

## 2015 CSIE|UM Symposium

Friday, June 19, 2015

*University of Michigan • Chemistry Building*

10:00 AM - 4:00 PM

10:00 AM – registration and snacks

10:20 AM – welcome

10:30 AM – panel discussion on laboratory design challenges

12:00 PM – poster session and lunch

01:30 PM – hands-on lab sessions (concurrent)

- A. Tailoring "upstairs" research for "downstairs" learning in general chemistry laboratory
- B. Introducing group meeting style discussion to organic chemistry I laboratory
- C. Planning an optimization experiment in organic chemistry II laboratory
- D. Design and analysis of a microfluidics system using Agar in chemical analysis laboratory

03:00 PM – keynote address by Professor Elizabeth Vogel Taylor, MIT



*Room 1640 CHEM • 3:00 PM*

### Research-Inspired Biochemistry in the MIT Undergraduate Laboratories

*The academic, biotech and pharmaceutical research in and around the MIT campus provides a natural opportunity to connect the skills and concepts from the chemistry curriculum to cutting-edge applications. As part of the Howard Hughes Professorship Program, we have developed resources that integrate current research into both lecture and laboratory courses.*

**There is no fee to attend the CSIE|UM symposium.**

**Please join us for lunch!**

You are invited to visit the chemistry education posters that will be presented during the noontime poster session.

*For more information, please visit the CSIE|UM web site  
[sites.lsa.umich.edu/csie-um/](http://sites.lsa.umich.edu/csie-um/)*



# 2015 CSIE|UM Symposium

## Poster Titles and Authors

Posters are listed in alphabetical order by the last name of the first author. \*Indicates designated presenter.

Learning: Not Just By the Book in CHEM 130

*Rachel A. Barnard\**, *M. Taylor Haynes II*, *Luke J. Peterson*, *Brian P. Coppola*, *Anne J. McNeil*, and *John P. Wolfe*

Redesigning the Undergraduate Organic Chemistry I Lab

*Matthew Beyersdorf\**, *Meg Breen*, *Rachel Merzel*, *Michele Nelson*, and *Anne McNeil*

Compute-to-Learn: Designing Interactive, Computer-Based Demonstrations of Physical Chemistry Concepts

*Eitan Geva*, *Heidi P. Hendrickson\**, *Mina Jafari\**, *Michael Lennard\**, *Alicia Rae Welden\**, *Kyle Williams\**, *Blair Winograd\**

Graduate Student Teaching in Organic Chemistry Laboratory: How is Pedagogical Content Knowledge Developed?

*Lillian V. Hale\** and *Ginger V. Shultz*

Learning Organic Chemistry: Supported by a Mosaic of Resources

*M. Taylor Haynes II\**, *Rachel A. Barnard*, *Luke J. Peterson*, *Brian P. Coppola*, *Anne J. McNeil*, and *John P. Wolfe*

Leveraging Reflection to Deepen Engineering Graduate Student Instructor Professional Development

*M. Taylor Haynes II\** and *Tershia Pinder-Grover*

Opportunities at the Interface of Chemistry and Education

*M. Taylor Haynes II\**

Designing an Authentic and Interactive Tutorial on Quantum Chemistry for Undergraduate Researchers: An Apprenticeship Model

*Heidi P. Hendrickson\**

Solving Simple Kinetics Without Integrals

*Lisandro Hernandez de la Pena\**

CSI-EMU and Digital Divas Workshops for Chemistry Outreach

*Larry Kolopajlo*, *Sharon MacKellar*, *Samantha Chupa*, *Tiffany Kennedy*, and *Katherine Uridge*

A Framework for General Chemistry Laboratory Design and Evaluation

*Sarah Mattioli*, *Morgan Rickers\**, *Justin M. Shorb*

Tournament Approach to Peer Review in a Quantitative Course

*Nicole Michelotti*, *Jared Tritz*, *David Winn*, and *Tim McKay*

Development of a Novel Transition Frequency Eigenvalue/PCA Approach in the Analysis of Eye-Tracking Data for Understanding Viewing Patterns of Multiple Representations

*Kirsten Monson*, *Yong Chul Yoon\**, *Justin M. Shorb*

Interviewing Past GSIs to Inform Future GSI Preparation

*Luke J. Peterson\**, *Rachel A. Barnard*, *M. Taylor Haynes*, *Brian P. Coppola*, *Anne J. McNeil*, and *John P. Wolfe*

Introducing Native Mass Spectrometry to Undergraduates in a Biochemical Analysis Laboratory

*Jessica N. Rabuck-Gibbons\**, *Brandon T. Ruotolo*

Incorporating authentic research in an optional component of the second semester organic laboratory course

*Traci L Smith\**, *Jason G. Gillmore*, *Stephen C. Scogin*

Authentic Research In STEM Introductory Labs

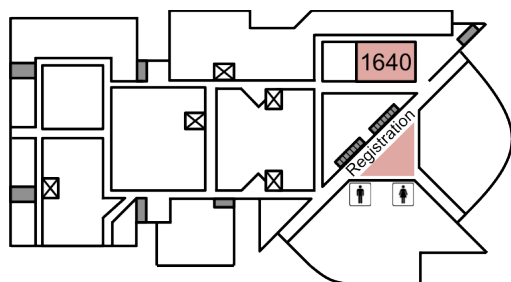
*Julianne Vernon\**, *Deborah Goldberg*, *John Wolfe*, *Thomas Schmidt*, *Timothy McKay*, *Joanna Millunchick*

Student-generated content in Sapling Learning: A skill-building resource for first-year organic chemistry courses

*Danielle M. Zurcher\**, *Brian P. Coppola* and *Anne J. McNeil*

## Building Map

Upper Atrium: Registration, Panel, and Keynote



Lower Atrium: Posters and Concurrent Sessions

