



PHOTO: JOSEPH V. LABOLITO

A Fulbright and PhD program await Diana Tiburcio

by Lindsay Hargrave

Diana Tiburcio, ENG '24, is headed to Stanford University to earn a doctorate in chemical engineering. The first woman of color from Temple to receive a Goldwater Scholarship, the chemistry minor and mechanical engineering major is first participating in a 10-month Fulbright at the Max Planck Institute for Chemical Energy Conversion.

In high school, Tiburcio was guided by her fencing coach Tasia Ford, who was making the move from coaching high school to coaching at Temple. Tiburcio made the decision to follow in the footsteps of her coach (a Temple alum), and came to Temple as a student-athlete in STEM.

Tiburcio's favorite faculty member is the chair of Chemistry. "Ann Valentine has been an incredible mentor throughout all four years at Temple," Tiburcio said. Tiburcio entered college hating chemistry, but taking

Valentine's General Chemistry class completely changed her mind. She went on to work in Valentine's inorganic lab, where she characterized how proteins react with metals such as iron and titanium.

Tiburcio fell in love with scientific research after becoming involved with research-focused groups like MARC (Maximizing Access to Research Careers) and Engineers Without Borders. Through these student organizations, she found camaraderie and projects to work on. She participated in the GREEN program in Peru to study water resource management and sustainability, with a focus on indigenous practices.

"I decided that I wanted to pursue a career in research, and Temple really gave me those opportunities as an R1 institution. I'm really grateful for everything that Temple provided me: the fellowships, the advising and fencing."



PHOTO: CONNOR MCVAIL

CHEMISTRY GRADUATE STUDENTS LEAD ACS SYMPOSIUM

by Greg Fornia

Chemistry graduate students Zachary O'Dell, Tipsiri Pungsrissai and Sanjay Sridhar, in collaboration with students from other universities, organized the Graduate Student Symposium at the 2024 American Chemical Society Spring National Convention.

The theme, Nanoparticle Heterogeneity, Realizing Strengths by Embracing the Differences, was centered around the work of the National Science Foundation Center for Single-Entity Nanochemistry and Nanocrystal Design, a partnership among Temple, led by Professor Kallie Willets, and Indiana University, Texas A&M University and University of Texas at Austin. All three students work in the Willets Lab, where research is focused on plasmonic nanoparticles and how they interact with light.

"The symposium's goal was to connect scientists from various disciplines of nanomaterial research to better understand and control heterogeneity in metal nanoparticle samples," explained O'Dell, who chaired the symposium.

Sridhar's role was managing logistics, including drafting the schedule and managing technology. As speaker liaison, Pungsrissai communicated with invited researchers. "This symposium was a great opportunity to meet and talk about science to big names in the research field," said Pungsrissai. "I guess it's like seeing your idols in person."

CHEMISTRY'S HERB BASSOW DEMO DAY

by Greg Fornia

The Herb Bassow Demo Day, a longstanding collaboration between the Chemistry Department and Philadelphia Section of the American Chemical Society, offers middle and high school students opportunities to experience what it's like to be a scientist.

Inspired by the Royal Society of Chemistry Christmas lectures, the most recent event attracted approximately 300 students from five Philadelphia public and private schools, including Carver High School for Engineering and Science and St. Joseph's Preparatory School.

Co-organized by Daniele Ramella and Jaskiran Kaur, both associate professors of instruction, each event consists of faculty demonstrations, such as making liquid nitrogen ice cream, and hands-on activities like decorating t-shirts using chromatography.

Additional activities include marshmallow inflation, to learn about pressure and volume, and balloon on a stick, to explore polymer structure. "Students come with different levels of understanding of chemistry," said Kaur. "Some are excited to see demonstrations of the concepts they learned in their classes and others are excited to learn new concepts. There is something for everyone."

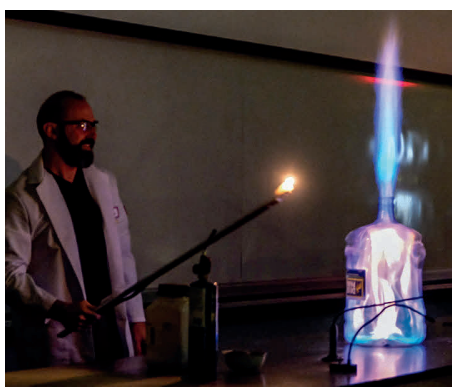


PHOTO: RYAN S. BRANDENBERG



CAROL MANHART: TEMPLE TRAILBLAZER IN STEM

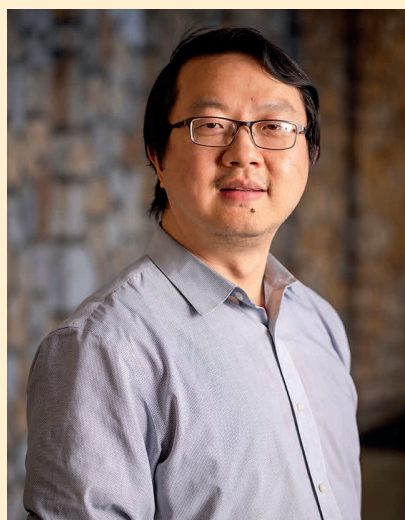
by Jonny Hart

Carol Manhart, assistant professor, was featured as a Temple trailblazer in STEM, celebrating accomplished women researchers. Manhart's focus is using biochemistry to understand how errors are corrected during the DNA copying process. Her research has been published in journals such as *Nucleic Acids Research*.

Growing up, Manhart was curious about how things worked. Watching her dad fix a door, Manhart was captivated by the deadbolt lock, and felt a strong desire to dismantle it to get a better understanding of how it works.

That sense of wonder intensified during college, particularly as she took more biology courses. Today, her work focuses on how proteins interact with DNA to correct errors and predict the likelihood of acquiring a cancer associated with a defective protein.

"To women aspiring to excel in STEM fields, I would strongly recommend seeking out mentors and sponsors," said Manhart. "It is crucial to connect with individuals who can provide guidance and support, as well as advocate for you to flourish in your career."



RISING STARS IN CHEMISTRY

Associate Professor Ross Wang was named a 2024 Rising Star in Biological, Medicinal, and Pharmaceutical Chemistry by *ACS Bio & Med Chem Au*, an open-access journal of the American Chemical Society. Wang was selected based on his outstanding record of accomplishment and future promise. Associate Professor Sarah Wengryniuk was named a Rising Star by the American Chemical Society Women Chemists Committee, recognizing exceptional early to mid-career women chemists across who have demonstrated outstanding promise.