



**MACROMOLECULES
INNOVATION INSTITUTE**
VIRGINIA TECH.

December 2022
e-NEWSLETTER



Message from the Director

Dear MII,

As we prepare to wrap up the semester and 2022, we thank the entire MII community for your continued commitment to excellence! From the Technical Conference & Review to the MII Halloween Party and everything in between, our students, faculty, postdocs, and staff demonstrate a constant enthusiasm that cannot be overlooked. For this reason, so many companies and agencies are drawn to collaborate with MII, some even setting up R&D facilities here at Virginia Tech, drawn partly by our institute.

Looking to 2023, we are already planning our prestigious Covestro Lecture for the spring, as well as the next Technical Conference & Review for the fall (October 2-4). We are excited to continue working with our External Advisory Board on developing and expanding our programs. And we can't wait to see what new scientific achievements our researchers will produce!

Sincerely,
Robert B. Moore
Director, MII

MII News & Updates

2023 Covestro Lecture Announced

The much-awaited 2023 installment of the prestigious Covestro Lecture Series has been announced! Gregg Beckham, a Senior Research Fellow and group leader at the National Renewable Energy Laboratory (NREL), will be giving his talk, “Challenges & Opportunities in Plastics Recycling & Redesign.” His presentation will cover the importance of analysis in plastics recycling and redesign, techniques using enzymes to recycle polyesters, and the conversion of mixed plastics waste into building blocks for recyclable-by-design polymers.

The talk is free and open to the public - no RSVP or registration required! It will be held at 5:30pm on Tuesday, February 7th, 2023. [Visit our webpage to learn more.](#)



proudly present the annual Covestro Lecture,
a free event open to the public:

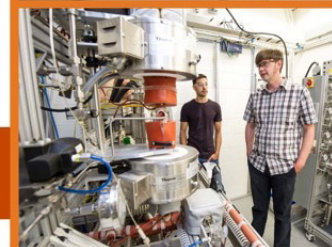
*“Challenges & opportunities in
plastics recycling & redesign”*

Tuesday, February 7th, 2023
5:30 to 7:00 pm
The Moss Arts Center
Anne & Ellen Fife Theater

A presentation by renowned scientist

Gregg Beckham

of the National Renewable Energy Laboratory



Polymer Sustainability Workshop

February 8th, 2023



MII to host a Polymer Sustainability Workshop

On February 8th, 2023, MII will host its first-ever Polymer Sustainability Workshop. The event will bring together Virginia Tech scientists, local polymer companies, and world-renowned polymer sustainability experts from NREL and the FDA. The agenda will feature presentations, panel discussions, and networking, centered around the topics of plastics recycling, polymer design, and more.

Two teams receive MII Seed Funding for collaborative projects

This year, funding has been awarded to two teams. Rana Ashkar and Kevin Edgar, together with graduate students Teshani Kumarage and Fiorella Mazzini, will be investigating methods for enhancing the effectiveness of mRNA vaccines. John Matson and Padma Rajagopalan, together with graduate students Ishani Sarkar and Neeti Gandhi, will be seeking to improve methods for studying liver fibrosis.

[Read the VTx story here.](#)



Faculty News



Chemistry's Feng Lin named Leo and Melva Harris Faculty Fellow

A member of the Virginia Tech community since 2016, Lin's interdisciplinary research is focused on materials for energy and sustainability, which is of worldwide current interest due to its application in advancing electrochemical energy systems and battery technologies.

[Read the VTx story here.](#)

Bartlett group paper featured in Small Rising Stars Collection

“Tough bonding of liquid metal-elastomer composites for multifunctional adhesives,” published by members of the Bartlett group, was recognized as part of the Rising Stars collection. According to the journal, “The Rising Stars series intends to celebrate the diversity of the international scientific communities that these top-tier journals serve by collecting outstanding Research Articles on studies conceptualized and supervised by recognized early career researchers from around the world.”

[Read the paper here.](#)



Erdogan Kiran named Alexander F. Giacco Professor of Chemical Engineering

Erdogan Kiran, professor of chemical engineering in the College of Engineering at Virginia Tech, has been named the Alexander F. Giacco Professor of Chemical Engineering by the Virginia Tech Board of Visitors.

[Read the VTx story here.](#)

Hang Yu chosen for DARPA Young Faculty Award

The Defense Advanced Research Projects Agency is investing up to \$1 million over the next three years into research in Virginia Tech’s Department of Materials Science and Engineering that could make possible autonomous metal manufacturing in space and other remote environments. Associate Professor Hang Yu, who will receive the funding beginning this year through DARPA’s prestigious Young Faculty Award program.

[Read the VTx story here.](#)



MII Student Highlights



Moore and Bartlett groups collaborate on Soft Matter paper

The research groups of Bob Moore and Mike Bartlett collaborated on a recent publication in *Soft Matter*, titled “X-ray scattering as an effective tool for characterizing liquid metal composite morphology.” Erin Crater, a lead author, credits MII for helping to facilitate this collaborative effort between two research groups in different departments.

[Read the journal article here.](#)

Education & Outreach

Virginia Tech Science Festival

A number of MII-affiliated research groups, including the Moore, Deshmukh, and Schulz groups, presented exhibits at the Virginia Tech Science Festival on October 12th. Held since 2014, this expo-style, family-friendly event reaches 4,000 to 6,000 visitors annually, bringing in families, elementary students on school field trips, and Virginia Tech students.





ROA Airport “Science as Art” Exhibition

Sanket Deshmukh is embarking on a partnership with the Roanoke Airport, which displays exhibitions of art based on scientific research. For example, one image depicts a polymer grafted nanoparticle reimagined as a sea anemone. This effort will provide an exciting opportunity for the public to engage with science in a fun and unexpected way. The exhibit is located on the upper terminal level, near the escalators.

MII Halloween Party

On October 29th, students and faculty gathered for the annual MII Halloween Party. Many great costumes were in attendance, but the winners this year were the DREAMS Lab, who dressed as characters from Star Wars. Join us in congratulating them for their coordination and Halloween spirit!



MII Alumni Highlight



Sue Mecham, NALA Membranes

Sue Mecham, CEO and Co-founder of NALA Membranes, graduated from Virginia Tech with a Ph.D. in Chemistry in 1997. Her studies took place prior to the formation of the MACR Program, but as a student advised by Jim McGrath, she was involved with MII’s predecessor organizations, the Center for Adhesives and Sealant Science (CASS) and the Polymer Materials and Interfaces Laboratory (PMIL).

[Read the full highlight](#) to learn how Mecham’s experience at Virginia Tech has helped shape her career.

Events & Reminders

MII Technical Conference: October 2-4, 2023

The 2023 Technical Conference & Review has been announced! Development of the agenda and opening of abstract submissions will take place starting in early 2023.



MACROMOLECULES
INNOVATION INSTITUTE

Discovery at the nexus of minds and molecules

