

# Crushing Chemistry

❖ NSF Center for the Mechanical Control of Chemistry ❖

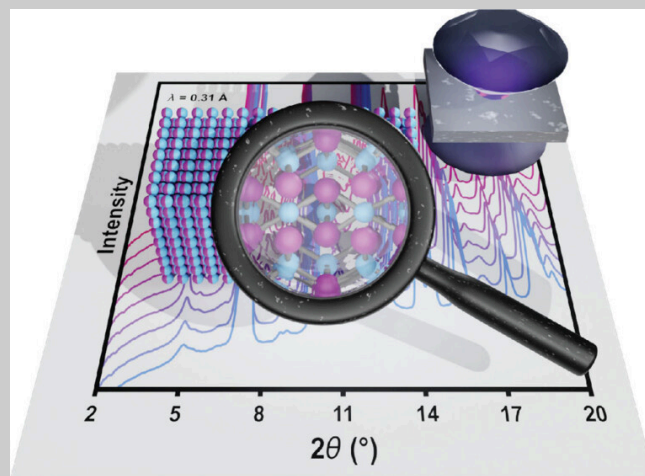
August 2025

## Rodney Amankwah Receives NOBCChE Travel Award

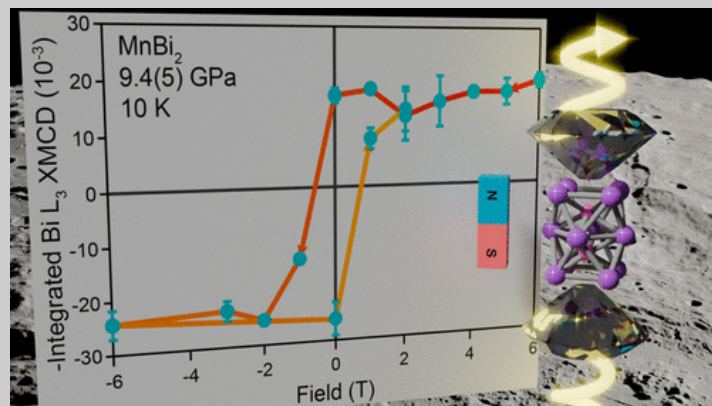


Rodney Amankwah, an undergraduate research student in the Speight Lab at William & Mary, has been awarded the Tier 1 Advancing Science Conference Grant (ASCG). This travel grant is awarded to students recognized as promising future scientists and will support Rodney's presentation at the NOBCChE conference in Atlanta, Georgia, September 22–25. He will present a poster titled, "Solvent-Free and Sustainable Aldol Reactions with Mechanochemistry." Stop by his poster to learn more about the research being conducted in the Speight Lab and at the CMCC. **Congrats Rodney!**

## Two New Publications in the *Journal of the American Chemical Society*



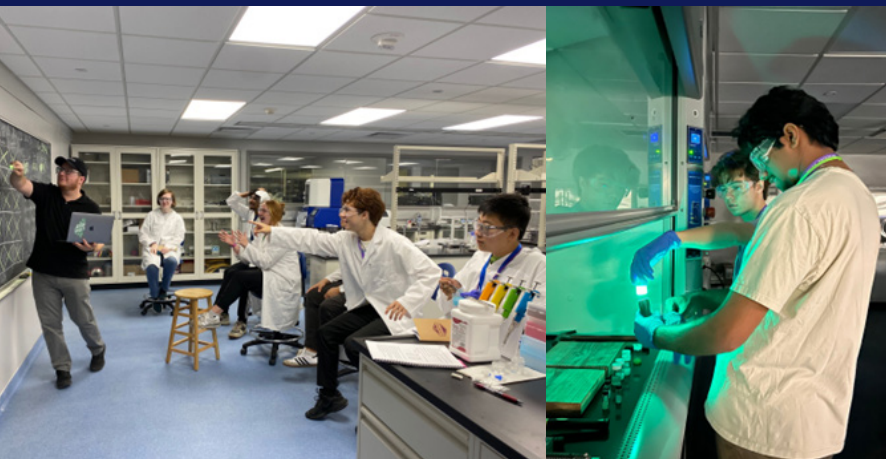
Riesel, E. A., Fang, Z., Fabini, D. H., Altman, A. B., Meng, Y., Ghose, S. K., ... & Freedman, D. E. (2025). Planar Defect Layers Template a High-Pressure InBi Polymorph. *Journal of the American Chemical Society*.



Badding, C. K., Riesel, E. A., Murphy, R. A., Puggioni, D., Popov, D., Fabbri, G., ... & Freedman, D. E. (2025). MnBi<sub>2</sub> Is a Permanent Magnet. *Journal of the American Chemical Society*.



## CMCC Hosts Fourth Successful Youth Adventure Program



This July, the CMCC hosted five high school students for our SMASH Chemistry course, a mechanochemistry-themed Youth Adventure Program at Texas A&M University. Participants received one-on-one mentoring and guidance from graduate students in the Batteas and Altman groups, attended lectures, conducted hands-on experiments, and watched exciting demonstrations.



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



## That's a Wrap!

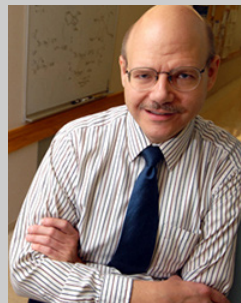


The CMCC proudly celebrates William Oprisu, a graduate student in Dr. Carpick's group at the *University of Pennsylvania*, who successfully completed his Masters of Chemistry. **Congratulations William!**



This August, the CMCC wrapped up its 5th Research Experience for Undergraduate (REU) program. The program concluded with all 11 students presenting their research at a virtual CMCC wide poster session, where we celebrated their hard work and accomplishments.

## Recent Presentations from CMCC Members



**Dr. Tim Hanusa**, a professor at Vanderbilt University, presented "Isolable 'Heavy Grignards' from Elemental Calcium by Direct Mechanosynthesis" at a Gordon Research Conference in Newport, Rhode Island.



**Dr. James Rondinelli**, a professor at Northwestern University, presented "Chemically-Tunable Superelasticity in Silver Halides" at the International School of Oxide Electronics in Cargèse, France.



**Dr. Alison Altman**, a professor at Texas A&M University, presented the poster "Orbital Control in lanthanide materials using pressure," at the North American Solid State Chemistry Conference, in Ames, Iowa.



**Dr. Paul Marshall**, a postdoc in the Altman lab at Texas A&M University, presented the poster "Uniaxial compression for bulk synthesis of  $\text{NdI}_2$ ," at the North American Solid State Chemistry Conference in Ames, Iowa.

## Crushing It: Probing Mechanochemistry with Solid-State NMR



This month, Dr. David L. Bryce, full professor and University Research Chair in Nuclear Magnetic Resonance at the University of Ottawa, joined our CMCC Mechanochemistry Discussions seminar. He discussed how his group uses mechanochemical techniques and cosublimation to create non-covalent cocrystals, as well as how his lab applies solid-state nuclear magnetic resonance (SSNMR) to characterize their structures. Visit our YouTube channel to watch his seminar and learn about the kinetics of non-covalent bond formation in cocrystals.

**We want to hear from you! Scan the QR code to take a short survey about our seminar series.**

