NSF Center for the Mechanical Control of Chemistry & September 2025

Black Chemists Breaking Scientific Barriers: 2025 ACS Symposium



Photo Left to Right: Malika Jeffries-El, Kensha Clark, Rashanique Quarels-Allen, Toby Nelson, Tamra Blue-Lahom, Ampofo Darko, Briana Simms, Davita L. Walkins, Isaiah Speight, and Robert Gilliard.

Dr. Speight, an Assistant Professor at William & Mary, helped organize the Black Breaking Scientific Chemists session on August 20 at the 2025 Fall American Chemical Society conference, alongside Dr. Kensha Clark, Assistant Professor at the University of Mississippi, and Dr. Davita L. Watkins, Assistant Professor at The Ohio State University. The symposium was presidential event supported by ACS President Dr. Dorothy Phillips.

CMCC at INCOME 2025

















Top Left to Right: James Batteas, Adam Braunschweig, James Mack, and Daniel Tabor. Bottom Left to Right: Tomislav Friščić, Frankie Antillon, Mark Boyer, and Mennatullah Mokhtar.

The CMCC had a strong presence at INCOME 2025 in Berlin, Germany. Dr. James Batteas and Dr. Daniel Tabor (TAMU), Dr. Adam Braunschweig (CUNY), and Dr. James Mack (Cincy) presented their latest research, while Dr. Tomislav Friščić (UoB) delivered an inspiring talk on the future of mechanochemistry. CMCC members also shared their work through poster presentations: Dr. Mark Boyer (TAMU) and Dr. Mennatullah Mokhtar (Cincy) highlighted their cutting-edge research, and Dr. Frankie Antillon (TAMU) showcased the CMCC's education initiatives and broader impacts efforts. We are proud of our team for representing the center and contributing to the global mechanochemistry community.

Welcome Our Newest Members at the CMCC!



Dr. Nicholas HopperPostdoctoral researcher in the Tabor group at TAMU



Michael McNeill
Graduate student in the
Hanusa group at Vanderbilt



Yunah Jeung Graduate student in the Carpick group at UPenn



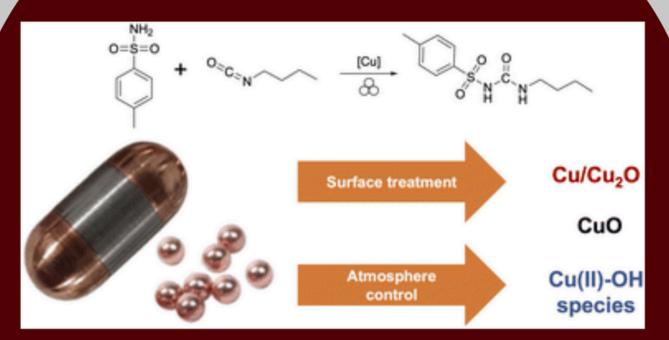
Marc Ramos
Graduate student in the
Mack group at Cincy

Scan the QR code to access the Spanish version! Escanee el código QR para acceder a la versión en español!





New Publication in Chemical Science



Floyd, K. R.; Mella, L.; Kwok, R. W.; Gray, M.; Broker, Jr., E.J.; Marianski, M.; Friščić, T.; Batteas, J. D. (2025). Harnessing the copper surface for direct mechanocatalysis: A case study on mechanochemical sulfonylurea synthesis. *Chemical Science* https://doi.org/10.1039/D5SC04099J

A recent publication in *Chemical Science* from Marianski (Hunter College), the (University of Birmingham), and Batteas (Texas A&M University) groups investigated how the surface characteristics of milling jars influence direct mechanocatalysis in the synthesis of the anti-diabetic drug tolbutamide. Their study used custom-designed milling jars to explore the behavior of copper surfaces different milling conditions. Their findings provide new insights into how copper transformations affect mechanocatalytic activity and offer strategies for better control and higher yields in direct mechanocatalysis.

To learn more about their findings, scan the QR code.





Recent Presentations from CMCC Members



Dr. Daniel Tabor, a professor at Texas A&M University (TAMU), presented "Machine learning for molecules, polymers, properties, and design" for his promotion seminar in the TAMU Chemistry Department.



Dr. Alison Altman, a professor at TAMU, presented "Gaining Orbital Control in f-Element Chemistry: Informed Design of New Quantum Systems" for her mid-term review seminar in the TAMU Chemistry Department.



Dr. Isaiah Speight a professor at William & Mary presented "Chemically and Financially Sustainable Methods for Synthesis" at the 2025 Fall American Chemical Society conference, in Washington, DC.



Dr. Sourabh Kumar, a postdoctoral researcher in the Martini group at UC Merced, presented "Classical potential-based framework for modeling distortion-driven mechanochemical Diels-Alder reactions" at the 2025 Fall American Chemical Society conference, in Washington, DC.

Welcome Our Newest Members at the CMCC!



Ivy Agyemang
Graduate student in the
Braunschweig group at CUNY



Jaewon Lee Graduate student in the Rondinelli group at Northwestern



Megan Minassian
Undergraduate student in
the Altman group at TAMU