauge their interest in join Keramos. Our chapter continued utilizing an electronic application process to facilitate reaching more students and reviewing applications easier.

In order to be initiated, students were required to attend the Missouri S&T virtual career fair and/or get their resume reviewed, MSE virtual etiquette dinner, and create a Keramos plaque and an initiation test must be passed to demonstrate knowledge of the organization. When

initiates are notified that they have been selected they are given information on the history of Keramos. his information as well as general materials science knowledge and information about our MSE department. All of our initiates successfully passed the pledge quiz in order to be initiated.

Past requirements were attending a Miner Job for Major Cash (MJMC) but because of MS&T COVID-19 regulations wouldn't allow it. The virtual required events were held via Zoom, due to COVID-19 regulations where many faculty and general Keramos members were able to attend.







V. Graduating Members

Fall 2020 Graduates

<p>Katelin Eagan Address: [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Tessa Smith Address: [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Aaron Read Address: [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Brooke Wiles Address: [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>

Spring 2021 Graduates

<p>Nathan Blatt Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Theodore Lewis Address: [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Sydney Boland Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Amber Meyer Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Alaina Childers Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Jaden Schottel Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Michael Decker Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Steven Smith Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Katie Duncan Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Noah Weyrauch Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Allison Graber Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	<p>Deja-Shea Williams Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>
<p>Anna Kaczmarek Address: [REDACTED] [REDACTED] Phone: [REDACTED] E-mail: [REDACTED]</p>	

VI. Missouri Chapter Honorary Keramos Nominations



The Missouri Chapter of Keramos would like to nominate Professor David Lay as an honorary member for the 2020-2021 school year. Professor Lay is a physics lecturer at Missouri University of Science and Technology.

Professor Lay received his masters degree in chemical physics from the University of MO-St. Louis in 1986. He demonstrates a clear understanding of the topic along with the ability to engage his students in physics. Lay is very knowledgeable in many subjects including aviation to medical procedures to survival strategies.

Not only does Professor Lay care about sharing his knowledge, his lectures have helped students solidify their physics skills. His lectures while they aren't conventional, help the students work through real world examples. He teaches with such a passion that his clear care for each student comes through. The positive impact of Professor Lay on the education of many material scientists at Missouri S&T during his thirteen years as a professor is one of his many accomplishments. Professor Lay is skillful in teaching physics to any student and motivating the students when necessary. The students in Keramos and many others have benefited from learning in his class. His dedication and passion to teaching physics and engaging students make him an outstanding candidate to become the next honorary member of the Keramos Fraternity.

VII. Treasurer's Report

The Missouri Chapter of Keramos obtained a total of \$880.00 and spent a total of \$1957.55 over the course of the 2020-2021 school year. The \$880.00 was gained through a combination of fundraising events and member dues. The \$1957.55 was spent mainly on the CGIF project to send demo kits out to high school students to get them interested in STEM. The remaining money was allocated for department events such as banquets and initiation. The following three tables contain the annual expenditure report for the Missouri Chapter for the bank account, cash bag, and Venmo account.

Bank Account				
Date	Debit	Credit	Balance	Description
9/9/2020			\$2304.31	Beginning Balance
9/18/2020	-\$151.95		\$2152.36	Ted Day Funeral Flowers
11/30/2020		\$300.00	\$2452.36	Money Bag Deposit
11/30/2020		\$500.00	\$2952.36	MJMC
2/5/2021	-\$135.00		\$2817.36	Keramos King and Queen
3/18/2021	-\$897.44		\$1919.92	Outreach Demo Kits

Cash Bag				
Date	Debit	Credit	Balance	Description
9/9/2020			\$763.00	Beginning Balance

9/16/2020	-\$75.00		\$688.00	Ted Day Funeral Vase
11/3/2020	-\$300.00		\$388.00	Transfer to Bank Account
3/2/21		\$10.00	\$398.00	Member Dues
4/19/21	-\$10.00		\$388.00	Best Plaque Award (Return of Initiation Dues)

