

Portland Section Newsletter

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November 2022

Capturing Student Reasoning about Molecular Structure and Behavior

a talk by

Dr. Ginger Shultz

Associate Professor

Department of Chemistry, University of Michigan

November 17, 2022

Reed College Vollum Lounge

3203 SE Woodstock Blvd, Portland, OR 97202

[map](#) (use East Parking Lot; Vollum College Center is number 37 on map)

Dinner Reservations

Dinner reservation FIRM deadline: **Thurs. Nov 3, 2022 8 AM**

Schedule: 6:00 pm social • 6:45 pm buffet dinner • 7:45 talk

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Message from Chair Andrew Baggett

Recap of National Chemistry Week at OMSI with pictures page 3

2022-23 Meeting Schedule

12/15 (flexible) Claire Lower, Lifehacker*

*the 12/15 meeting is intended to be at a food/drink related site to allow Claire, chemistry graduate and food writer, to riff a bit on food science. Tasting opportunities.

COVID PROTOCOLS

Reed College's COVID-19 Prevention & Response Plan below considers the state of Oregon's directives and the Centers for Disease Control and Prevention's (CDC) public health recommendations.

<https://www.reed.edu/coronavirus/v>

Andrew Baggett, Chair
and Past Chair
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Abstract: Capturing student reasoning about molecular structure and behavior

Chemistry often is presented as a disconnected set of ideas. Our group investigates how students make associations and connections between these ideas to describe chemical phenomena and to solve complex chemical problems. Using a variety of methods including eye-tracking, semi-structured and think-aloud interviews, and textual analysis of student writing, we investigate how students reason about molecular structure and behavior to uncover patterns of reasoning associated with differential performance. I will share findings regarding student reasoning and implications for teaching in general, organic, and physical chemistry.

Dr. Ginger Shultz

Bio: Ginger Shultz

<https://lsa.umich.edu/chem/people/faculty/gshultz.html>

National Chemistry Week-end at Oregon Museum of Science and Industry (OMSI)

On October 22 and 23, Saturday and Sunday, with two sessions each day, 10am-1pm and 1pm-3pm, this year's Portland Section National Chemistry Weekend will be held at OMSI. Portland Section volunteers will provide assistance to OMSI Chemistry Lab staff to show attendees about "Fabulous Fibers: The Chemistry of Fabrics". On the next page are photos at OMSI of John Birtles, Perkinelmer, Applications Scientist, and Vincent Huynh, Lacamas Labs, demonstrating experiments for young OMSI visitors.

K-12 Poster and Illustrated Poetry Contest also is a part of ACS National Chemistry Week (NCW). ACS sponsors an [illustrated poem contest](#) for K-12 students in the US. Portland Section K-12 students have been winners and finalists in several contests. NCW Chair Angela Hoffman reports that several teachers have submitted student posters. Local Section submissions are judged by a panel of ACS student members from the University of Portland ACS Student chapter. Winners (from the various age categories) of the Local Section contest are submitted to ACS to compete in the National illustrated poem competition. We will wait to see if one of our poems is a winner!



Message from the Chair

Dear members and friends of the Portland ACS, if you have not already done so, please consider attending our distinctive Pauling Medal Award Symposium honoring Dr. Cynthia Burrows on Saturday Oct. 29. We are excited to host this event this year and continue the tradition of the Pauling Medal Award. Please also keep an eye out for announcements regarding the remainder of our monthly meeting schedule for the 2022-2023 academic year: we will have events monthly through at least April this cycle.

Our section is in a time of transition as we elect individuals to take on several key section leadership roles. Please take a small amount of time to vote in our local section election and make your voice heard with regards to leadership of the section. It has been my pleasure to serve as Chair of the section for nearly 2 years and I am excited about our future as Arthur Glasfeld takes over as Chair in January.

I wish you and your families and friends a safe and enjoyable Fall and look forward to seeing you soon at a Portland ACS event,

-Andrew Baggett, Chair
Portland ACS Local Section

Pauling Medal Symposium and Poster Symposium

The Section will be hosting the quadrennial [Linus Pauling Medal Symposium](#) on 29 October in the [Robertson Life Sciences Building](#) (2730 S Moody Ave, Portland, OR 97201) at the OHSU waterfront complex.

This year's Pauling Medalist is [Cynthia J. Burrows](#) from University of Utah.

Featured speakers are Alison Butler, University of California Santa Barbara; Valeria Molinero, University of Utah; and Jonathan Sessler, University of Texas. Contact [Dr. Dean Atkinson](#) or [Dr. David Reingold](#) for additional information.

Preceding the Pauling Symposium a Poster Symposium will be presented from 11am to 1:00pm, in the same building. The Poster Symposium features undergraduate, graduate and other research. Prizes for posters will be presented during the reception following the Pauling Medal Symposium. The Symposium concludes with a Banquet at 7pm including dinner and presentation of the Pauling Medal to the Pauling Medal Awardee Prof. Cynthia Burrows.

ACS volunteers at National Chemistry Week-end at OMSI



Vincent Huynh, Lacamas Labs



John Birtles, Perkinelmer, Applications Scientist

On Oct. 21 I visited two Portland Section National Chemistry Week-end volunteers, Vincent and John, above, who were demonstrating experiments that showed the chemistry of fibers for OMSI visitors.

The three pictures (L to R below) show John demonstrating the Dip 'n Dye experiment, which shows dyeability of fibers. The first photo shows undyed fibers, one of which won't dye; the fibers are dipped into the red dye, blotted, and finally only one fiber shows red color.

Two other experiment flyers are pictured: The Water Droplet Race shows visitors the concept of surface tension by noting which fabrics absorb water and which fabric repels water. The cotton ball experiment demonstrates intermolecular forces of polymers by being able to be torn apart in one direction but not the other.

All photos MG Dibblee

