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MESD
Materials Engineering & Sciences Division
http://www.aiche.org/community/sites/divisions/mesd

MESD Division Newsletter

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Notes from the Chair

Dear MESD Members and Friends,

On behalf of MESD, I would like to thank you all for your contributions, hard work and participation in our division and our field. These contributions are especially valued in the challenging year that we have had, and I continue to be impressed by the active engagement of the MESD community. We have an exciting meeting planned for Boston, and we are looking forward to welcoming many of you here in person for the first time in a while.

We are excited to honor our division award winners, selected from a highly competitive pool of nominees. The Braskem Award for Excellence in Materials Engineering and Science will be presented to Prof. Stacey Bent (Stanford University) for "insights into understanding and controlling surface and materials chemistry and the application to diverse problems in nanotechnology and energy." Prof. Lisa Hall (Ohio State University) will receive the Owens-Corning Early Career Award for "molecular theory and simulations yielding fundamental insights into the structure and dynamics of ion-containing polymers and polymer nanocomposites." We appreciate the service of Prof. Michael Tsapatsis (Johns Hopkins University) and Prof. Chris Ellison (University of Minnesota) in leading these award committees. The Division plenary will feature talks by Prof. Joern Siepmann (University of Minnesota), Prof. Paula Hammond (MIT), and Prof. Qing Wang (Penn. State University).

In addition, many MESD Areas have plenary sessions, graduate award sessions, and sessions featuring our talented candidates for faculty positions. This excellent programming is due to the hard work of all five of our areas and their leaders; we appreciate their effort in putting together this program. I would like to especially thank our 1st vice chair and friend, Prof. Julie Champion (Georgia Tech), for her excellent work on MESD programming in Boston. Due to the ongoing pandemic, Julie has had to manage our first hybrid meeting, and her cool head, pro-active style, and wonderful leadership have led to a meeting that I am very excited for all of us to attend. I also want to thank MESD directors Prof. Jessica Schiffman (U. Mass) and Prof. Evan Wujcik (U. Alabama) who took charge of organizing the poster session and judging. This year, the MESD poster session is on Monday, November 8, from 3:30-5:00 p.m.

The MESD election is currently ongoing. Please cast your vote! Biographies and statements are included in the online ballot and in this newsletter. I appreciate all who are running in the election and are willing to serve MESD. Thanks to MESD director Prof. Kyle Lampe (U. Virginia), who was our de-facto lead for the nominating committee.

We are always looking for MESD members to contribute to the division. Please attend your Area's business meeting on Tuesday, November 9, from 6-7 p.m. to give input into future programming and elect Area leaders. To accommodate our hybrid schedule, all meetings will be virtual. We hope that this serves as a means to increase inclusivity and participation, including industrial and international participants. MESD is also nearing the completion of a major revision of its bylaws, and I urge you to have a look at the results of deliberations led by past chair Jodie Lutkenhaus (TAMU).

In closing, I want to thank the MESD Executive Council and Area chairs and co-chairs. I have enjoyed working with all of you these past few years, and I know that in turning over the reins in Boston MESD will be in good hands with Julie Champion and April Kloxin!

Brad Olsen
Chair, MESD 2020-2021
Alexander and I. Michael (1960) Kasser Prof.
Dept. of Chemical Engineering, MIT

Inside this issue

MESD Plenary and Poster Awards

At the 2020 MESD Plenary, Prof. Karen Winey (University of Pennsylvania) received the Braskem Award for Excellence in Materials Engineering and Science, and Prof. Bryan Boudouris (Purdue University) received the Owens Corning Early Career Award. A hearty congratulations to both of these leaders in our field!

MESD Award Winners. Pictures of Karen Winey (left) and Bryan Boudouris (right). Unfortunately, plaques had to be mailed due to the pandemic.

Graduate Student Poster Awards were announced. This competition gathered contributions from all five areas of the division: polymers, biomaterials, inorganic materials, electronic and photonic materials, and composites.

Graduate Student Poster Award Winners:

1st – Chelsea E.R. Edwards; University of California, Santa Barbara; 8A. *Title: Processing Dependence and Aging of the Coacervate-Precipitate Transition in Mixed Polyelectrolytes.* Advisor: Matt Helgeson.

2nd – Weiheng Xu; Arizona State University; 8F. *Title: Multi-Layered Composite Fibers.* Advisor: Kenan Song.

