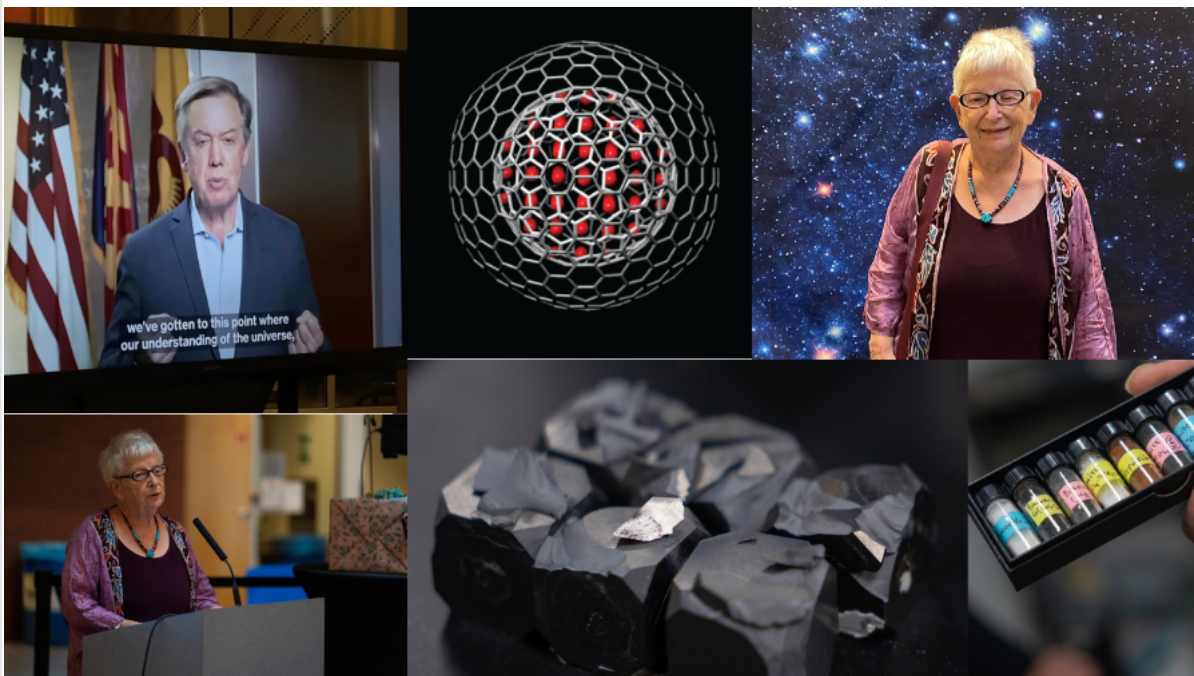


## SMS Connects - September 2022



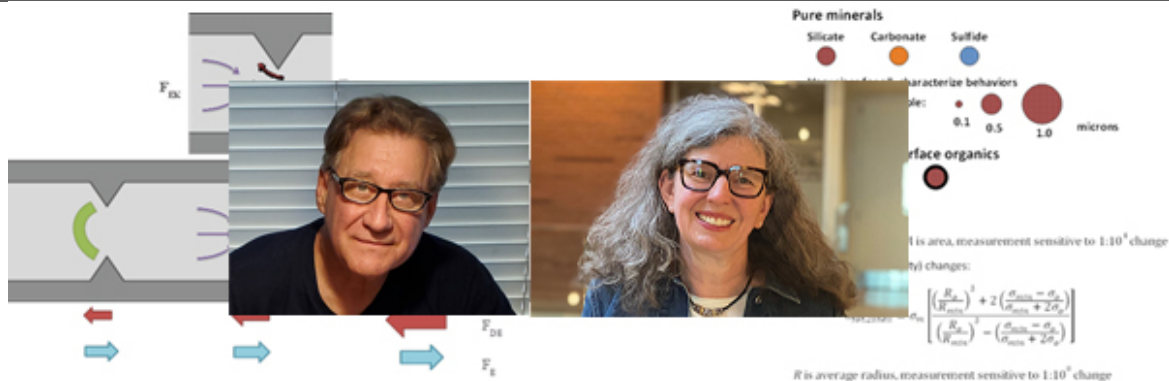
### Materials Matter: ASU celebrates opening of MotU

On Tuesday, Sept. 13, the Navrotsky Eyring Center for Materials of the Universe (MotU) had its pandemic-delayed grand opening, with deans, colleagues and students from a range of disciplines gathered on the Tempe campus to mark the occasion.

President Michael M. Crow, who spoke via video, said “I think the exciting thing here is that Alex has brought together scientists, engineers and conceptualizers...”

[read full story...](#)

### SMS Faculty Receive ACS Petroleum Funds



Hilairy Hartnett (geochemist) and Mark Hayes (bioanalytical chemist) have been awarded an ACS Petroleum Research Fund Grant to study carbon sequestration in natural systems. The project arose out of a casual discussion between the two at an ASU social event. Hayes

specializes in separation and analysis of bioparticles and Hartnett is interested in adsorption of carbon in natural systems. How so much carbon accumulates on the sea floor has been a long-term puzzle in biogeochemistry and Hartnett recognized that the problem might be addressed by isolating and concentrating the small inorganic and bioparticles that have organic carbon stuck to them using analytical techniques developed by Hayes. The work is connected to a key aspect of the global carbon cycle which is organic carbon preservation.



