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

MESD Division Newsletter

Volume 53 Issue 1 October 2022

Notes from the Chair

Dear MESD Members and Friends,

On behalf of MESD and the areas, I thank all of you for your effort, scientific contributions, and participation in our division and the field of materials. Though life is looking a little more normal this year, there has been much work to capitalize on positive changes that occurred, such as in the area of diversity, equity and inclusion and use of virtual meeting tools, and to reconnect with each other in ways that we have missed. We have an exciting meeting planned for Phoenix, and I am looking forward to seeing many of you there and hearing about your recent work.

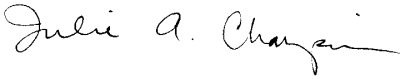
We are especially eager to honor our Division award winners during the Division Plenary, selected from a highly competitive pool of nominees. The Braskem Award for Excellence in Materials Engineering and Science will be presented to Prof. Greg Rutledge (MIT) for "molecular engineering of soft matter focused on understanding relationships between processing, structure and properties of engineered polymers with applications to polymer crystallization." Prof. Letian Dou (Purdue U.) will receive the Owens-Corning Early Career Award for "groundbreaking research on the design, synthesis, characterization, and optoelectronic device application of two-dimensional organic-perovskite hybrid semiconductors and epitaxial heterostructures." We appreciate the service of Prof. Michael Tsapatsis (Johns Hopkins U.) and Prof. Chris Ellison (U. Minnesota) in leading these award committees. The Division Plenary will also feature talks by Prof. Wilfred Chen (U. Delaware), Prof. Perla Balbuena (Texas A&M U.), and Prof. Donglei (Emma) Fan (U. Texas Austin). Please join me at the Division Plenary on Wednesday, November 16, 8-10:30 a.m.

The MESD Areas also have plenary sessions, graduate award sessions, and sessions featuring respected industrial colleagues or our talented faculty candidates. This excellent programming is due to the hard work of all five of our areas and their leaders and we appreciate their effort. I would like to especially thank our 1st vice chair, Prof. April Kloxin (U. Delaware), for her outstanding work on MESD programming for Phoenix. April has taken initiative, sought feedback, and deftly navigated the difficult task of scheduling many sessions with limited space. Her leadership and hard work, in collaboration with the area chairs, has resulted in an excellent meeting that we can all look forward to experiencing. I also want to thank MESD directors Prof. Evan Wujcik (U. Maine) and Prof. Rachel Letteri (U. Virginia) who led organization of the poster session and judging. The MESD poster session is Monday, November 14, 3:30-5:00 p.m. and I encourage everyone to attend.

The MESD election is currently ongoing, please vote by November 1st! Biographies and statements are included in the online ballot and this newsletter. I appreciate all who are running in the election and are willing to serve MESD. Thanks to MESD directors Prof. Anita Shukla (Brown U.) and Prof. Cole DeForest (U. Washington), and Past Chair Brad Olsen (MIT) for serving on the nominating committee.

Please attend your Area's business meeting on Tuesday, November 15, 7-8 p.m. to give input into future programming, elect Area leaders, and volunteer to chair sessions. At 5:30-7pm the same night, the Division business meeting is also open to anyone who is interested in learning more about Division operation and sharing their thoughts. To increase inclusion and participation, all business meetings will be virtual. The links will be available in the online program and we hope this enables those of you not able to travel to Phoenix to attend and engage.

Finally, I want to thank the MESD Executive Council and Area chairs and co-chairs. I have enjoyed working with all of you and admire your commitment. MESD has a bright future, led by April Kloxin and Rafael Verduzco (Rice U.).



Julie Champion (Georgia Tech)
Chair, MESD 2021-2022

Inside this issue

MESD Plenary and Poster Awards

At the 2021 MESD Plenary, Prof. Stacey Bent (Stanford University) received the Braskem Award for Excellence in Materials Engineering and Science, and Prof. Lisa Hall (Ohio State University) received the Owens Corning Early Career Award. Congratulations to both of these leaders in our field!

MESD Award Winners. Stacey Bent (top) and Lisa Hall (bottom) receive their award plaques from 2021 Past Chair Jodie Lutkenhaus (TAMU, black jacket) and Chair Brad Olsen (MIT, blue shirt). There are big smiles beneath the masks!

Graduate Student Poster Awards were also announced and are listed below. This competition gathered both in-person and virtual contributions from all five areas of the division: polymers, biomaterials, inorganic materials, electronic and photonic materials, and composites.

Co-1st Place (in person) – Ashley Masucci; Pennsylvania State University; 8A. *Title: Conjugated Grafted Polymers for Electrochemical Transistors.* Advisors: Enrique Gomez & Christian Pester.

