

Annual picnic: Save the date!

first published 26 March 2023

Join us for the 2023 Summer Picnic! We will be in Shaw Park this year, at the lovely Barry-Wehmiller Pavillion. We are starting on the earlier side to try and avoid the late afternoon heat.



Date: Saturday July 22, 2023
Time: 10:00 AM – 3:00 PM
Location: Shaw Park – Barry-Wehmiller Pavillion
Address: 27 S Brentwood Blvd, Clayton, MO 63105

If you have any questions, please contact Immediate Past Chair, [Cynthia Chapple](#). Bring a lawn game, your friends and family, and enjoy some BBQ and good company!

Daria Sokic-Lazic is the 2023 Chemical Science and Technology Award Winner!

first published 30 March 2023

Submitted by Rui Tang, PhD, Chemical Science and Technology Award coordinator.

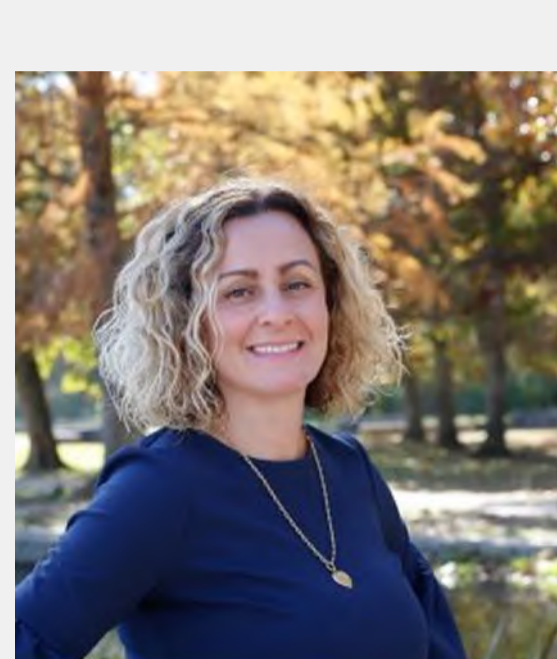
I am pleased to announce the winner of the 2023 American Chemical Society, St. Louis Section, Chemical Science and Technology Award, Daria Sokic-Lazic, MS. She is currently an Instructor of Chemistry at the Department of Chemistry, Saint Louis University. Saint Louis University is one of the nation's oldest and most prestigious Catholic universities. Founded in 1818, SLU is recognized for world-class academics, life-changing research, compassionate health care, and a strong commitment to faith and service.

Ms. Sokic-Lazic joined the Department of Chemistry as a faculty member at St. Louis University back in 2009. Starting from the general chemistry lab coordinator, Daria has been managing 30 lab sections with over 700 freshmen students, 10-12 graduate teaching assistants, and 8-10 undergraduate preparatory assistants every fall semester. All this while teaching a freshman course of more than 100 students and developing innovative teaching techniques and materials. Her workload, work ethic, and drive toward making the teaching and learning experience for graduate and undergraduate students exceptional cannot be overstated.

Ms. Sokic-Lazic consistently strives to implement the highest pedagogical practices in her labs and courses. She is constantly working on improving her labs, bringing in new technologies, new procedures, and better implementations of teaching materials. She invests a vast amount of time in teaching materials. A significantly higher time allocation goes into training and educating graduate students on teaching practices. Training graduate students from a wide range of backgrounds on their fundamental chemistry knowledge, technical skills, grading skills, adequate teaching, and overall time management takes a lot of work. Not only does she train graduate students but also undergraduate students. She trains undergraduate students on chemical preparation techniques, equipment setup, and troubleshooting for the teaching labs. Daria supports graduate and undergraduate students' education and professional growth with empathy and compassion. She is honest, fair, straightforward, and kind in her student interactions.

Even with her plate full, Ms. Sokic-Lazic always initiated innovative teaching materials for her classrooms. Since 2018, Daria has been working with other faculty members at the Department of Chemistry, St. Louis University, on obtaining educational grant proposals through the KEEN Foundation. Their project has been focused on developing and implementing modules in large freshman-level chemistry courses that would bring value, connection, and curiosity to our students. Through this project, they developed 9 modules that span basic chemistry, principals of chemistry, and general chemistry I & II. The innovative modules affect over 1000 students each year. Daria's creativity, thoroughness, and accountability were highly displayed during this work. She paid attention to every detail and thought-out every scenario in the grant writing process, module development, and implementation phases. This funded project was highly successful and resulted in web-based publications and was presented at national STEM teaching conferences. Currently, the project is in the data collection phase and will have another resulting manuscript where Ms. Sokic-Lazic was the initiator and propeller of this team.

Ms. Sokic-Lazic is ambitious, curious, honest, fair, and caring. She truly cares that all students under her supervision and in her courses succeed. She goes out of her way to see them do well. She works with students one-on-one to help them improve their skills and knowledge. Ms. Sokic-Lazic's is a vital faculty in the chemistry department and is the backbone of the general chemistry course sequence at the Department of Chemistry, St. Louis University. Her efforts, expertise, drive, dedication, and impact on the success of teaching and educational research are paralleled by very few.



Daria Sokic-Lazic, 2023 Chemical Science and Technology Award winner.