3rd – Ricardo David Sosa; University of Houston; 8D. *Title: Irreversible Inhibition of Barite Mineralization: A Unique Mechanism for Treating Scale.* Advisor: Jeff Rimer.

Area 8A Polymers: Graduate Student and Plenary Symposium

2021 Chair: Prof. Rafael Verduzco (Rice University)
Co-Chair: Prof. Bryan Beckingham (Auburn University)

MESD Area 8A (Polymers) had an exciting program at the 2018 AIChE National Meeting. Of particular interest was the annual AIChE Excellence in Polymers Graduate Research Symposium which was organized Allie Obermeyer and Eric Davis, and to the selection committee Yeongseon Jang, Santanu Kundu, and Daniel Hallinan. The ten finalists gave very high quality talks despite the virtual format. First place went to Vivian Feig (Stanford), second place to Dylan Anstine (U. Florida), and third place to Rui Sun (TAMU) – congrats everybody! Special thanks goes to the Journal of Polymer Science for their support.

8A Excellence in Graduate Polymer Research Symposium. Composite image of student participants and organizers.

Area 8A's plenary session at the annual meeting also included six speakers from academic, industrial, and government research in the Emerging Topics in Polymer Science and Engineering Symposium. Speakers were Megan Robertson (U. Houston), Juan de Pablo (U. Chicago), Amalie Frischknecht (Sandia National lab), Christopher Balzer (Caltech), Vivek Sharma (U. Illinois Chicago), and Jennifer Schaefer (Notre Dame).

Area 8A also sponsored the Rising Stars Award to recognize "young professionals from industry who have demonstrated excellence in the area of polymer science and engineering." The awardees were Amanda Engler (3M), Catherine Mulzer (DuPont), Azlin Ismitli (Dow), Hari Katepalli (Dow), and Brandon Sweeney (Essentium, Inc.). The session was organized by Vivek Sharma and William Liechty.

Area 8B Biomaterials

2021 Chair: Prof. Steven Caliari (U. Virginia)
Vice-Chair: Prof. Adrianne Rosales (U. Texas Austin)
Co-V-Chair: Prof. Helen Zha (RPI)

The 2020 8B program included primary sponsorship of 18 oral presentation sessions along with co-sponsorship of an additional 10 sessions. These sessions covered a variety of biomaterials topics and included multiple faculty candidate sessions designed to help applicants secure independent positions, a graduate student award session to honor outstanding up-and-coming researchers, and a plenary session highlighting the work of leaders in the field. This session included keynote talks from the following speakers:

- **Kristi Kiick**: "Phase-Separating (poly)Peptides for ECM-Based Targeting and Delivery"
- **Carlos Rinaldi**: "Emerging Biomedical Applications of Magnetic Nanoparticles in Dynamic Magnetic Fields"
- **Elizabeth Cosgriff-Hernandez:** "Integrin-targeting Materials in Regenerative Medicine"

In the Biomaterials: Graduate Student Award Session we awarded prizes to the top three presentations. Arizona State University Chemical Engineering is gratefully acknowledged for funding these awards:

First Place ($250): **Justin Peruzzi.** Northwestern University – Prof. Neha Kamat. *"Driving Encapsulated Biological Reactions with DNA-Functionalized Vesicles"*

Second Place ($150): **Abigail Grosskopf.** Stanford University – Prof. Eric Appel. *"Polymer-Nanoparticle Hydrogels: Rheological Properties to Biomedical Applications"*

Third Place ($100): **Eden Ford.** University of Delaware – Prof. April Kloxin. *"Integrating Fibrous Structure within Hydrogel Biomaterials to Support Stem Cell Migration for Collagenous Tissue Regeneration"*

There was a significant effort made to include more invited speakers throughout standard programming to enhance engagement and attendance. Invited speakers included Elizabeth Lipke, Eun Ji Chung, Julie Champion, Y. Shrike Zhang, Sharon Gerecht, and Rein Ulijn. Notably, the 'Biomaterials in Industry and the Clinic' session was completely comprised of invited talks from Tingrui Pan, Omid Veiseh, Sarah Mayes, Kunwoo Lee, and Greg Hudalla.