Venmo Account				
Date	Debit	Credit	Balance	Description
9/9/2020			\$758.64	Beginning Balance
9/10/2020	-\$56.97		\$701.67	Steam Account
11/6/2020	-\$10.00		\$691.67	Best Plaque Award (Return of Initiation Dues)
3/1/2021		\$30.00	\$721.67	Member Dues
3/4/2021	-\$13.91		\$707.76	Mailed Graduation Pins
3/6/2021		\$10.00	\$717.76	Member Dues

3/19/2021	-\$17.66		\$700.10	Demo Kits
3/19/2021	-\$26.19		\$673.91	Demo Kits
3/29/2021	-\$200.35		\$473.56	Shipped Demo Kits
4/1/2021	-\$40.00		\$433.56	Etiquette Dinner Gift Cards
4/2/2021		\$30.00	\$463.56	Keramos Chords
4/22/2021	-\$23.08		\$440.48	Banquet Awards

VIII. Chapter Activities

A. Fundraising

Miner Jobs for Major Cash

Starting in the fall of 2014, the Missouri Chapter began a program entitled “Miner Jobs for Major Cash” (MJMC), in which student members of the chapter would perform a service project for a faculty member in the department. In exchange for help the faculty member would donate to the chapter. Last year, the executive board made attending a MJMC a part of the Initiation requirements. This gives our new members time to bond with their pledge class, feel connected to the organization, and help the organization gain funds. Tasks in this year's MJMC included organizing firewood, building dog kennels, and general yard work. The attendees raised a total of \$500 for our Keramos Chapter. The department faculty also enjoy hosting the students for these events with many faculty members providing food and good conversation for the members that help out.



B. Educational Outreach

Our objective was to showcase the wide variety of materials and applications that make up the field of ceramics and to inspire students from all ages to pursue an education in ceramic engineering and material science. The Missouri Chapter of Keramos worked diligently throughout the year to provide aid and opportunity for educational outreach activities.

Demo Trainings

The Materials Science and Engineering department at Missouri S&T has a long history of involving students who are interested in joining the department. In order to keep this tradition going, Keramos members helped train new students on how to perform our materials science demonstrations. These demos cover topics such as glass, grain boundaries, fiberglass insulation, atomic structures, metallic materials, solid oxide fuel cells, and other technical ceramics. Keramos members held one demo training session per semester for a total of two sessions this year to train ten MSE students on how to perform our demos for all age ranges. The majority of those who received demo training this year are now initiated members of Keramos and can now help our department uphold our legacy of providing prospective students a real glimpse into what materials engineers do. The others have gotten to witness what Keramos is all about firsthand and our hope is to galvanize these students to continue spreading the word about ceramics and

material science and inspire them to join Keramos in the future.



Virtual Outreach

The chapter decided to hold virtual outreach sessions via Zoom for middle school and high school students because we were no longer able to travel and give demos in the spring semester. This talk covered an overview of the materials science department and applications for ceramic materials. Our executive board worked in conjunction with a professor to plan and execute two sessions in order to give prospective students an introduction to materials science.