Co-1st Place (in person) – Jackson Powers; University of Florida; 8B. *Title: Understanding Membrane Permeability of Proteinosomes Self-Assembled from Globular Fusion Proteins.* Advisor: Yeongseon Jang.

1st Place (virtual) – Yuito Narita; Soka University; 8D. *Title: Synthesis and Characterization of ZnO Photocatalysts with Different Morphologies.* Advisor: Junichi Ida.

MESD In-Person Poster Award Winners. Jackson Powers (left center) and Ashley Masucci (right center) are congratulated by Jodie Lutkenhaus (right) and Brad Olsen (left). There are more big smiles beneath the masks!

Area 8A Polymers

2022 Chair: Bryan Beckingham (Auburn University)
Co-Chair: Samanvaya Srivastava (UCLA)

MESD Area 8A had an exciting program at the 2021 AIChE National Meeting. Of particular interest was the annual AIChE Excellence in Polymers Graduate Research Symposium, which was organized by Zhe Qiang (U. Southern Mississippi) and Keisha Walters (U. Oklahoma). The award winners are pictured below. Congratulations to all the students who participated!

First place: Adam Uliana (UC Berkeley)

Second place: Abby Grosskopf (Stanford)

Third place: Chris Cooper (Stanford)

Area 8A also held two plenary sessions at the annual meeting on Emerging Topics in Polymer Science and Engineering, chaired by Siamak Nejati (U. Nebraska) and Mingjiang Zhong (Yale). Speakers were Brad Olsen, Jodie Lutkenhaus, Greg Rutledge, Vivek Sharma (U. Illinois Chicago), Damien Guironnet (U. Illinois U-C), Christopher Bowman (U. Colorado), Megan Robertson (U. Houston), Chris Alabi (Cornell U.), Jennifer Schaefer (Notre Dame), and Siow Ling Soh (Natl. U. Singapore).

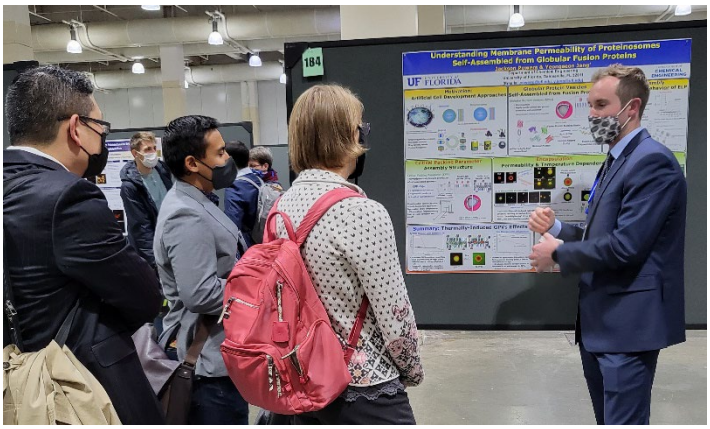
Additionally, Area 8A sponsored a Rising Stars in Industry session, organized by Christina Tang (Virginia Commonwealth U.), Rachel Letteri, and William Liechty (Dow). The speakers were Anand Atmuri (PPG Industries), Pranav Karanjkar (Dow), Theresa Whiting (3M), Brian Habersberger (Dow), and Matthew Ryan (Cypris Materials, Inc.).

Area 8B Biomaterials

2022 Chair: Adrianne Rosales (U. Texas Austin)
Vice-Chair: Helen Zha (RPI)
Co-V-Chair: Catherine Fromen (U. Delaware)

The 2021 8B program included scientific sessions for faculty candidates 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. The plenary session was organized by Julianne Holloway (Arizona State U.), Catherine Fromen, and Matthew Weber (Notre Dame) and included keynote talks from Lola Eniola-Adefeso (U. Michigan), Susan Thomas (Georgia Tech), and Edward Botchwey (Georgia Tech).

In the Biomaterials Graduate Student Award Session, chaired by Mark Tibbitt (ETH Zurich), Xiaoping Bao (Purdue U.), Nisarg Shah (UC San Diego) and Rong Tong (Virginia Polytechnic), the top three students were awarded prizes. Anton Paar, Biomaterials Science (RSC), and University of Virginia Chemical Engineering are gratefully acknowledged for funding these awards. **First place** was awarded to Phillip Taylor (U. Delaware), **second place** to Erica Hui (U. Virginia), and **third place** tie was awarded to Abigail Grosskopf (Stanford) and Victoria Muir (U. Pennsylvania). Congratulations to all the participants!



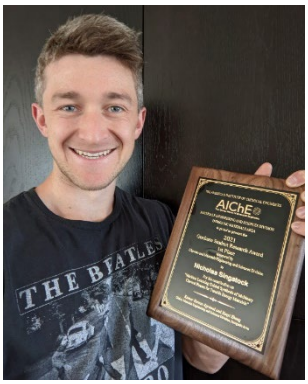
Scene from the 8B Poster Session: Jackson Powers, poster co-winner, presents his research.

