

Karen Daves is This Year's High School Teaching Award Winner!

first published 5 April 2022

We would like to congratulate Karen Daves of Rosati Kain High School for being awarded the American Chemical Society: St. Louis Section High School Teaching Award. Mrs. Daves is a high school chemistry and ecology teacher with over 12 years of experience providing educational guidance and mentorship in an all-girls high school college preparatory environment. She believes it is the teacher's job to find the delicate balance of encouragement, enlightenment and engagement that allows each student to find her connection to the content and her understanding of its value in her life. She is a member of the American Chemical Society – St. Louis Section, American Association of Chemistry Teachers, American Modeling Teachers Association, Science Teachers of Missouri, and Jane Austen Society of North America. Through dedication to her student's education and a love of chemistry education Mrs. Daves personifies the core beliefs of this award and we are very pleased to have her as our recipient this year.



Mrs. Karen Daves, the 2022 High School Chemistry Teacher of the Year Awardee

Chemistry is pHun out-reached

first published 23 April 2022

Science Outreach for the 2021-2022 Academic Year

The "Chemistry is pHun" science outreach program was revived for the 2021-2022 academic year after its 2020-2021 pandemic hiatus. This year's program comprised 21 visits to 13 different Rockwood School District schools, with presentations to second and fifth grade classes totaling 1044 students.

ACS–St Louis Section member **Joe Smith** made all of this year's presentations with scheduling and logistical help from Rockwood Partners in Education, an organization that partners with volunteers willing to share their expertise or special talents with Rockwood School District students. Giving these presentations is a fun way to share your excitement about science with students. Additional volunteers are welcome and would help ensure continuity of the "Chemistry is pHun" program. If you are interested in participating, please contact Joe at smithjp1972@gmail.com.

Second- and fifth-grade presentations both start with a brief discussion of the broad range of STEM careers and the varied settings where STEM professionals work. Safety is emphasized, with a focus on eye protection during demonstrations and on the need for adult assistance for any experiments done at home.

Second graders attend a presentation entitled "States of Matter", focusing on solids, liquids, and gases. The presentation discusses examples of where we encounter matter in different states and the role played by energy uptake and release in changes between different states of matter. Students participate in a demonstration of heat release during the liquid-solid phase transition in a hand warmer and see the effects of a gas-to-liquid transition in the "Collapsing Can" experiment. Students seeing this demonstration invariably ask "can you do this again?", which leads to a good discussion of the importance of reproducing experimental results.

Fifth graders experience the "Transforming Matter" presentation, introducing the concept of a chemical reaction as a transformation that involves a change in chemical composition. Combustion illustrates how reactants can turn into products with a release of energy. Acid-base reactions are demonstrated with the help of indicators which led to an exploration, using red cabbage juice indicator, of the acidity of fluids encountered in daily life. A discussion of the pH scale ties in well with math class, 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.



Engagement during a second-grade Chemistry is pHun visit



Solid content for Chemistry is pHun-yuns.

Cuatro de Mayo Cocktails with Chemists

first published 25 April 2022

Our Cuatro de Mayo Cocktails with Chemists does not rush the season by even a day with a piñata-themed event. Instead, it is a Star Wars-themed get-together, as in "May the Fourth Be with You!"

Join us on Wednesday, May 4, at **Third Wheel Brewing, 4008 N. Service Road, St Peters** (I-70 exit 255 at Cave Springs Road). Wear your favorite Star Wars t-shirt and bring your light saber (optional) to enjoy the award-winning beers at Third Wheel. We will of course have plenty of deep-fried pretzel sticks, wings, and other snacks to share.

You don't have to be an ACS member, but you do have to have a love of chemistry and science. And consider this invitation to include a +n: please invite your colleagues or students to join us. First beer is on our tab for those 21+.

Please [let us know you are coming](#).



2023 officer nominations arriving to an inbox near you

first published 29 April 2022

Yes, believe it or not, 2023 planning is on the agenda. Is it just me, or does anyone expect a flying car to float by the window when you see "2023"? Regardless, in the next few weeks, you should receive a Google Forms link about officer nominations for terms beginning in 2023. Please consider nominating one or several of your talented colleagues, or yourself, to participate in the governance of the local section and contribute to building excitement in the local chemistry community.

Suppose you prefer not to use an online form. In that case, instructions for mailing a nomination form to the section secretary via email or USPS mail will be available when the nomination form opens.

Please keep in mind that you should use only one method to nominate people:

- The Google Forms link
- Emailing the secretary
- Sending a nomination form via USPS mail to the secretary

Meeting & Seminars

Board of Directors

St Louis Section–ACS Board of Directors meets the second Thursday of each month over Zoom for the foreseeable future

Date: May 12th([via Zoom](#))

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

Business meeting begins at 6:30 pm

Future meetings: The Board of Directors will be on summer hiatus, the next meeting is September 8th.