CGIF Demos at NSTA Conference -

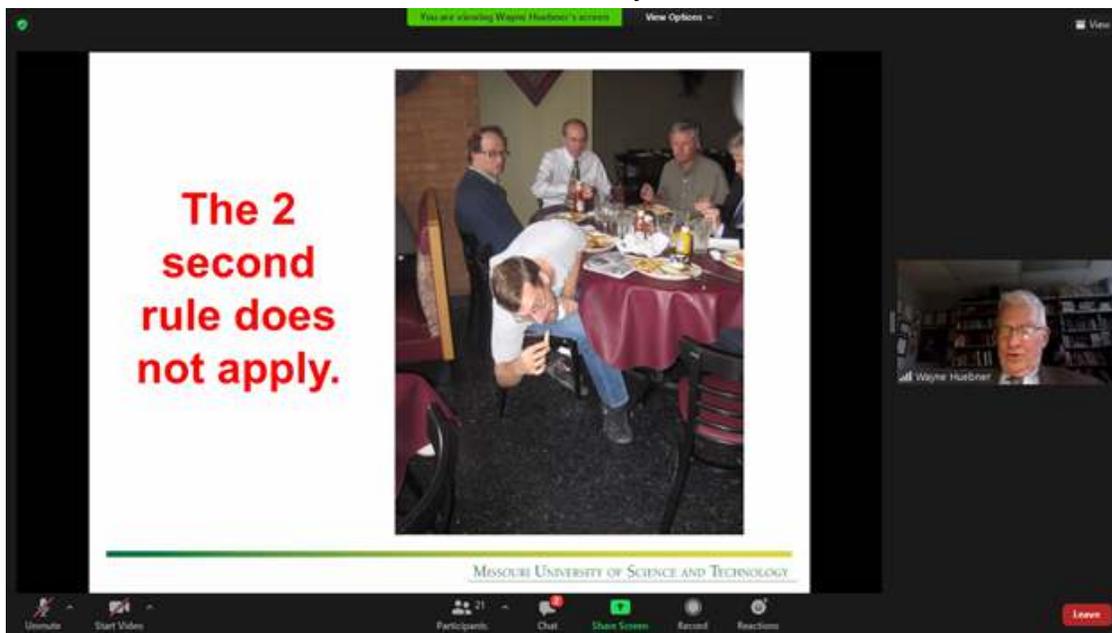
The Ceramic and Glass Industry Foundation (CGIF) promotes learning about materials science through their materials science classroom kits. CGIF has been attending the National Science Teachers Association (NSTA) conference for the past couple of years and showing teachers how these kits work. This year the conference is being held in St. Louis, so one of our student members and one of our faculty members have volunteered to help CGIF at the conference in mid April. There, the two will explain some of the science behind the demos in the kit, and even show how some of the demos work. These Keramos members will also be working alongside various members of industry and other students to help encourage teachers to promote materials science in their classrooms.

C. Professional Development

Etiquette Dinners

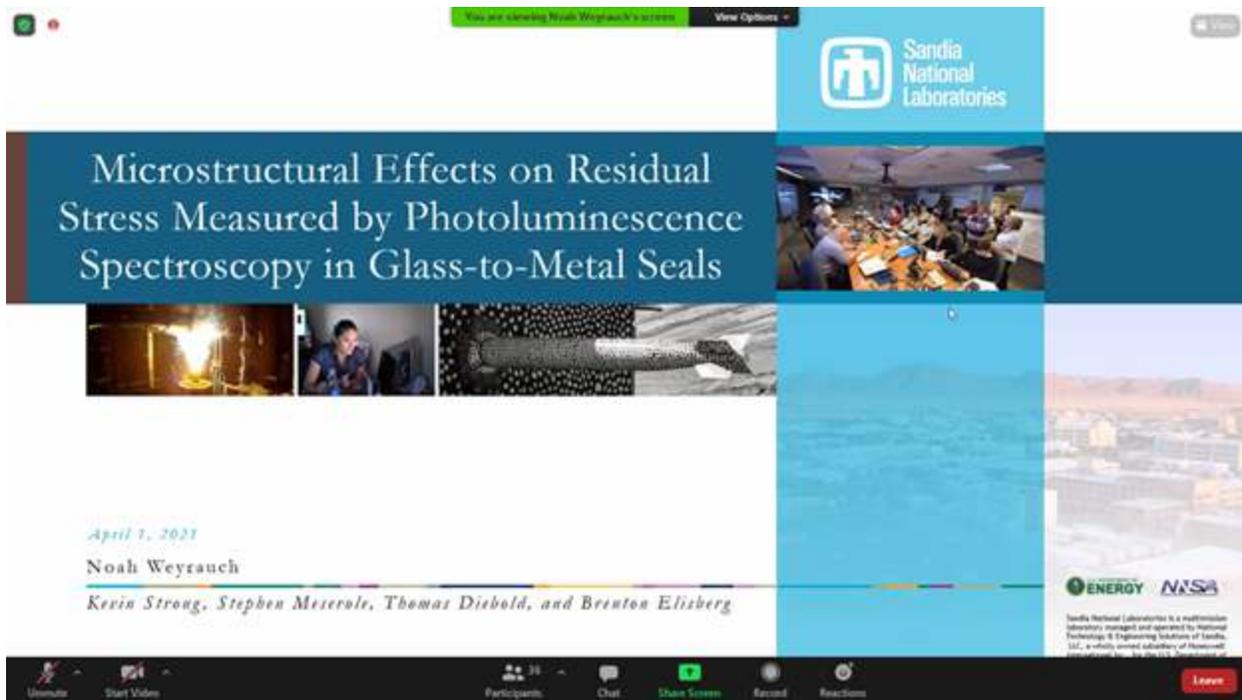
Each academic year Keramos hosts two etiquette dinners. The purpose of the etiquette dinner is to mimic a formal dining interview and teach how to conduct oneself in this type of situation. Through our sponsors, students are also able to socialize and learn from industry