Translation of biomaterials was also highlighted in an invited session on Biomaterials in Industry and the Clinic, chaired by Latrisha Petersen (Johnson & Johnson), Eun Ji Chung (U. Southern California), and Forrest Kievit (U. Nebraska). Speakers included Guillermo Ameer (Northwestern U.), Davide Miksa (Ethicon Inc.), He Bai (Becton, Dickinson and Company), Anita Shukla, and Jian Yang (Penn State).

Area 8D Inorganic Materials

2022 Chair: Chen Zhang (University of Maryland)
Vice-Chair: Nian Liu (Georgia Tech)
Co-V-Chair: Gaurav Giri (U. Virginia)

In 2021 Area 8D held a graduate student award session with prizes generously sponsored by Chevron and organized by Xueyi Zhang (Penn State) and Kumar Varoon Agrawal (EPFL). **First place** was awarded to Nick Singstock (U. Colorado), **second place** to Jacklyn Hall (U. Houston), and **third place** to Favirash Gholamirad (U. South Carolina). Congratulations to all the students!



Area 8D Graduate Student Award winner Nick Singstock with his plaque.

Area 8E Electronic & Photonic Materials

2022 Chair: Carissa Eisler (UCLA)
Co-Chair: Matt Crane (Colorado School of Mines)

Area 8E hosted a graduate student award session at the 2021 annual meeting, graciously sponsored by the *Journal of Vacuum Science and Technology A* and organized by Carissa Eisler and Matt Crane. From among the exceptional candidates, three award winners were selected. **First prize** went to Seung Kyen Ha (MIT), **second place** was awarded to Minh Tran (NYU), and **third place** was awarded to Steven Chavez (U. Michigan). Congratulations to all the participants!

Area 8E also had a plenary session featuring both industrial and academic speakers. It was organized by Charles Hages (U. Florida) with invited talks from Kevin Brew (IBM), Eric Bretschneider (EB Technology & Consulting), Max Mankin (Modern Electron), Jason Baxter (Drexel U.), and Rohit Prasanna (Swift Solar).

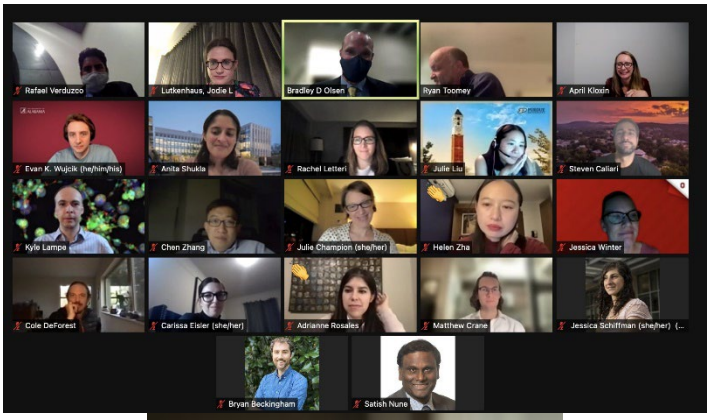
Area 8F Composites

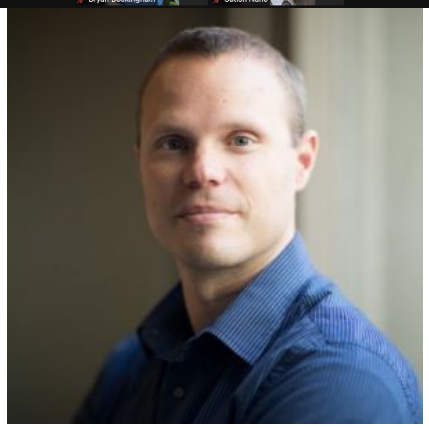
2021 Chair: Amanda Koh (U. Alabama)
Co-Chair: Kenan Song (Arizona State U.)

Area 8F had sessions on topic ranging from 3D Printing of Composites to Nanocomposites and Multifunctional Composites, presenting a robust program at the virtual meeting.

Olsen Recognized for Service to MESD

At the conclusion of the 2021 Executive Council meeting, we thanked Brad Olsen for his service to MESD as chair (2020-2021), vice chair (2019-2020, during which he had to program the annual meeting 2 times!), and 2nd vice chair (2018-2019). Brad's strong leadership, tireless effort, and thoughtful agility during very difficult times preserved the value of MESD and ensured that MESD emerged even stronger than before.





Recognition of Service to MESD. (top) A photo of our MESD Division and Areas leadership team at the 2021 Division Business Meeting, led by Prof. Brad Olsen (in green box, top center). (bottom) An unmasked photo of our outgoing chair and friend.