Area 8D Inorganic Materials

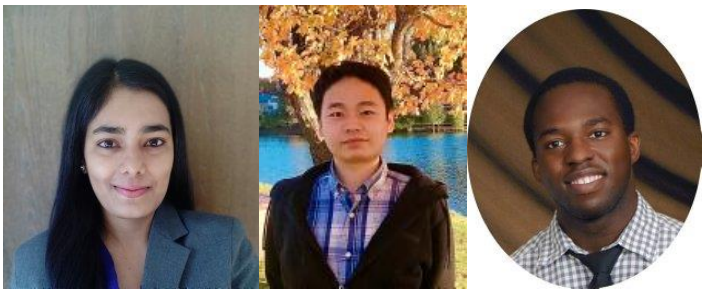
2021 Chair: Satish K. Nune (PNNL)
Co-Chair: Chen Zhang (University of Maryland)

In 2020 area 8D produced a program of top-quality science at the national meeting, including a repeat of their highly successful graduate student award session, this time chaired by Xueyi Zhang and Kumar Varoon Agrawal. Five students were featured as part of the session: Rishabh Jain (U. Houston), Meiirbek Islamov (U. Pittsburgh), Ajit Vikram (UIUC), Swapnil Dattatray Deshmukh (Purdue University), and Khashayar R. Bajgiran (LSU).

Area 8E Electronic & Photonic Materials: Inaugural Industrial/Academic Plenary

2020 Chair: Prof. Carissa Eisler (UCLA)
Co-Chair: Prof. Chuck Hages (University of Florida)
Co-Co-Chair: Dr. Matt Crane (U. Washington)

Area 8E hosted a graduate student award session at the 2020 annual meeting, graciously sponsored by the *Journal of Vacuum Science and Technology A (JVST A)*. Among many talented candidates, the area selected three award winners. First prize went to Akriti, from Purdue University, for her talk "Anionic Diffusion in Two-Dimensional Halide Perovskite." Second place was awarded to Tianmeng Wang, from RPI, for his talk "Excitonic Fine Structure in Two-Dimensional Transition Metal Dichalcogenides." Third place was awarded to Tochukwu Ofoegbuna, from LSU, for "Defect Engineering in Strained Low-Dimensional ABO3 Perovskite Nanoparticles for Next-Generation Energy Storage Devices." Congratulations to all of the participants and the three winners pictured below!



8E Graduate Award Winners Akriti, Tianmeng, and Tochukwu.

Area 8E also had a plenary session with invited talks from Jane Chang (UCLA), Michael McGehee (CU Boulder), and Michael Strano (MIT), highlighting the intersection of chemical processing and electronic device design.

Area 8F Composites

2021 Chair: Prof. Kenan Song (Arizona State University)
Co-Chair: Amanda Koh (U. Alabama)

Area 8F had sessions on topic ranging from Manufacturing of Composites to Nanocomposites to Sustainable Composites, presenting an extremely robust program at the virtual meeting.

Lutkenhaus Recognized for Service to MESD

At the conclusion of the 2020 Executive Council meeting, we thanked Jodie Lutkenhaus for her service to MESD as chair (2019-2020), vice chair (2018-2019), and 2nd vice chair (2017-2018). Jodie has been an inspiring leader and many great things happened in MESD under her leadership.

Recognition of Service to MESD. A photo of our outgoing chair, Prof. Jodie Lutkenhaus.

Biographical Sketches and Statements of Nominees

CANDIDATES FOR 2ND VICE CHAIR
(VOTE FOR 1)

Amy Peterson, University of Massachusetts Lowell

Bio: **AMY PETERSON** is an Associate Professor of Plastics Engineering at University of Massachusetts Lowell with expertise in interfacial phenomena and additive manufacturing (AM). Her research group studies processing-structure-property relationships in polymers and polymer composites, with a focus on interfacial phenomena in multilayered systems. She received her BS and PhD in Chemical Engineering from Drexel University. She was an Alexander von Humboldt Postdoctoral Fellow at the Max Planck Institute of Colloids and Interfaces 2011-2013 and Assistant Professor of Chemical Engineering at Worcester Polytechnic Institute 2013-2018. Amy has been a member of AIChE since 2008 and an active member of MESD and area 8A since 2013. She has chaired/co-chaired numerous sessions in 8A, including the Emerging Areas in Polymer Science and Engineering Plenary in 2018. Amy served as a MESD Director 2018-2020. Amy also has other organizational experience, including currently serving as Programming Co-Chair of the Adhesion Society, as a member of ARMI BioFabUSA's Leadership Advisory Council, and as a member of the planning committee for a National Academies of Science, Engineering, and Medicine Workshop on Convergent Manufacturing – A Future of Additive, Subtractive, and Transformative Manufacturing.