professionals and professors. This year one etiquette dinner was planned for the spring. Our etiquette dinner was held virtually over Zoom. Students were given the opportunity to pick up Taco Bell free crunchy taco coupons from the department to grab dinner for the event. The host is there to guide the students through a presentation of proper etiquette, to offer tips, and of course to add some humor to the event. This year Dr. Wayne Huebner graciously hosted the event. Keramos was very pleased to adapt the event to consider the health and safety of the department and still have the education and community we desired.



Lunch and Learns

One of the long-standing traditions within the department is the Keramos Lunch & Learn. Unfortunately, with the restrictions to meeting in person it had to look a little different this year. This year 4 students spoke about their research and co-op experiences and shared helpful tips and tricks for students going on co-op or looking for work. Each student had 12 minutes to present their work and an additional 3 minutes for questions from the crowd. Students then were able to write about what they learned for credit in lab courses and ask clarifying questions



Student and Professor Advising Session

This year with the virtual setting we were often forced to operate in the chapter saw a loss of communication for things like how to set up a schedule or what classes are good to take together. Keramos saw this as an opportunity to invite 2 professors and all the undergraduates to an online meeting to let people ask questions and share experiences about taking the certain courses and general setup of schedules.

Resume Reviews

Two weeks before the career fair, our Keramos Chapter helped to hold resume reviews for members. Members were asked to upload their resumes on a google form where they were reviewed and given critiques by the executive board. This helped many members to refine their resumes for greater success at the career fair.

Graduating with Honors

This is an honor given to the outstanding members of Keramos. Graduating seniors are able to wear blue and gold honor cords at graduation and seniors who receive the graduating with honors distinction also get to wear a Keramos gold pin. Seniors fill out an application and write about the following criteria and how they went above and beyond: departmental activity, professional development, research, and other campus involvement. Any E-Board members who are not graduating evaluate the responses and choose the top candidates as compared to the rest of their class.

D. Networking Events

Calendar

A Google calendar was created showcasing all the events, meetings, professional development, and service opportunities that went on throughout the year. The calendar also provided information on events that were going on in the department to help keep Keramos members not only active in the organization, but also within the Materials Science department on our campus. This calendar proved to be a great resource for increasing involvement among members and within the department.

MSE Department Discord

Following the announcement that classes would be held remotely for the rest of the spring semester in March, the executive board wanted to provide a way for students to still engage with one another in a manner similar to congregating in the McNutt commons. We decided to put together a department Discord which students can log on and talk to one another or ask questions on homework. This allows students to have a sense of belonging in this time of online classes and uncertainty. This year we have continued to utilize this as a tool to hold meetings, socials, and other ways to communicate.