Biographical Sketches and Statements of Nominees

CANDIDATES FOR 2ND VICE CHAIR
(VOTE FOR 1)

Amanda Koh, University of Alabama

Bio: **Amanda Koh** is an Assistant Professor in the Department of Chemical and Biological Engineering at the University of Alabama. She received her Ph.D. in chemical engineering from Rensselaer Polytechnic Institute in Troy, NY and her B.S. in chemical engineering from the Massachusetts Institute of Technology in Cambridge, MA. She was an Oak Ridge Associated Universities (ORAU) Postdoctoral Fellow at the Army Research Laboratory in Aberdeen Proving Ground before moving down south and starting her current faculty position in 2018. The Koh Lab focuses on soft material composites, and particularly the interfaces in those composites, to address exciting challenges in the fields of soft robotics, stretchable electronics, magnetorheological fluids, and polymer adsorbents for improved water quality. Amanda is currently the Area Chair for 08F and has chaired/co-chaired many sessions in this area. Amanda has a passion for expanding the reach of academic research through promoting and supporting graduate and undergraduate scholars and has mentored 32 undergraduate and 4 graduate students, comprising majority women and underrepresented students for which she has been awarded the 2022 Undergraduate Research and Creative Activities (URCA) Faculty Mentor Award as well as a 2020 Girl Scouts of North-Central Alabama Woman of Distinction.

Candidate Statement: AIChE has played a pivotal role in my connection to and learning from the chemical engineering community worldwide. As a chemical engineering Ph.D. from a chemistry graduate group, I have enormously benefited from the programming and connection that my membership in MESD and 08F has provided. This has been strengthened by my role as 08F Area Chair for the 2022 AIChE Annual Conference. As 08F Area Chair I have expanded the diversity of the area's chair/co-chair participation and enabled more researchers to share their voice through the use of virtual meeting spaces. As a Vice Chair, I would look forward to learning from each area to understand the strengths that should be built upon and the challenges that we can learn from and address together. I am particularly excited to capitalize on AIChE's recent commitment to IDEAL (Inclusion, Diversity, Equity, Anti-Racism, and Learning) to continue to grow MESD's support and inclusion of all chemical engineering researchers and faculty. I look forward to serving the MESD and AIChE community.

Adrianne Rosales, University of Texas Austin

Bio: **Adrianne Rosales** is an Assistant Professor of Chemical Engineering at the University of Texas at Austin with expertise in polymers and biomaterials. Her research group focuses on development of dynamic and stimuli-responsive materials, especially for applications as engineered extracellular matrices. She received her B.S. from the University of Texas at Austin and her Ph.D. from the University of California, Berkeley. Adrianne was an NIH Postdoctoral Fellow at the University of Colorado Boulder before joining the faculty at the University of Texas in 2017. Her work has been recognized with an NSF CAREER award, a 3M Non-Tenured Faculty Award, and Burroughs Wellcome Fund CASI Award. Her undergraduate engineering teaching has also been recognized at UT Austin with both college-level and university level awards, including at "Texas Ten" recognition. Adrianne has been a member of AIChE since 2013, chaired or co-chaired sessions in 8B Biomaterials, and is currently the Chair of 8B.

Candidate Statement: I would be honored to serve as 2nd Vice Chair and eventually Chair of AIChE MESD. AIChE has been an integral part of my professional career since I was a postdoctoral fellow, and as an independent investigator, I appreciate all of the opportunities AIChE provides for our trainees. As 2nd Vice Chair, I would like to strengthen our division's interaction with the Student Conference and promote networking between members of the different Areas. I would also like to assist Area Chairs with fundraising for their individual Areas and coordinate efforts to build strong plenary and technical sessions. If given the opportunity, I would be happy to continue serving MESD and AIChE.

Evan Wujcik, University of Maine

Check out the MEAN Lab Website!