Chemistry is pHun reaches over 1,000 students!

first published 31 March 2023

Submitted by Joe Smith

The 2022-2023 season of the "Chemistry is pHun" outreach program sponsored by the St. Louis Section of the American Chemical Society was wrapped up in March. Thanks to facilitation by Partners in Education in the Rockwood School District, a non-profit that does the substantial work of interfacing with schools on schedules and room reservations, we were able to complete 19 separate school visits and give 37 presentations attended by a total of 1251 2nd- and 5th-grade students.

Presentations to both grades began by discussing the diversity of career activities carried out by STEM professionals, including chemists. Safety was emphasized by having all presentation participants wear eye protection and urging students to get grown-up assistance before experimenting at home.

Second graders attend a presentation entitled "Observing States of Matter" that focuses on matter in the states of solids, liquids, gases, and plasmas and the role of energy transfer and chemical reaction in causing state changes. Demonstrations with hand warmers and the "collapsing can experiment" illustrate heat energy's role in state changes. The presentation concluded with a hands-on demonstration where each student transformed liquids into a solid by reacting Elmer's glue with borax solution.

Fifth graders experience a "Transforming Matter" presentation that introduces the concept of chemical reactions as transformations of reactants into products. A combustion reaction demonstration illustrates how reactants can turn into products accompanied by a release of energy. Discussing acid-base reactions, demonstrated with the help of red cabbage juice indicator, leads to exploring the acidity of fluids encountered in daily life. A discussion of the pH scale ties in well with math classes, where students are learning about exponents. Methods of controlling chemical reactions, such as removing a reactant or reducing temperature, are discussed in the context of extinguishing fires and the use of refrigeration to slow down food spoilage. This presentation also concluded with a hands-on demonstration where each student transforms liquids into a solid by reacting Elmer's glue with borax solution.



Joe Smith shows how rapidly changing temperature can cause a can to be crushed.



Joe Smith explains the experiment about to be performed while properly PPE'd students listen.

Giving these presentations is a gratifying activity for Chemistry is pHun coordinator Joe Smith. Students ask a wide variety of questions, ranging from the routine ("Is something going to explode?" or "How many years did you go to school?") to the profound, such as "How do you invent things?" and "How does matter form?" Giving these presentations is an opportunity for retired professionals to introduce the idea of a STEM career to students in their formative years. If you are interested in participating in future programs, contact Joe at smithjp1972@gmail.com.

Meeting & Seminars

Board of Directors

St Louis Section-ACS Board of Directors meets the second Thursday of each month. We hope to move back to in-person meetings in 2023, please check the meeting announcements.

Date: April 13th ([via Zoom](#), and [location TBD](#))

Join internet meeting at 6:00 pm for social/chit-chat
Business meeting begins at 6:30 pm

Future meetings: May 11th, September 14th

Maryville University

Seminars are approximately once a month on Thursdays, 4-5 pm. Details are available on the university's [seminar page](#). All seminars are free and open to the public. Contact [Jason Telford](#) for more information.

Saint Louis University

Seminars are generally on Fridays at 12 noon in Carlo Auditorium, Tegeler Hall, unless noted otherwise. Refreshments follow. For the most up-to-date information, refer to the department's [home page](#) and follow the link to the Seminar Schedule.

University of Health Sciences & Pharmacy in St. Louis

The Center for Clinical Pharmacology hosts a monthly seminar series in ARB 212 unless otherwise noted. For the most up to date information refer to the center's [seminar page](#) or contact [Jodi Maslin](#).

University of Missouri–St Louis

Mondays at 4 pm in 451 Benton Hall, unless otherwise specified. Refreshments 15 minutes prior to seminar time. For timely information on visiting seminar speakers, contact the Chemistry Department, 314.516.5311, or visit the [seminar schedule](#). The department has additional seminar series which are also concluded from this page.

Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. For information, consult the departmental [events page](#). Related seminars, including endowed seminar series and the WU med school biochemistry series, are linked here as well.

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Facilities Available

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Bruker Bioscope Resolve Bio AFM with Nanoscope V controller
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- **Confocal Microscopy**
Zeiss LSM 900 system equipped with Axio Observer 7 inverted microscope
- **Thermal Analysis**
TA Instruments TGA Q500 for Thermogravimetric Analysis
TA Instruments DSC Q2000 for Differential Scanning Calorimetry
- **Surface Area and Pore Size Analysis**
Coulter SA3100 Surface Area and Pore Size Analyzer
- **Elemental Analysis**
ICP-AES, Vista Inductively Coupled Plasma Atomic Emission Spectrometer
EDS, Energy-Dispersive X-ray Spectroscopy using 30mm² detector in Apreo 2 SEM
- **Liquid Chromatography-Mass Spectrometry**
ThermoFisher Scientific TSQ Altis Triple Quad Mass Spectrometer equipped with Vanquish binary pump and Triplus autosampler

About the Chemical Bond

The *Chemical Bond* is published at www.stlacs.org January through May and September through December by the St Louis Section–American Chemical Society. If you would like to receive email notification when each issue is posted, you can subscribe to our email list and join the "Chemical Bond reminders" group.

Correspondence, letters to the editor, etc., should be emailed to editor@stlacs.org or mailed % St Louis Section–ACS, PO Box 410192, Saint Louis, MO 63141-0192.

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