E. Services to the Community

St. Patrick's School Science Fair

On February 18th, the Missouri S&T chapter of Keramos helped out at the St. Patrick's School Science Fair. This event is held once and year and students from fifth to eighth grade put together poster presentations on a scientific experiment that was conducted by themselves during the previous months. This year the event was held online in order to keep the event safe. Members of Keramos donated time to help judge these posters and interact with students on the projects they were recently involved in. Each student was asked a series of questions to help see how well they understood their project. Based on score sheets filled out by Keramos volunteers, winners were decided from each grade level. The help our members provide in judging helps to drastically reduce the time the teachers at St. Patrick's School have to take to accurately grade and judge each project from the four classes. We also offer advice on how to improve their posters and presentation skills, as well as provide a student's viewpoint while judging their presentations.

Presentation Review for the St. John Bosco High School

On February 26th some of the Keramos executive board helped out at St. John Bosco High School in California. Jack Rosenthal's class were learning about ceramic engineering and were tasked with giving presentations on a material of their choosing. Keramos exec logged into a Zoom call and listened to six student groups present and followed with questions. We were also able to offer advice on how to improve their presentation format and speaking.

Spring Banquet

Like the Etiquette Dinner, The 2021 Spring Banquet was held virtually over Zoom on April 22 at 5 p.m. The event was graciously hosted by Dr. Hilmas. Honor was given to the MSE graduate and undergraduate students graduating in 2020. Praise was also given to awards and honors that professors, students, and student groups received throughout the year from the university and MS&T. New faculty was congratulated and the retiring faculty thanked for their passionate service to the department. Outstanding graduate and undergraduate students were voted on by the faculty and the students. These awards were presented at the banquet by chosen professors. Outstanding faculty awards were also voted on by the students and presented at the banquet by students.

F. Alumni Engagement

Alumni Keragram

Keramos maintained the tradition of sending a newsletter to alumni to keep them involved and up to date on happenings at Missouri S&T. Every month, the alumni receive a newsletter from Keramos keeping them up to date. The newsletter's objective was to address conference experiences, faculty and department news, and the future plans of Keramos. This has been successful and will continue to be used to connect with alumni.

April 8, 2021



KERAGRAM

Missouri S&T Keramaa Newsletter

Upcoming

- April 20, 2021 Spring Session
- April 27, 2021 Summer Session

Virtual Etiquette Dinner

Despite not being allowed to meet in person for the usual etiquette dinner, Keramaa was able to get an a virtual etiquette dinner over Zoom for the department. Dr. Hunter agreed to present proper etiquette to the students. Despite missing the dinner portion, students were still able to hear some interesting stories and see the live and interactive a professional dinner. The department had a great time learning from Dr. Hunter and enjoying students' live questions for dinner.



CGIF Outreach

This year for the CGIF outreach event, Keramaa organized extra books to send to high school students. Keramaa prepared some simple, short-yet-useful lessons to explain high schoolers to chemical science. A total of 215 chemical books were built and shipped out for students. These books have been well received and multiple high school teachers have ask for recommendations for their students. Thank you to our CGIF Chair for planning a successful outreach event!



Student Speaker Series

Keramaa organized a student speaker series during semester for incoming students. Students speak on their careers and undergraduate research opportunities. These series students agreed to present on their experiences. These students presented on their work as well as the benefits of taking these opportunities. This was a great experience for younger students to hear about opportunities, meet and network the department.



G. Convocation and Conferences

MS&T 2020

MS&T 2021 was held virtually in the fall. Missouri S&T had 25 undergraduate students, several of them Keramos members. Missouri S&T students competed in the Student Speaking Competition, the Mug Drop, and Disc Golf competitions. Ashleigh Abbott competed and won second place overall in the Student Speaking competition with a talk on the incorporation of bioactive molecules in layer-by-layer (LbL) films for biomedical applications. Several students submitted mugs for the aesthetic mug competition with Claire Pallett winning first and Michelle Pallett winning second place. Missouri S&T also entered the disc golf competition and took second place.