Bio: **Evan K. Wujcik** is currently an Assistant Professor in the Department of Chemical and Biomedical Engineering and Advanced Structures & Composites Center (8/2022-present) at The University of Maine [Orono, ME, USA]. He was previously an Assistant Professor in the Department of Chemical and Biological Engineering (1/2017-7/2022) at The University of Alabama [Tuscaloosa, AL, USA]. Prior to that he was an Assistant Professor of Chemical Engineering in the Dan F. Smith Department of Chemical Engineering (8/2013-12/2016) at Lamar University [Beaumont, TX, USA]. Prof. Wujcik obtained his Ph.D. in Chemical and Biomolecular Engineering from The University of Akron [Akron, OH, USA] (2013) as well as his M.B.A. (2011), M.S. in Chemical Engineering (2009), B.S. in Applied Mathematics (2010), and B.S. in Chemical Engineering (2008) from The University of Rhode Island [Kingston, RI, USA]. He directs the Materials Engineering And Nanosensor [MEAN] Laboratory, where his research interests include advanced materials, composites, polymers, wearables, fibers, water quality engineering, and electrohydrodynamics. This work is/has been supported by NSF, DOD, DOE, EPA, DOI, and DOEd funds. He is a Founding Associate Editor for *Advanced Composites & Hybrid Materials* [Springer-Nature, 2021 IF: 11.806]. Prof. Wujcik has been an active member of AIChE since 2005 as an undergraduate, graduate, professional, and then Senior Member (2016-present). Evan is also an AIChE/ASEE-trained Safe Zone Ally (Level 2), through AIChE's Diversity & Inclusion initiative. Within MESD, he has presented in or chaired sessions in 08A, 08D, 08E, 08F. Currently, he is a Division Director in AIChE MESD (2021-2022 Annual Meetings). Evan was the recipient of the 2007 AIChE Northeast Regional Outstanding Student Award, a 2012 AIChE NSEF poster session award, and—as a faculty member—is the recipient of a 2020 NSF CAREER Award [MPS/DMR/Electronic and Photonic Materials], was honored to be a 2020 AIChE Sensors Topical Plenary Speaker, and was inducted into the National Academy of Inventors in 2022. He is also active on Twitter, so give him a follow: @Evan_K_Wujcik (https://twitter.com/Evan_K_Wujcik).

Candidate Statement: AIChE has played a substantial part in my professional life for nearly two decades. The leadership roles—at the area and divisional levels—in MESD I have undertaken have only left me wanting to be more involved in 08 service and continue working with my amazing MESD colleagues. During my rotation as the Vice (2017), Acting (2018), and Past (2019) Chair of 08F-Composites, I strove to have more invited speakers from diverse backgrounds and paths in 08F. In addition, I encouraged and sought more diverse recruits for 08F area leadership for a more inclusive area. During my 1st year as MESD Director (2021-2022 meetings), I developed the online MESD Poster Session Judge Solicitation Form and widely distributed this through social media outlets to reach a broader MESD audience and promote inclusion, diversity, equity, and learning within the MESD community. Currently, as a 2nd year MESD Director I am tasked with orchestrating the—always spectacular—poster session. I will try to build upon the momentum of my previous year of service as an MESD Director to inspire, engage, retain, and advance future talent—particularly, early career and diverse scientists and engineers—in a more inclusive divisional space. As 2nd Vice Chair of MESD—and in future roles as Vice Chair, Chair, and Past Chair—I will strive to support and celebrate AIChE's advancement along an IDEAL (Inclusion, Diversity, Equity, Anti-Racism, Learning) path to improve divisional programming for all and make leadership positions more accessible to underrepresented groups. Our intersectionality is key to advancing our field and fostering a collaborative environment amongst colleagues in MESD. I look forward to all future chances to serve the MESD and greater AIChE communities.

CANDIDATES FOR DIRECTOR

(VOTE FOR 2)

Jorge Almodovar, University of Arkansas

Bio: **Jorge Almodovar** is an associate professor at the Ralph E. Martin Department of Chemical Engineering at the University of Arkansas. He holds the Ralph E. Martin Professorship in Chemical Engineering. He also serves as the director for the Arkansas LSAMP Bridge-to-the-Doctorate program and as the Chemical Engineering Graduate Coordinator. He

earned his B.S. in Chemical Engineering from Iowa State University and his PhD in Chemical Engineering from Colorado State University (CSU). At CSU he investigated the delivery and stability of growth factors using polysaccharide-based biomaterials. After CSU, he worked as a Whitaker Post-Doctoral Fellow at the Grenoble Institute of Technology in Grenoble, France investigating the formation of gradients on polyelectrolyte multilayer films, funded by the Whitaker International Program. Prior to joining Arkansas, he was a faculty member at the Chemical Engineering Department at the University of Puerto Rico Mayaguez where he began an active research group. His research interests include extracellular matrix mimetic biomaterials, cell-material interactions, and biomaterials as therapeutics. His research focus is on the engineering of biomimetic materials—inspired by the native cell environment—for fundamental studies, cell manufacturing, tissue engineering, therapeutics, drug delivery and regenerative medicine. His research team also focuses on developing electrospun materials for applications in healthcare and water treatment. He is an author of 35 peer-reviewed research articles, 2 US patents, 5 book chapters, and an editor for one textbook. He has received numerous awards including the University of Arkansas 2020 Chemical Engineering Outstanding Research Award, the Ralph E. Powe Junior Faculty Enhancement Award, and the 2021 Cells Tissues Organs Young Investigator Award.