Candidate Statement: AIChE has played a critical role in Amy's career, starting from her first conference presentation in an 8F session at the 2008 AIChE Annual Meeting. If elected as 2nd vice chair, Amy plans to build from MESD's strong foundation, maintaining our areas of strength while continuing to evolve. Amy plans to work with the individual areas to understand how they can and want to grow, with a focus on how to broaden the appeal of MESD to include greater membership from industry and national laboratories. Amy would like to work with the membership to support efforts to maintain MESD communities virtually – these would benefit the membership beyond the current pandemic since many members/potential members cannot attend meetings regularly for personal, financial, and/or professional reasons. In terms of new activities, Amy plans to focus on partnerships and new efforts that promote an environment of diversity and inclusion in MESD.

Will Tisdale, MIT

Bio: **WILL TISDALE** joined the Department of Chemical Engineering at MIT in January, 2012, where he is currently Associate Professor and MacVicar Faculty Fellow. His research interests involve the synthesis and spectroscopy of semiconductor nanomaterials, with particular focus on solution processable nanomaterials for high-performance energy conversion technologies and the development of time-resolved microscopy tools for understanding their performance. Will is a recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE), an Alfred P. Sloan Fellowship, the Camille Dreyfus Teacher-Scholar Award, the AIChE Nanoscale Science & Engineering Forum Young Investigator Award, and MIT's Everett Moore Baker Award for Excellence in Undergraduate Teaching. Will earned a B.S. in Chemical Engineering from the University of Delaware in 2005, Ph.D. in Chemical Engineering from the University of Minnesota in 2010, and was a postdoc in the Research Laboratory of Electronics at MIT before joining the faculty in 2012.

Candidate Statement: I would be honored to serve in the position of 2nd Vice Chair for AIChE MESD. AIChE has been a part of my professional life since I was an

undergraduate Chemical Engineering major at the University of Delaware beginning in 2001, and was instrumental in launching my professional career at MIT in 2012. I have attended 10 of the past 12 AIChE Annual Meetings – plus one meeting as an undergrad in 2004 – where I have been an active contributor to Area 8E. Over the years I have chaired numerous sessions, given many contributed and invited talks (including the 8E plenary session in 2019), watched as my students won the 8E Graduate Student Award, and enjoyed making new friends at evening hospitality suites. Materials have and will continue to play an important role in the evolution of the field of Chemical Engineering, and I would be happy to help lead that effort within AIChE MESD.

Rafael Verduzco, Rice University

Bio: Rafael Verduzco is a Professor of Chemical and Biomolecular at Rice University. He received his Ph.D. in chemical engineering from the California Institute of Technology in 2007 and his B.S. in chemical engineering from Rice University in 2001. He worked as a Postdoctoral Researcher at the Center for Nanophase Materials Sciences (CNMS) at Oak Ridge National Laboratory prior to starting his faculty position at Rice University in 2009. The Verduzco laboratory uses a combination of polymer chemistry and multi-scale characterization tools to broadly address challenges in polymer science, and areas of research include conjugated polymers for organic electronic devices and bioelectronics, bottlebrush polymers, and covalent organic frameworks (COFs). This work is supported by funding from the National Science Foundation, the Office of Naval Research, DARPA, and the Welch Foundation. He is currently serving as the Chair of Area 08A Polymers and received an NSF CAREER award in 2015 and the 2020 Rice Research + Teaching Award.

Candidate Statement: I would be honored to serve as a Vice Chair and eventually Chair of the Materials Engineering and Sciences Division of AIChE. I have been an active member of AIChE for my entire research career and have directly benefitted from the scientific and social opportunities offered by AIChE meetings, and I would look forward to working with fellow chemical engineers improve the quality of AIChE meetings and promote MESD. As Chair of Area 08A Polymers, I have made it a priority to maintain clear and constant communication with members, which was necessary during the uncertainty of the pandemic. I have also found ways to improve organization and planning, by for example creating a handbook for future Area Chairs. As a Vice Chair, I would find ways to make the meetings most beneficial to members by listening to input from members of the various Areas. I believe that strong plenary sessions add significant value to the meeting, and I am also a strong supporter of providing opportunities to young faculty and researchers to share and promote their work. I would look forward to serving in this role and helping to contribute to further growing MESD and AIChE.

