



**FRIDAY, NOVEMBER 11, 2022**

- 4:30 – 5:30 pm      Optional pre-MAALACT Happy Hour at Hop Asylum Brewing (**NOTE:** This is not included in the cost of registration)  
  
Hop Asylum Brewing – 138 S. Market St., New Wilmington, PA 16142
- 5:30 – 6:00 pm      MAALACT Check-In and Registration  
  
McKelvey Campus Center (Directions at the end of this document)
- 6:00 – 7:00 pm      Dinner – McKelvey Campus Center – Witherspoon Room, Lakeview (3<sup>rd</sup> Floor)
- 7:00 – 8:00 pm      Keynote Address – Stacey Lowery Bretz, University Distinguished Professor – Miami University  
  
“Measuring Meaningful Learning and Mindset: Students’ Expectations, Experiences, and Beliefs about Intelligence in the Undergraduate Chemistry Laboratory”  
  
Abstract: Every college student majoring in science or engineering takes multiple laboratory courses throughout their college education. While faculty cannot imagine teaching without laboratory, little evidence exists to claim that students actually engage in meaningful learning experiences in these courses. The typical role of the college laboratory in student learning has largely remained one of confirming principles presented in lecture rather than exploration and concept development. Meaningful learning requires that students choose to create connections between their prior knowledge and the material to be learned. Students must actively integrate not only their thinking and the *doing* of their laboratory work, but also their feelings and beliefs. Furthermore, students’ beliefs about their intelligence, known as mindset, are context dependent. Mindset reflects students’ beliefs about the role of effort and ability as they contribute to success, especially in moments of confusion, uncertainty, or errors in the lab. This seminar will present findings from multiple research studies using two instruments created in our research group – the Meaningful Learning in the Laboratory Instrument and the Intelligence Mindset in the Chemistry Laboratory. The implications for pedagogy and assessment within college laboratory courses will be discussed.
- 8:00 – 8:30 pm      Informal Conversations to Close the Evening



**SATURDAY, NOVEMBER 12, 2022**

8:00 – 8:30 am Light Breakfast - Hoyt Science Center Room 101 (Directions at the end of this document)

**Contributed Talks Session 1 – Hoyt Science Center Room 101**

- 8:30 – 8:50 am Erin Wilson, Westminster College  
"Using specifications-based grading in the lower-level chemistry and biochemistry curriculum at a PUI."
- 8:50 – 9:10 am Jason Vohs, Saint Vincent College  
"Using literature assignments in an Inorganic Chemistry lecture course to enhance technical reading skills and discourage academic dishonesty."
- 9:10 – 9:30 am Kat Bay, Schrödinger  
"Teaching with Schrödinger: Web-Based Computational Chemistry Tools"
- 9:30 – 9:50 am Hailey Kwiatkowski, Lake Erie College of Medicine  
"Gamified Team-Based Escape Room Activity for Pharmacy Calculations."

**9:50 – 10:00 am Break**

**Contributed Talks Session 2 – Hoyt Science Center Room 101**

- 10:00 – 10:20 am Helen Boylan, Westminster College  
"Post-labs, IF-ATs, and Real-World Applications"
- 10:20 – 10:40 am John Milligan, Thomas Jefferson University  
"Beyond A-B-C-D: Opening up new possibilities for "clicker" engagement with students through web-enabled platforms"
- 10:40 – 11:00 am Anne Reeve, Messiah University  
"Yes, Sophomores Can Do 2D NMR: A Scaffolded Approach to Teaching NMR Spectroscopy in the Organic Lab."
- 11:00 – 11:20 am Matt Tracey, University of Pittsburgh – Johnstown  
"Template-Assistant Spectroscopy Interpretation in Undergraduate Organic Chemistry Labs."



**11:20 – 11:30 am**                      **Break**

11:30 am – 12:30 pm                      Group Discussion and Lunch – Hoyt Science Center Room 180

12:30 – 1:30 pm                      Keynote Address – Thomas Montgomery, Assistant Professor of Chemistry  
– Duquesne University

“How to Speak and Write Like a Chemist: Communication and the Scientific Method.”

Abstract: For students to be successful scientists in the modern world it is increasingly apparent that they need to master how to communicate with others. This involves communication to other scientists, non-scientist colleagues, and the general population. Teaching students how to communicate effectively is widely discussed within the science education community, and is a reported priority for both businesses and government agencies. To address this need we have developed a curriculum that uses the scientific method as a scaffold for teaching students how to communicate their work. Our pedagogy has the students focus on how specific aspects of their projects fit into the general scientific method and present that information as both a written document and a timed presentation. The students receive feedback from both peers and faculty mentors, and repeat this process four additional times. We have seen that as students progress through our iterative process they gain confidence, and become better at writing and speaking with purpose. Finally, our use of scientific method as the basis for the curriculum makes it highly transferable to other science departments, not only chemistry.

1:30 – 2:00 pm                      Optional Tour of New Chemistry Labs



### Directions to Westminster College – New Wilmington, PA

Westminster College is well-marked in Google Maps. The northwest corner of the campus the corner of Market St. and Maple St.

Friday's activities are in the McKelvey Campus Center, which is off of Maple St. The Orchard St. and Maple St. parking lots are marked with pins on Google Maps. You can park in either lot.

The entrance to the McKelvey Campus Center is on the bend in Orchard St. Someone will be just inside to greet you.

The dinner and keynote address will be one floor up the spiral staircase in the Witherspoon Room – Lakeview.

Saturday's activities are in the Hoyt Science Center, which is located between Maple St. and Westminster Dr. If you are traveling down Maple St., go right through the traffic circle onto Westminster Dr. You will see the entrance to Hoyt Science Center on your right. You can park in any of the spaces along Westminster Dr. If there are no spaces in front of the entrance, there is additional parking back through the traffic circle on the right at the end of Maple St.

Someone will be at the entrance to Hoyt Science Center to guide you to the breakfast location.