Keramos Convocation

Convocation this year began with an open forum led by the national student representative and Missouri Chapter member Tony Luebbert. Missouri Chapter member Will Reicher, was elected to be the next student rep. From there, the meeting moved into individual chapter presentations. Convocation ended with the distribution of national awards. The Missouri Chapter was pleased to accept both the Diamond Award and the James I. Mueller Outstanding Chapter Award. Next year, the Missouri Chapter plans on sending several representatives from our new executive board.

H. External Chapter Communications

National Student Representative

The Keramos National Student Representative is elected every year during the student portion of the Keramos Convocation. The National Student Representative is in charge of organizing the student portion of national conference calls, being a liaison between the student chapters and the National Board, and communicating the best practices of Keramos to the national chapters. This year it was especially imperative that chapters can communicate plans and maintain sociability in a transition to a virtual world.

At the Keramos Convocation at the 2019 MS&T conference in Columbus, a member of the Missouri chapter, Tony Luebbert, was elected as the next National Student Representative for the 2019-2020 school year. He participated in national conference calls and continued communicating with the chapter presidents across the nation. At the virtual 2020 MS&T conference, another member of our chapter was elected to the position, William Reicher.. He has plans to unite the chapters through a large virtual initiation and maintain communication among chapters in a virtual climate. We wish him luck for the remainder of his term.

IX. Keragram Article

The Missouri Chapter of Keramos has kept busy by bettering the organization and taking a very active role in preparing our student members for life in industry and grad school. Top priorities were to bring undergraduate members closer through both social and professional development events. Together with everyone, we had a great year of commoridry and growth as a chapter.

We started an alumni newsletter that went out to keep them informed of all the new happenings both within our chapter and in the department as well. This was received very well and caused some alumni to reach out to us and ask questions and offer themselves to be

interviewed for future editions. This is going to be used to connect the next generation of ceramists to our alumni for years to come. Long term, we would like this to be always something to let our members know they always have a spot within our organization.

This year we tried to focus on student involvement at each level despite the online setting. We managed to create events that were tailored to spark conversations and friendships between members who previously had not talked before because of grade or other reasons. We took student feedback and created discord socials and events to engage students of all grades.

To engage students, all Keramos members were invited to assist with our large outreach event of creating demo boxes for high schoolers. Students were engaged professionally with the student speaker series, resume reviews, and presentations provided by the Career Opportunities and Employer Relations office. Socially, a monthly Discord night was run for a chance to play games and interact with students safely.

X. Executive Summary

The trend of this year has been perseverance and finding ways to say “yes”. With the completely new environment that was surrounding most universities this year, very unique challenges were presented to the Missouri chapter. Throughout it all though, the bonds formed in Keramos shined through the computer screens and was still able to make a difference on campus and in the community. Still having most of the money from last year’s CGIF budget, our team was able to find a way to teach middle school and high school teachers and students about materials science. We were able to reach over 300 students with individualized boxes that taught them about the basics of materials science. We had the opportunity to sit in on high school presentations about composites and cements and give them feedback.

Keeping social in these times was a challenge but the use of online socials proved to be crucial to keep the Missouri chapter as tight knit as it always is. With the inability to do our “Skeros” and other in-person activities it was satisfying to still have in-person initiation with our recent classes to maintain the strong connection to tradition that is refreshing to have. It was incredible to watch the drive of the members wanting to stay in each other’s company regardless of how difficult it was to plan.

With anything done this past year, it is evident that it had to be done with intentionality. Looking back on previous years, the number of events was not the same, however, this year it is clear that every project and event mattered more to the Missouri chapter. Outreach continued with a new drive of energy, students kept social through computer screens, and faculty were utilized to spread knowledge and support to students. Even in a pandemic, the Missouri chapter took advantage of opportunities and stepped up to the challenge to still make Keramos relevant to the department and campus and it brought pride to see all the hard work to make it possible.