Candidate Statement: For more than 10 years I have been involved in the Biomaterials Area (8B) of MESD as a presenter, attending programming meetings, and as a session chair or co-chair. MESD and 8B has contributed significantly to my career, ever since I was a graduate student, and I am eager to contribute back to the future direction of MESD through the director position. Recently, I have served as either chair or co-chair of the Biomaterials session and the Biomaterials and Life Sciences Engineering Faculty Candidates session. MESD leadership has done an excellent job programming AICHE's technical meetings, fundraising, and coordinating awards to recognize outstanding chemical engineers in their area. As an MESD director, I aspire to continue leveraging the leadership's excellent job while at the same time making novel contributions to ensure that the MESD community is well represented. I commit to work alongside with the Minority Affairs Committee, LGBTQ+ Allies Initiative, and Women in Chemical Engineering, to ensure that the MESD community welcomes, supports, and empowers everyone within the AIChE community. I am committed to providing a supportive and welcoming environment within AIChE, particularly for our students from underrepresented populations.

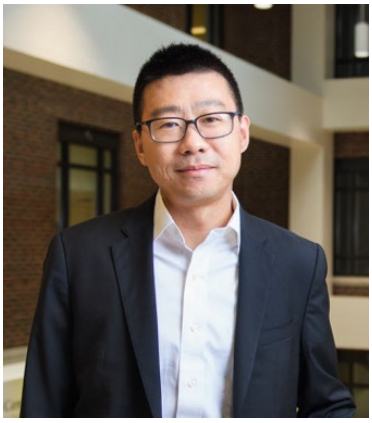
Kelly Burke, University of Connecticut

Bio: **Kelly A. Burke** is an Associate Professor of Chemical and Biomolecular Engineering and Director of the Polymer Program of the Institute of Materials Science at the University of Connecticut (UConn). Dr. Burke's research focuses on the development of responsive polymers and gels that are designed to function with biological environments to advance our understanding of interfaces as well as to afford new ways to probe materials interactions with biological systems. Dr. Burke received a B.S.E. in Chemical Engineering from UConn in 2005. Dr. Burke was awarded a NSF Graduate Research Fellowship (2005) to pursue her PhD in Macromolecular Science and Engineering at Case Western Reserve University. During this time, Dr. Burke was awarded the ACS PMSE ICI Graduate Student Award in Applied Polymer Science and the MRS Graduate Student Research Silver Award. Upon completion of her doctorate in 2010, Dr. Burke embarked on a four-year postdoctoral appointment in biomaterials and tissue engineering at Tufts University with Dr. David L Kaplan. She was awarded a NIH Ruth L. Kirschstein Postdoctoral Fellowship (2012) for her postdoctoral studies on 3D *in vitro* models human tissue and their application to disease states. Her UConn research group, founded in 2014, investigates the synthesis and structure, property, function relationships of biomaterials, with particular emphasis on anisotropic and naturally sourced materials. Her recent awards include a National Science Foundation CAREER Award (2020), a National Institutes of Health Maximizing Investigators' Research Award (MIRA, 2022), and a Young Investigator Award from the American Chemical Society Division of Polymeric Materials: Science and Engineering Division (PMSE, 2022)). At UConn, her service focuses on enriching academics and student experiences, and includes serving on the Honors Program Board of Directors (2017-2021), the Graduate Faculty Council (2019-present), the University Senate (2022-present), and the Justice, Equity, Diversity, and Inclusion Community of Practice (2020-present).

Candidate Statement: Dr. Burke is an active member of AIChE (MESD) and the American Chemical Society (PMSE and POLY Divisions). Within AIChE, she has continuously organized sessions for Area 8B (Biomaterials) since 2015 and is seeking to grow her

connections with the MESD division through serving in a Director position. Dr. Burke is committed to the mission of MESD and seeks to advance its technical goals through high quality programming that emphasizes the diverse applications of polymeric materials. She also aims to increase participation in the Division through working with student members to demonstrate the value of continued membership in AIChE, which she has learned firsthand. As a polymer scientist whose research interests span 8A and 8B, Dr. Burke has realized that finding a technical "home" that links us to our community of practice is critically important, particularly as science and engineering continues to grow more interdisciplinary and collaborative. Dr. Burke thus aims to increase involvement AIChE, particularly for members traditionally underrepresented in engineering and for students as they transition into their independent careers.

