November 2019



Abhishek Singharoy receives NSF CAREER award



Assistant Professor Abhishek Singharoy from Arizona State University's School of Molecular Sciences and the Biodesign Institute's Center for Applied Structural Discovery has recently earned a Faculty Early Career Development (CAREER) award from the National Science Foundation (NSF).

The prestigious CAREER program supports the early career development activities of teacher-scholars who most effectively integrate research and education within the mission of their organization.

Read full story || Watch the video

Dealth Breakthrough discovery in plants' DNA may lead to slowing aging process in humans



A study led by Julian Chen in Arizona State University's School of Molecular Sciences in collaboration with Dorothy Shippen from Texas A&M University has unraveled the first detailed structure and function of the RNA component of telomerase enzyme from land plants. The telomerase RNA components from land plants show the connection between ciliate (pond scum) and human telomerases and offer new insights into the evolution of telomerase in eukaryotes.

Read full story || Read full story on CNN health

2019 Homecoming This Saturday November 23 @1:30 PM

Come watch some exciting chemistry demonstrations!



Some of our "Science is Fun" undergraduates, Student Affliates of the American Chemical Society (SAACS) and undergrads from professor Scott Sayres' physical chemistry class will be at the annual ASU <u>Homecoming Block Party</u> on Saturday, November 23. In addition to food and music the block party will feature tents housing dozens of ASU units. Come to the SMS tent for exciting chemistry demos!

Alumni Spotlight: Chad McCluskey

Meet Chad McCluskey, Alhambra High School Science Instructional Leader and teacher extraordinaire. Chad, a recent SMS graduate, exemplifies all the attributes of a dedicated and passionate teacher. After majoring in chemistry and graduating in 2013 he had to decide whether to continue with research (he won the Academic Merit Award in 2013) or to pursue a career in teaching (he also won a Distinguished Teaching Assistant Award). In the end the choice was easy as he believes that good public education provides the essential backbone for our society.

You can discover more by listening to Dr. Ara Austin's podcast with Chad.

Listen to Episode 9: Science Teacher



Our Student: Krisztina Tope- First Prize Winner in WCS' Poster Contest!

Congratulations to Krisztina Tope who won First Prize in the Western Coating Symposium's (WCS) Student Poster Contest! Krisztina is the 2019 SMS Arizona Society for Coatings Scholarship Awardee which was presented at the SMS Awards Ceremony last spring by ASCT president, Randy Hughes.

Krisztina's poster was about her research in "Formation of Atomically Precise Surfaces using Size Selected Clusters." The posters were judged by a panel of industry experts and awards were given to the students with the best presentations. The photo is of WCS representative, Ted Garrett, presenting Krisztina with her First Place Certificate and her Blue Ribbon. She is the first School of Molecular Sciences ASCT scholarship student to compete in the Student Poster Contest and we are sure she will not be our last winner.



Research highlights

Massive simulation reveals how a bacterial organelle converts sunlight to chemical energy ASU researchers report successful simulation of every atom of a light-harvesting structure in a photosynthetic bacterium.

Photosynthesis seen in a new light by rapid X-ray pulses

In a new study led by Petra Fromme and Nadia Zatsepin, researchers investigate the structure of Photosystem I (PSI) at the European X-ray Free Electron Laser (EuXFEL) in Hamburg, Germany.

Microfluidics aid membrane protein structure studies

Alexandra Ros and her group published a paper on injection devices for membrane protein structure visualization with x-Ray free electron lasers (XFELs).

ASU team accepts the NSF Quantum Leap challenge

ASU was awarded a Conceptualization Grant from the National Science Foundation's Quantum Leap Challenge Institute program to study electron spin as a medium for information storage and sensing.

That's a switch! Synthetic circuits regulate gene expression

Alex Green and his group generate synthetic circuits to regulate gene expression.

read more SMS News and Research

International Year of the Elements



2019 is the International Year of the Periodic Table of Chemical Elements (IYPT2019). After an effort lead by Kathryn Kitzmiller, Christina Forbes and Greg Tucker of the Central Arizona Section of the American Chemical Society with Paul Jagodzinski, a member of the board of directors for the American Chemical Society, the State of Arizona has recognized the IYPT2019 with an official commendation signed by Governor Douglas Ducey.

Christina Forbes and Greg Tucker are pictured outside SMS with the official State commendation.

New LinkedIn Group for SMS Graduate Alumni and Students- Join us!

SMS graduate students recently created a LinkedIn group named "ASU School of Molecular Sciences Graduate Alumni and Students". We invite you to join the group and become a member of SMS community forever.

Click here to join



Employment Opportunities

Texas A&M University: College of Agriculture and Life Sciences: Biochemistry & Biophysics, An <u>Assistant/Associate/Full Professor with an emphasis in cryoelectron microscopy (cryoEM).</u>

City of Westminster, CO: Chemist.

DEPARTMENT OF THE ARMY, Aberdeen Proving Ground, MD: Chemist.

Please follow us on the <u>SMS LinkedIn</u> page for more job opportunities. Please also check <u>Chemistry Job Resource: Chemjobber</u> for more chemistry jobs.

Please feel free to send email to <u>ASUSMS@asu.edu</u> at any time with questions, concerns, or suggestions. You can visit our website at <u>sms.asu.edu</u> or connect with us by liking our <u>Facebook</u> page!