CANDIDATES FOR DIRECTOR
(VOTE FOR 2)

Mario Moisés Alvarez, Tecnologico de Monterrey

Bio: **MARIO MOISÉS ALVAREZ** is a Rómulo Garza Insignia Professor at Centro de Biotecnología-FEMSA in Tecnologico de Monterrey in Monterrey, México. He is a Biochemical Engineer by training and received a Ph.D. from Rutgers University in Chemical and Biochemical Engineering in 2001. Mario Alvarez has postdoctoral experience in both Industry and Academia. He conducted research and technology development at the Pharmaceutical Institute at Bristol-Myers Squibb Co. (2001–2002) and was a Visiting Professor at the Harvard MIT Health Sciences Division in the Khademhosseini Lab (2014–2016). Mario Alvarez is a senior AIChE member with technical expertise in diverse areas of materials science and engineering, including biotechnology and

bioengineering, biofabrication, biomaterials engineering, micro- and nanotechnologies, mixing, and pharmaceutical engineering. He has more than 100 research papers published across these areas in prestige journals, such as *Biomaterials, Advanced Materials, PNAS, Nature Review Materials, Materials Horizons, ACS Nano, Biofabrication, ACS Biomaterials Science and Engineering, Scientific Reports, Advanced Healthcare Materials, Acta Biomaterialia,* and *Biotechnology and Bioengineering*. Mario Alvarez is also active in the area of technology development and has been granted two USPO patents and 12 Mexican patents.

Candidate Statement: I am greatly honored by this nomination to serve as a director of the AIChE Materials Engineering and Science Division. The MESD is a reference of excellence within the AIChE, and I am excited and committed to investing my efforts and my time to advance all the initiatives of MESD. I have a particular interest in encouraging and supporting vocations in the area of materials engineering among our undergraduate and graduate students. We need more young minds interested in materials to advance the frontiers of technology in so many areas that impose great pressure on our societies: clean energies, food science and food tech, biomedicine, pharmaceutics, and electronics, among others. I also want to help in promoting the diversity of gender, ethnicity, and academic background in the MESD community. I am also convinced that the interaction between academia and industry further enriches our technical communities, and MESD has been a good example of this. I want to contribute to that front as well.

Samira Azarin, University of Minnesota

Bio: **SAMIRA AZARIN** is an Associate Professor of Chemical Engineering and Materials Science at the University of Minnesota. She earned her B.S. in Chemical Engineering from the Massachusetts Institute of Technology in 2006, and her Ph.D. in Chemical Engineering from the University of Wisconsin-Madison in 2011 working with Sean Palecek and Juan de Pablo. She was a postdoctoral fellow with Lonnie Shea at Northwestern University from 2012 to 2014. Her research program focuses on the development of novel biomaterial platforms to address current therapeutic roadblocks in the treatment of cancer, including metastatic spread and drug resistance. She is the recipient of an NSF CAREER Award, the McKnight Presidential Fellowship, and the George W. Taylor Career Development Award. She has been an active member of the Biomaterials Area (8B) of the Materials Engineering and Sciences Division (MESD), attending programming meetings and co-chairing sessions within 8B each year since starting her faculty position in 2014.

Candidate Statement: I have enjoyed my involvement in the Biomaterials Area of MESD over the past 7 years, and I am eager to contribute to the future direction of MESD through the director position. As a faculty member in an interdisciplinary department that houses both chemical engineering and materials science, I am excited to expand my involvement beyond Area 8B and coordinate with the other materials areas on programming and fundraising efforts. As an attendee and judge at the MESD poster session, I have seen the value of this forum for students to present their work to a wide audience, and I would like to raise the profile of this event so that participation and engagement continue to increase. Over the past couple of years the restrictions on our ability to gather in person as a result of the pandemic have impacted attendance and engagement at the annual conference. As we look toward the future, I am committed to integrating virtual programming to broaden participation in the division, while also strengthening our traditional conferences and programming.

