

SMS Connects - October 2022



discover your talents and help us transform the world for sustainable living

Dear SMS Community,

Dear SMS Community, This was a successful month for SMS students and faculty as well. Two of our early career professors have received prestigious awards!

Audrey Lapinaite was awarded National Institute of Health (NIH) Director's Innovator Award, the grant award that supports exceptionally creative early career investigators who propose innovative, high-impact projects in the biomedical research. With this extraordinary award Audrey and her students will focus on next-generation precision genome editing tools that will broaden our understanding of how human genetic variations impact health and enable the development of new therapeutic strategies. Gary Moore was awarded the Inter-American Photochemical Society Young Investigator Award for his outstanding contributions to the photochemical sciences. Gary's insightful research opened new concepts in nature inspired processes for energy storage to produce clean fuels and other commodity products, thereby resulting in sustainable technologies that minimize the impact of climate change. These two exceptional awards are testimony to an excellent culture of research at SMS, ensuring a bright future for our school.

This semester's Eyring Lectures will be given by Professor David Tirrell, provost of Caltech and a member of all three branches of the American Academy of Arts and Sciences of the U.S. National Academies (Sciences, Engineering, and Medicine). He will deliver two exciting talks, one General Lecture, addressing his journey through chemistry and biochemistry, and a second, technical presentation focused on his current research. Don't miss this extraordinary opportunity for a stimulating discussion by Professor Tirrell who will present cutting-edge research in the field of engineering and probing of protein behavior.

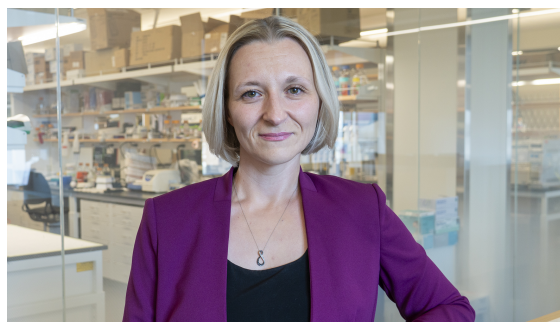
Best Regards,
Tijana Rajh
SMS Director

In the News



Moore wins photochemistry award

Gary Moore has received the 2023 Inter-American Photochemical Society Young Investigator Award. He is recognized for his studies on what plants can teach us about solar energy storage.



Lapinaite Receives NIH Award

Audrey Lapinaite has just been awarded a prestigious National Institutes of Health (NIH) Director's New Innovator Award. Lapinaite and her group's research focus on new genome editing tools.

This Thursday and Friday, Fall Eyring Lectures...



Professor David Tirrell

David Tirrell to deliver distinguished Eyring Lecture Series at ASU

The Fall Eyring Lecture Series will be held on **Thursday, November 3, and Friday November 4, 2022.**

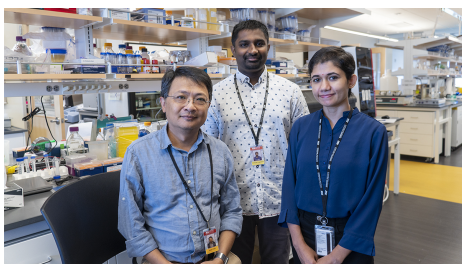
This semester's lectures will be delivered by Professor David Tirrell from California Institute of Technology. Tirrell will deliver a General Lecture on Thursday at 6:00 pm in Marston Theater (ISTB4) entitled "Genetic Engineering of Macromolecular and Cellular Materials." He will give a technical presentation on Friday at 2:30 pm in PSF 166 entitled "Selective Proteomic Analysis of Cellular Sub-populations in Complex Biological Systems."

For more information please read: [David Tirrell to deliver distinguished Eyring Lecture Series at ASU](#)

Reception

We invite SMS alumni to join us for a reception with Professor Tirrell before his General Lecture, on Thursday, November 3, 5:00pm—5:40pm at the ISTB4 lobby. We look forward to seeing everyone at the reception!

Research Highlights



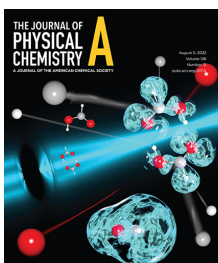
Study discovers dual-function messenger RNA

For the very first time, a study — led by Julian Chen and his group has discovered an unprecedented pathway producing telomerase RNA from a protein-coding messenger RNA (mRNA).



AI spurs scientists to advance materials research

ASU researchers Qi-Jun Hong, Alexandra Navrotsky and Sergey Ushakov, together with Axel van de Walle at Brown University, have harnessed the power of artificial intelligence (AI), or machine learning (ML), to demonstrate an easier way to predict melting temperatures for potentially any compound or chemical formula.