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

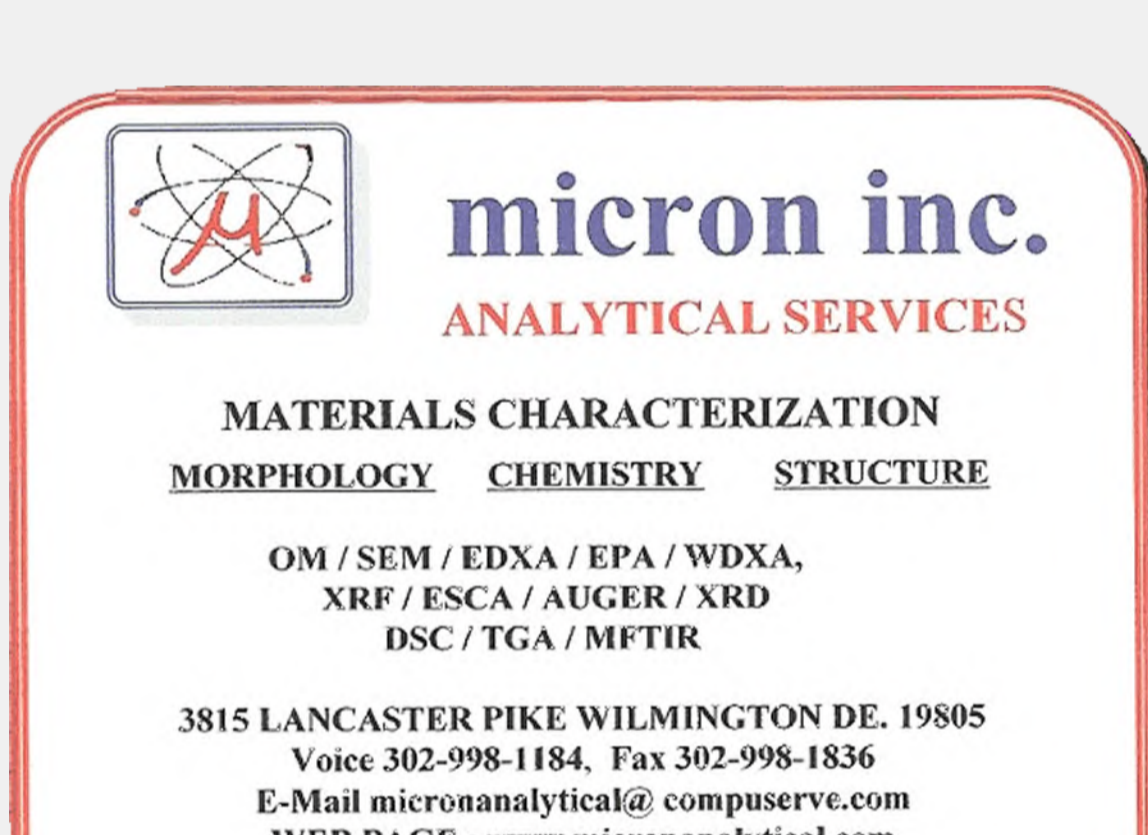
Mondays at 4 pm in 451 Benton Hall, unless otherwise specified. Refreshments 15 minutes prior to seminar time. For timely information on visiting seminar speakers, contact the Chemistry Department, 314.516.5311, or visit the [seminar schedule](#). The department has additional seminar series which are also accessible 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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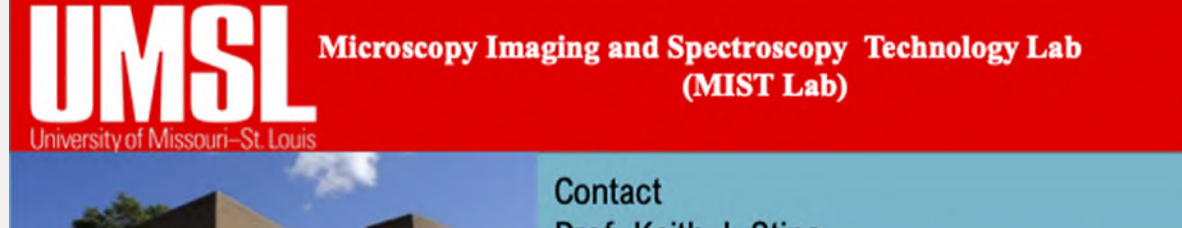
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Prof. Keith J. Stine
Chair, Department of Chemistry and Biochemistry
Email: kstine@umsl.edu

Dr. Bishal Nepal
Lab Manager, MIST Lab
Email: bnff8@mail.umsl.edu

Facilities Available

- **Electron Microscopy**
ThermoFisher Scientific Apreo 2 Field Emission Scanning Electron Microscope (FE-SEM)
- **Atomic Force Microscopy**
Bruker Bioscope Resolve Bio AFM with Nanoscope V controller
Digital Instruments Multimode AFM with Nanoscope III controller
- **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

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