The Biegasiewicz Lab has been awarded ACS Petroleum Research Funding to develop the vanadium-dependent haloperoxidases (VHPO) class of enzymes as biocatalysts for the selective synthesis of complex molecules. A particular focus of the work will be interrogation of their ability to perform regio- and stereoselective halofunctionalization reactions on readily available alkene and alkyne starting materials. Accomplishment of this goal would enable the mild and sustainable construction of medicinally relevant molecules for downstream analysis of their biological properties.

## Our Graduate Students



### **SMS graduate student receives Merck Research Award**

Subhadeep Dutta received the 2022 Merck Research Award for Underrepresented Chemists of Color (UCC). At the September 22nd Merck Symposium, Subhadeep gave a presentation entitled: "Biomaterials-based Tattoo Ink Formulations for Endoscopic Imaging Applications."

### **Graduate student is featured in *Nature* Careers Podcast**

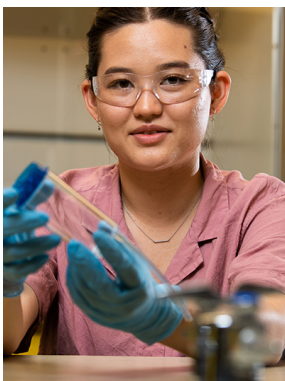
Many scientists switch sectors mid-career that can present life-changing challenges. In 2012, more than a decade after graduating with a bachelor's degree in French, mother-of-six Bethany Kolbaba Kartchner switched to science, rising at 4 a.m. to study for an associate degree in biochemistry at Maricopa Community College. In



the second episode of Muddle of the Middle, a podcast series on mid-career stage in science, Kolbaba Kartchner, now an SMS PhD candidate, tells Julie Gould how she manages her busy personal and professional schedules.

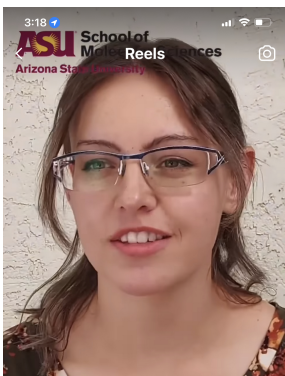
<https://www.nature.com/articles/d41586-022-03049-0>

## Undergraduate Students' Summer Internship



**Ikumi Ellis:** Pacific Northwest National Laboratory

This summer Ikumi Ellis held an internship at the Department of the Energy's Pacific Northwest National Laboratory (PNNL). She conducted research that could help change the way single-use medical devices, such as IV drips, syringes and tubing, are sterilized for patient safety. [read her story on PNNL press release](#)



**Rylee James:** DAAD RISE program, Germany

Rylee James was selected to go to Germany to participate in the [DAAD RISE program](#) at Phillips University, Marburg Germany. Rylee learned how to synthesize new building block materials that could combine with metal counter ions and learned many new techniques including powder X-ray diffraction, TGA and UV/Vis spectroscopy. Rylee says that she learned to think outside of the box and try different approaches with chemistry in order to get results. [watch her video on SMS Instagram](#)



**Bryan Lau Kah Jhun:** EMD Electronics

Bryan Lau Kah Jhun is a junior in the School of Molecular Sciences and interned over the summer at EMD Electronics. He felt extremely valued as an intern and gained a confidence learning to use a wide range of analytical tools. Bryan's professional goal is to become a chemist with the possibility of earning a PhD in chemistry along the way.

[watch his video on SMS Instagram](#)

On the SMS YouTube Channel

## Junior Faculty Spotlight

### Audrone Lapinaite

*Developing novel precision genome editing tools*

**ASU** School of  
Molecular Sciences  
Arizona State University



## [SMS Junior Faculty Spotlight](#)

Check out the latest episode of the SMS Junior Faculty Spotlight series featuring Audrone Lapinaite: Molecular mechanisms of immune systems and novel precision genome editing tools.

## Upcoming SMS Seminars

Fall 2022 Seminars will be on Fridays @ 2:30pm in Biodesign Auditorium, zoom available:

<https://asu.zoom.us/j/87081218152>

- 10/7: Dr. Klaus Lackner, Arizona State University - "Direct Air Capture for Carbon Management"
- 10/14: O'Keeffe Seminar: Dr. Robert Cava, Princeton University - "Finding New Materials - A Chemical Perspective" (PSF 166)
- 10/28: Dr. Jennifer A. Prescher, University of California, Irvine - "Multi-Component Imaging with Engineered Luciferases and Luciferins"

Please visit: <https://sms.asu.edu/about/SMS-Seminars> for Fall 2022 Seminar information.

## SMS is Hiring...

- Postdocs (5 positions)
- Instructor-General Chemistry
- Teaching Assistant (TA)

Please visit <https://sms.asu.edu/About/Employment-Opportunities> for job descriptions.

Please feel free to send email to [ASUSMS@asu.edu](mailto:ASUSMS@asu.edu) at any time with questions, concerns, or suggestions. Please visit our website at [sms.asu.edu](https://sms.asu.edu) to learn more about our school.

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