Limited Formation of CO₃³⁺ through Strong-Field Ionization and Coulomb Explosion of Formic Acid Clusters
Shaun F. Sutton, Chase H. Rotteger, Dane M. Miller, Lenin M. Quiroz, Pinarsetty Tarakeshwar, and Scott G. Sayres*
Cite this: *J. Phys. Chem. A* 2022, XXX, XXX, XXX-XXX

First detection of triply ionized CO molecules

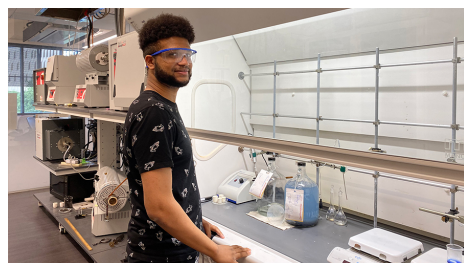
Scott Sayres and his research group used intense high-frequency lasers to detect triply ionized CO molecules for the first time. Ionized molecules play important roles in planetary atmospheres and interstellar clouds. Their exciting results are highlighted on the cover of JPCA.

Our Students and Alumni



ASU researchers solve a Lyme disease mystery

SMS doctoral graduate Karie Behm was recently highlighted in ASU New for her research to unlocking some of the secrets of Lyme disease, a tenacious ailment affecting some 500,000 Americans every year.



Graduate student's first-author paper

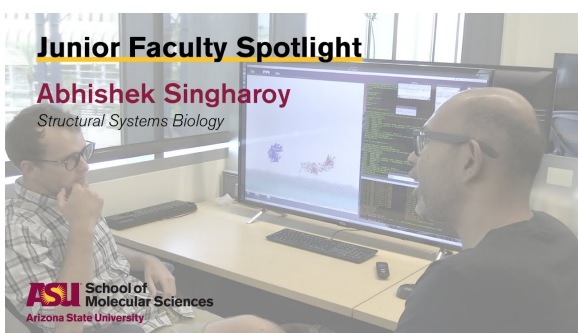
The latest work from Christina Birkel's group, just published in *Inorganic Chemistry*, and first authored by graduate student Jordan Sinclair, demonstrates a sol gel-based method to access a largely unknown MAX phase: V₂PC. -The paper is titled "Sol Gel-Based

Synthesis of the Phosphorus-Containing MAX Phase V2PC.”

Sinclair wants to contribute to the synthesis of largely commercializable and efficient materials. Producing solid-state materials for batteries, computers and other products is a rapidly growing field especially since their manufacturing costs are decreasing significantly.

[Read more SMS News and Research](#)

Faculty spotlight on our YouTube Channel



[Abhishek Singharoy](#)

Check out the latest episode of the SMS Junior Faculty Spotlight series featuring Abhishek Singharoy: computational biophysics, molecular modeling, energy and health.

Join us- SMS is recruiting PhD/MS students

The School of Molecular Sciences is now recruiting PhD/MS students for entry in Fall 2023. The School provides an innovative approach to graduate education that trains students across traditional chemistry disciplines (Analytical, Biological, Organic, Physical or Computational) to be successful independent scientists meeting grand challenges in an increasingly post-disciplinary scientific world. Visit: <https://sms.asu.edu/graduate-study> to learn more, discover your talents and help us transform the world for a better tomorrow!



Science is Fun!

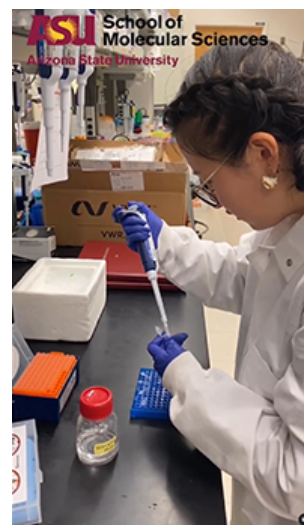


ASU Science is Fun is an internship course for students to develop their science and education communication skills. Students learn, develop and present science-outreach activities through participating K-12 and community events. Science is Fun interns perform classroom demonstrations, spend a semester in school science clubs mentoring students, and provide outreach through social media. Follow Science is Fun on TikTok <https://www.tiktok.com/@sif.asu> and Instagram <https://www.instagram.com/asu.sif/>.

Next Month, on November 19, the Science is Fun team will co-host our homecoming tent with The SAACS, we look forward to seeing everyone there!

SMS is on Instagram (@sms.asu)

Did you know that SMS is on Instagram? You'll find some fun and interesting events and news. We've also added some inspiring photos and videos on this popular app. Follow us on Instagram <https://www.instagram.com/sms.asu/>, check out the [latest Reel](#) featuring our undergraduate student Eva Chen and her undergraduate research journey!



SMS is Hiring!

- Full-time faculty positions:
 - Experimental High-Pressure Chemistry
 - Materials Chemistry
 - Polymer Chemistry
 - Biomolecular Design, Programming & Engineering

- Quantum Molecular Science
- [Postdoctoral positions](#)
 - MoTU
 - Coral Biochemistry
 - Material Chemistry
 - Geomicrobiology
 - Molten Salt Thermodynamics
- [Instructor - General Chemistry](#)

Please feel free to send email to ASUSMS@asu.edu at any time with questions, concerns, or suggestions. Please visit our website at sms.asu.edu to learn more about our school.

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ASU School of Molecular Sciences

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