Letian Dou, Purdue University



Bio: **Letian Dou** is currently the Charles Davidson Associate Professor of Chemical Engineering at Purdue University. He obtained his B.S. in Chemistry from Peking University in 2009 and Ph.D in Materials Science and Engineering from UCLA in 2014. From 2014 to 2017, he was a postdoctoral fellow at the Department of Chemistry, University of California-Berkeley and Materials Science Division, Lawrence Berkeley National Laboratory. His research interest includes the design and synthesis of organic-inorganic hybrid materials and low-dimensional materials, fundamental understanding of the structure-property relationships, as well as applications in high performance electronic and optoelectronic devices. He is a recipient of AIChE Owens Corning Early Career Award (2022), NSF CAREER Award (2021), *Advanced Materials* Rising Stars award (2021), Office of Naval Research Young Investigator Award (2019), Highly Cited Researcher in Cross-Fields (2019-2022), MIT Technology Review Innovators Under 35-China Award (2018), and MRS Graduate Student Award (2014). He served as the faculty mentor for Purdue Solar Chapter, an undergraduate student organization, to promote materials and energy research among underrepresented students.

Candidate Statement: I am honored to be a candidate for MESD Director. In recent years, I have served as the Area 8E (Electronic and Photonic Materials) Co-Chair in 2018 and 2019 and as the Area 8E Chair in 2020. As Area Chair, I successfully acquired several new sessions (one core session and three co-sponsored sessions) for the area and secured external support for the Area 8E Graduate Student Award Session. Since then, I have been actively working with new chairs and participating events in 8E and I have chaired 2 topical conference symposiums. My goals as a MESD Director will be to promote a more inclusive environment for researchers with diverse backgrounds and experiences; expand efforts to increase participation of industrial and international members; and initiate collaborative projects with a broader materials research community such as Materials Research Society, SPIE, and American Chemical Society to enhance the visibility of AIChE's MESD. I look forward to working with MESD in the future and appreciate your consideration.

Neşe Orbey, University of Massachusetts Lowell

Bio: **Neşe Orbey** joined the Department of Chemical Engineering at University of Massachusetts, Lowell (UML) in March 2010 where she is currently an Associate Professor. Her research expertise is in rheology and processing-structure –property relations in polymeric materials. Neşe earned her BS and MS degrees from Middle East Technical University (METU), Turkey, and her PhD from McGill University, Canada all in Chemical Engineering. She started her career in academia at METU and then joined University of Delaware as a scientist the Institute of Energy Conversion and a visiting professor at the Department of Chemical Engineering. Prior to joining UML, she worked in industry as a Technology Manager at Foster-Miller Inc. (currently QinetiQ North America). Her research group is currently working on projects involving microencapsulation, 3D Printing, and synthesis of poly(p-phenylene)/carbon fibers using an enzymatic route. Nese has been a member of AIChE since 1995, and chaired/co-chaired various sessions in 8A since 2012. She served as Area Chair of 3D Printing in 2020 and 2021 and is currently the Group Chair of Topical Conference in Next Generation

Manufacturing. She is a Fulbright Scholar and a Fellow of AIChE.

Candidate Statement: I am very excited to be a candidate for the Director position of MESD. Throughout my career I worked in a variety of material development projects both in academia and in industry. Since 2012, I have been an active participant of AIChE MESD, chairing/co-chairing sessions and presenting my research. MESD is a well-established, successful division and I will be honored to serve MESD in an expanded capacity where I can contribute to the continued success of the division. If elected I will work to increase participation of undergraduate research students as well as graduate students in the MESD poster session. Using my industry experience, I will also work to increase participation from industry in our sessions. I will work to encourage inclusion and intentional representation of chemical engineers and students from diverse backgrounds and experiences in all MESD sessions. I will also support fund-raising as needed.

Matthew Panthani, Iowa State University

Bio: **Matthew G. Panthani** is an Associate Professor and Herbert L. Stiles Faculty Fellow in the Department of Chemical and Biological Engineering at Iowa State University, where he began in 2014. He received his PhD in Chemical Engineering from Case Western Reserve University in 2006. He earned a PhD in Chemical Engineering under the guidance of Dr. Brian A. Korgel from the University of Texas at Austin. He and his lab have been recognized with research honors such as the NSF CAREER Award and Air Force Office of Scientific Research Young Investigator Program. In 2022, he received the Mid-career Achievement in Research Award from Iowa State University College of Engineering. He has been recognized for excellence in mentoring and was awarded the Outstanding Mentorship Award from ISU's Research Experience for Teachers Program. Matthew has been active in AIChE and MESD, having served as a session chair each year since 2013, and as a Chair and Vice-Chair of MESD Area 8E (Electronic and Photonic Materials). Outside of AIChE, he has served in other leadership positions, including serving on the Executive Committee for Argonne National Laboratory Center of Nano and Molecular Science, and the advisory board for the Ames Laboratory Sensitive Instrument Facility. My research on novel semiconductor materials has been funded by the NSF, DOE, and DoD.