Cole DeForest, University of Washington

Bio: **COLE A. DEFOREST** is the Weyerhaeuser Endowed Associate Professor in the Departments of Chemical Engineering and Bioengineering at the University of Washington, where he began in 2014. He received his Chemical Engineering B.S.E. degree from Princeton University in 2006. He obtained his Ph.D. under the guidance of Dr. Kristi Anseth from the University of Colorado in Chemical and Biological Engineering with an additional certificate in Molecular Biophysics. His postdoctoral research was performed with Dr. David Tirrell in the Divisions of Chemistry and Chemical Engineering at the California Institute of Technology. He has authored ~55 articles in peer-reviewed journals including *Nature Materials, Nature Chemistry, Advanced Materials, JACS, PNAS, Science Advances, and Nature Reviews Materials.* Cole has received numerous research honors including the Society for Biomaterials Young Investigator Award, NIH Maximizing Investigators' Research Award, AIChE 35 Under 35 Award, and NSF CAREER Award. Notably, he has also been recognized for excellence in teaching and was awarded the UW Presidential Distinguished Teaching Award, given annually to a single Assistant Professor across all of the UW. His research on designing user-programmable materials to direct 4D stem cell differentiation has been supported through fellowships and grants from the NSF, NIH, and US DoEd.

Candidate Statement: I am honored to be a candidate for the MESD Director position. If so elected, my goals would be to:

1) standardize opportunities and coordinate efforts within MESD, providing a safe an inclusive experience for all
2) improve communication and transparency amongst its different Areas
3) decrease programming redundancy and scheduling conflicts between divisions through expanded session co-sponsorship
4) promote member re-engagement and a smooth return following the pandemic

I have been involved in as an active member and ambassador for AIChE for the past 16 years. Building on my undergraduate experience as the Vice President of the Princeton AIChE student chapter, I have chaired numerous MESD sessions, presented and co-author ~15 AIChE talks, and served as one of the faculty advisors for the University of Washington's AIChE student chapter. Within the Institute, I served as the MESD Area 8B Vice Chair for 2016 and 2017, as well as the Area 8B Chair for 2018. In these roles, I helped increase 8B abstract submissions and session numbers by 30%, organize a successful new member meet-and-greet, fundraise approximately $10k in sponsorship, and establish a fruitful collaboration with the newly formed Regenerative Engineering Society. Beyond AIChE, I established the "Young Biomaterial Scientist" group within the Society for Biomaterials and have planned several symposia for the American Chemical Society. As the UW Chemical Engineering's Associate Chair for Graduate Studies and as a Co-Chair of the Diversity, Equity, and Inclusion committee, I am committed to providing a supportive and welcoming environment for the next generation of Chemical Engineers.

Esther Gomez, Penn. State University

Bio: **ESTHER GOMEZ** is an associate professor in the Chemical Engineering and Biomedical Engineering Departments at the Pennsylvania State University. She received a B.S. in Chemical Engineering from the University of Florida and a Ph.D. in Chemical Engineering from the University of California,

Berkeley. She was a postdoctoral fellow in the Chemical and Biological Engineering Department at Princeton University. Research in the Gomez group currently focuses on examining the impact of mechanical cues on regulation of cell function and fate and on characterizing the structure of biological materials and assemblies. Esther's research and teaching have been recognized with a NSF CAREER award and the Penn State Engineering Alumni Society Outstanding Teaching award.

Candidate Statement: Esther has been a member of AIChE since 2007. She has been an active participant and has served in roles including session chair. At Penn State, Esther directs a NSF-funded research experience for undergraduates program focused on the Integration of Biology and Materials. Through this, she has organized professional development seminars and directed undergraduate research symposiums for 100+ participants. Esther is also a member of the diversity, equity, and inclusion committee within the Chemical Engineering Department at Penn State. Esther is committed to serving the community and she hopes to have the opportunity to serve as a director in MESD. Her efforts will aim to enhance the student experience, enrich programming, promote collaboration, and support the chemical engineering community.

