

SMS Connects - August 2021



Dear SMS Community,

We, at the School of Molecular Sciences, both faculty and staff, are very excited to start the new Fall semester 2021. After a year in which our staff and faculty have worked so hard to ensure that learning and research will be as productive and as safe as possible under pandemic induced constraints, we meet again, this time in classrooms in person, and as safe as possible, wearing masks in crowded areas.

I am honored to welcome you to this year in my new role; as a new Director for the SMS, I look forward to contributing new positive ways to SMS evolution and growth. That growth requires students, staff and faculty to focus on learning and teaching while at the same time staying connected to life outside our local settings, establishing new ties with the communities around our nation and world to build our own out of diversity.

We just completed our Fall Welcome for undergraduate majors where we demonstrated how exciting atoms and molecules are and, although we cannot see them without help of technology, we showed how they affect our day-to-day life. As students in our school, you will learn how to manipulate atoms and molecules, to think independently and creatively, find solutions, and work together to achieve your goals. These skills, knowledge, and habits of mind will prepare you to thrive in our increasingly complex and interconnected world.

I wish you a productive, fun and, most of all, a safe Fall semester. As a new year at SMS begins, we welcome everyone and look forward to a great year.

Tijana Rajh
SMS Director

Tijana Rajh Joins ASU



Tijana Rajh has been announced as the new director of Arizona State University's School of Molecular Sciences. Tijana comes to ASU from a 25-year career at Argonne National Laboratory, a multidisciplinary science and engineering research center of the U.S. Department of Energy.

Tijana has extensive leadership and administrative experience and a commitment to addressing gender and diversity issues in science. [Read full story...](#)

Colorful and Explosive Fall Welcome!



The class of 2025 (253 immersion plus 86 online) chemistry and biochemistry majors were warmly welcomed on 8/18/21 at 10 a.m. by SMS Director Tijana Rajh. This was followed in spectacular style, including lots of bangs, with exciting and colorful demonstrations from five SMS faculty and two academic advisors.

Ian Gould, Ara Austin, Jim Klemaszewski (Klem), Rebeca Smith, Ashli Morgan and advisors Jessica Shipley and Sarah Johnson, set fire to hydrogen balloons, explored temperature, pressure and volume relations, made "Elephant's Toothpaste", dazzled with colorful chemistry in solution and in flames, and created a spectacular indoor cloud of water using liquid nitrogen, to show our incoming chemistry and biochemistry freshmen the magic and beauty of chemistry.

[Click here to watch Fall Welcome video](#)

Early Start Program



While students are eager to transition from high school to college, it's not always easy. That's why many are encouraged to attend the SMS Early Start program. For ten days before the start of the Fall semester, incoming freshmen learn what it takes to achieve academic success and build relationships with faculty and other first year students. Plus, they get to move to campus early and earn three elective credits.

This year's group was instructed by Ian Gould and Orenda Griffin and Tim Lamb taught the lab. Peer mentors included Sree Neha Yeturu and Stephanie Donovan. Sree Neha is a sophomore and only just experiencing campus life for the first time.

[Meet our Early Start group and learn about their favorite part of the program.](#)

New Graduate Students



This month, the School welcomed its new class of 38 graduate students, 30 PhD and 8 MS. They are a diverse group from 11 different states in the U.S. and Bangladesh, Cameroon, China, Ghana, India, Indonesia, Korea, Nigeria, the Philippines, Sri Lanka, and Turkey. The students just completed an extensive two-week TA Training learning about the instructional philosophy of our undergraduate programs as well as orientations for the PhD and MS programs and the research within the School of Molecular Sciences. They now embark on the next set of challenges: finding and settling into a research lab and finding a research topic into which they will pour countless hours and determination for the next several years.

Our Students...



SMS online student first author on dynamic water-protein interactions research article
SMS online student Tawny Fajardo and Assistant Professor Matthias Heyden, through computer simulations of a small peptide, studied the underlying components of the potential energy and entropy that determine the peptide's structural and dynamical properties.

[Read the full story](#)

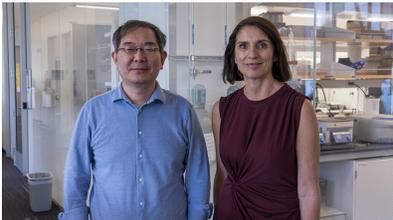


Graduate student Abesh Banerjee receives poster award

Congratulations to Abesh Banerjee (graduate student working in the Ghirlanda lab) for winning a poster award at the Protein Society Annual Meeting. Abesh's poster was titled: Membraneless organelle by design: the carboxysome.