Candidate Statement: I am happy to be a candidate for the MESD Director position. If elected to this role, my goals are to:

1. ensure that decisions consider the broad range of experiences and backgrounds of MESD by focusing on accessibility and inclusivity

2. increase the visibility of MESD researchers and sessions; this will be done through increased activity on social media, reducing redundancy in programming, and identifying new opportunities for co-sponsoring sessions within and outside of MESD

3. identify opportunities for growth by increasing membership from industry and national laboratories.

I have been involved with AIChE, having joined my undergraduate student chapter in 2003 and attending my first annual meeting in 2005. I have chaired numerous AIChE sessions and served as the MESD Area 8E Vice chair in 2015 and Area 8E Chair in 2016. During this time, Area 8E reached a peak in abstract submissions and sessions. As Area 8E Chair, I received MESD seed funding to pilot the Electronic and Photonics Graduate Student Award Session, and helped develop a relationship with the Journal of Vacuum Science and Technology to secure sponsorship for this session since 2017. I hope to bring my previous leadership experiences to help contribute towards MESDs sustained growth, while ensuring that inclusivity and diversity are prioritized when shaping future directions.

Amir Sheikhi, Pennsylvania State University

Bio: **Amir Sheikhi** is an Assistant Professor of Chemical Engineering and Biomedical Engineering (by courtesy) at Penn State. In August 2019, he founded the **B**io-**S**oft **Ma**terials **L**aboratory (***B-SMaL***) to tackle some of the challenges of the 21st century in biomedicine and the environment by designing novel bio-based colloidal systems via micro-

and nanoengineering techniques. Amir's lab consists of 10 graduate students, 2 postdocs, and more than 15 undergraduate researchers, funded by NIH (NINDS R01 and NIBIB R56), ACS PRF DNI, Meghan Rose Bradley Foundation, Center for Lignocellulose Structure and Formation (CLSF), Penn State Institutes of Energy and the Environment (IEE), Benkovic Research Initiative, etc. Amir's research has been featured in more than 65 publications, 50 seminars, and 14 reports of invention/patent applications with recognition by over 40 news media outlets. He is the recipient of several major awards, including the AIChE's 35 Under 35, 2022 ACS Unilever Award for Outstanding Young Investigator in Colloid & Surfactant Science, The John C. Chen Young Professional Leadership Scholarship, and The UNIFOR Global Research Fellowship. Recently, Amir was named as one of the 9 emerging leaders in Chemical and Biomedical Engineering worldwide, featured on the cover of the Inaugural "*Futures*" Issue of Bioengineering & Translational Medicine journal. Amir earned his Ph.D. in Chemical Engineering at McGill University and continued to complete two years of postdoctoral research on colloids and macromolecules at McGill Chemistry under Theo van de Ven and Ashok Kakkar. Before joining Penn State, Amir was a postdoctoral fellow in Bioengineering at Harvard Medical School and UCLA, working with Ali Khademhosseini.

Candidate Statement: I still remember my days as an undergraduate student in Chemical Engineering at the University of Tehran, Iran--knowing a lot about the AIChE conferences but never being able to attend due to the visa restrictions. Probably, one of the biggest wishes of that time was to be able to present in an AIChE annual meeting. This was still impossible when I was a PhD student in Canada! The wish came true when I moved to the US to conduct my postdoc at Harvard Medical School. I attended my first AIChE conference a few years ago and ever since have been involved in several activities, including chairing sessions for 08B (Biomaterials), serving the AIChE's flagship journal in biomedical engineering (Bioengineering and Translational Medicine, BioTM) as an Associate Editor (https://aiche.onlinelibrary.wiley.com/hub/journal/23806761/homepage/editorialboard.html), and being involved in the John C. Chen Young Professional Leadership network. I would like to further my involvement by serving our community as a director to help the Executive Committee achieve Division objectives smoothly while gaining more leadership experience to hopefully serve in more leading roles. Please feel free to reach out to me if you have any questions: sheikhi@psu.edu

To cast your vote:

All MESD professional members should have received an email with voting information (check your clutter or spam!). Please double check your MESD 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/366

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 1, 2022

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Opportunities to get involved:

1. Attend the MESD DEI Gathering sponsored by 8B. Wednesday, November 16, 1-3p.m., Phoenix Convention Center W-102A.

2. Organize or provide webinars on MESD or DEI related content or training. AIChE will support our efforts to provide content to our members. Contact AIChE liaison Derek Ward or Julie Champion or April Kloxin.

3. 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 virtual business meeting on Tuesday, November 15, from 7-8 p.m. or contact your Area's current chair (see the MESD webpage under Leadership).

4. Division Service. Volunteers are sought to lead or serve on MESD award committees and serve as social media chair or mentoring chair. Contact Julie Champion or April Kloxin if you want more information on these roles or want to volunteer.

5. 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

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