Rachel Letteri, University of Virginia

Bio: **RACHEL A. LETTERI** is an Assistant Professor in the Department of Chemical Engineering at the University of Virginia. After obtaining a B.S. in Chemical & Biomolecular Engineering from the University of Notre Dame, she completed a Ph.D. in Polymer Science & Engineering from the University of Massachusetts Amherst under the direction of Professors Todd Emrick and Ryan Hayward. She then conducted postdoctoral research in the laboratory of Professor Karen Wooley in the Department of Chemistry at Texas A&M University from 2016-2018 before starting at the University of Virginia in 2018. Her research interests include materials that synergistically combine functional polymer and peptides to address needs in medicine and engineering. She teaches Material & Energy Balances, Biochemical Engineering, and Chemistry for Engineering Functional Soft Materials, and serves on the editorial advisory boards for *Journal of Polymer Science* and *Polymer Chemistry*.

Candidate Statement: With formal training in chemical engineering and polymer science and engineering, I've found a meaningful community in the Materials Engineering & Science Division of AIChE. Since 2018, I've served as a session chair in 8A (Polymers) and have research interests that span 8A and 8B (Biomaterials), and would now very much value the opportunity to become more involved in serving our community. I'm honored by the nomination, and understand and appreciate the responsibility of a director in ensuring that our sessions continue to run smoothly and with as-optimal-as possible scheduling. If elected, I commit to maintaining prompt communication and follow-through as needs arise so I can be as helpful as possible in assisting our area and session chairs in organizing an impactful series of meetings.

Matthew Panthani, Iowa State University

Bio: MATTHEW G. PANTHANI is an Associate Professor and the Herbert L. Stiles Faculty Fellow in the Department of Chemical and Biological Engineering at Iowa State University. He received a B.S. in Chemical Engineering at Case Western Reserve University and a Ph.D. in Chemical Engineering at the University of Texas at Austin under the direction of Prof. Brian A. Korgel. His current research activities focus on synthesizing new inorganic and hybrid

organic-inorganic materials with tailored properties for optoelectronic applications such as solar cells, next-generation computing, and telecommunications technologies. He has received teaching and mentoring awards at Iowa State, including an "Outstanding Mentorship" Award from the Center for Biorenewable Chemicals Research Experience for Teachers program (2015) and "Best Life Advice" Award from the Iowa State University AIChE Student Chapter (2018). He has published more than 40 peer-reviewed journal articles holds four U.S. patents. Since joining Iowa State University, his research lab has been recognized with awards such as the Air Force Office of Scientific Research Young Investigator Award (2017) and the National Science Foundation Early CAREER Development Award (2019).

Candidate Statement: I am excited to run for a Director position within AIChE, an organization that I have been involved with since joining as an undergraduate in 2003. My involvement with MESD began in 2013, when I began serving as chair/co-chair. Since I began at Iowa State University, my students and I have presented research presentations and posters in MESD in every year since I became a faculty member. I previously served as the Area 8E (Electronic and Photonic Materials) Chair in 2016. During my time as Chair of Area 8E, I used seed funding from MESD to support the Area 8E Graduate Student Award Session, and was able to secure external sponsorship with support continuing beyond my term as Chair. If elected as a Director, I plan to continue these efforts in fundraising, particularly in support of graduate students and early-career chemical engineers. My primary goals will be to (1) support early career students, postdocs, and faculty, (2) ensure that decisions consider the diverse spectrum of backgrounds, experiences, institutions, and countries that constitution AIChE's membership, (3) expand efforts in increasing participation of industrial and international members, and (4) enhance the visibility of MESD-affiliated through a sustained online presence.

To cast your vote:

All MESD professional members should have received an email with voting information. Please double check your membership status, or you will not be able to log in to vote. You can cast your vote online here:
https://www.aiche.org/election/276

If you have any problems accessing the ballot, please contact AIChE Customer Service at the following email
address: customerservice@aiche.org

Election will close: November 2, 2021

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Opportunities to get involved:

1. Organize or provide webinars on MESD related content. AIChE will support our efforts to provide content to our members. Contact AIChE liaison Sean Liu and Brad Olsen or Julie Champion.

2. Area Programming. All areas are seeking assistance from MESD members in program development, session chairing and young professional (YP) and industrial member engagement. Attend your Area's business meeting on Tuesday, November 9, from 6-7 p.m. or contact your Area's current chair (see the MESD webpage under Leadership).

3. Other ideas? Reach out to any member of the executive committee.

Thank you to our MESD Sponsors

Braskem Award for Excellence in Materials Engineering and Science: Braskem America

Owens Corning Early Career Award: Owens Corning

Area Sponsors
Journal of Vacuum Science A, Journal of Polymer Science