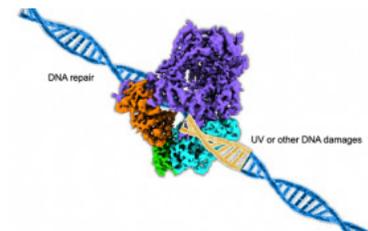
The poster describes a new type of 'membraneless organelle' the Ghirlanda group is using to engineer a synthetic carboxysome to fix carbon dioxide in the presence of light, by compartmentalizing an artificial enzyme and a carbon dioxide concentrating protein. The work is part of Proteocell, a collaborative project aimed at engineering an artificial cell that uses peptides and proteins to form membranes rather than lipids.

Research Highlights...



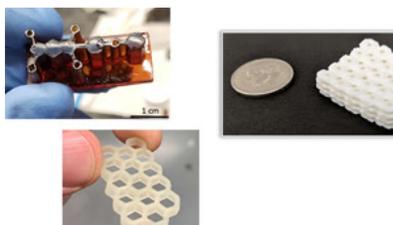
ASU researchers develop artificial enzyme to harness light for renewable energy systems

Using an artificial enzyme embedded in a transparent, conductive material, researchers at ASU SMS report in *Catalysts* their success in developing a highly efficient system to convert light energy into chemical energy. [read more...](#)



ASU, Mayo unravel DNA repair mechanism

Chloe Truong and Po-Lin Chiu of ASU SMS and The Biodesign Institute, along with Mayo Clinic biochemically characterize the protein-protein interactions of a huge DNA repair enzyme, DNA polymerase zeta, which is responsible for repair across damaged DNA, known as DNA translesion synthesis (TLS). [read more...](#)



ASU researchers collaborate to develop innovative manufacturing for modern industries

Tim Long, with fellow researchers from Virginia Tech, describe the versatility of new families of polyesters in a new paper published in *ScienceDirect*. [read more...](#)

In the School...

SMS New Leadership Team



We are very pleased to announce that Giovanna Ghirlanda has joined the SMS leadership team as Associate Director of Faculty Development. The New SMS leadership team includes: Tijana Rajh (Director), Ian Gould (Associate Director of Undergraduate Programs), Marcia Levitus (Associate Director of Graduate Programs), and Giovanna Ghirlanda (Associate Director of Faculty Development).

[SMS Leadership](#)

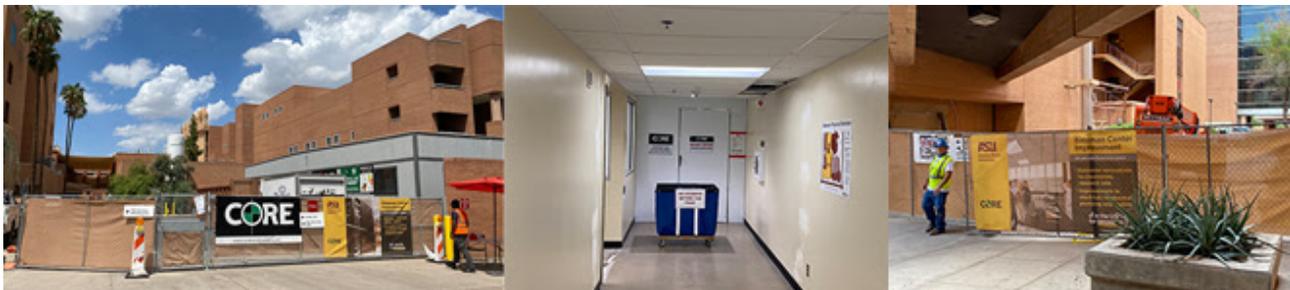
SMS Advising Team Moved to Armstrong Hall



The SMS advising office has been relocated to the Armstrong Hall (ARM 162). For more information about advising (make an appointment or walk-in schedule), please click here to [visit SMS advising page](#).

[Watch Video: Meet SMS Advising Team](#)

Physical Sciences (PS) Building Updates



Physical Sciences (PS) Building construction is underway. Having the PSD- and E-Wings sealed off means long detours to get to H-Wing and dry ice and liquid nitrogen stations. All lab classes are now squeezed into H-Wing and we now have labs running from 7:40AM until 8PM each day. However, the inconveniences will be worth it when the new and expanded teaching labs open in the reconstructed building.

SMS is Hiring!

ASU SMS: Lecturer - [General Chemistry \(AY Job #16781\)](#)

Get Your Official School Gear

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Bella+Canvas Unisex Jersey Crew
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Port & Company Ladies Fan Favorite V-Neck Tee
Port & Company | LPC450, 14682110



Sport Tek Microspique Sport Wick Polo
Sport Tek | 07150, 14682110, 7

SMS branded merch is available! Please visit this website: <https://asusms.designashirt.com>. to purchase your school gear, BE PROUD to be a SMS Sun Devil!

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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