

Submission deadline for oral presentations is July 11, 2014!

2014 Michigan Green Chemistry and Engineering Conference

Cultivating Next Generation Solutions

November 12, 2014 - Michigan State University, East Lansing

The Michigan Green Chemistry Roundtable and Michigan State University invite proposals for presentations and posters for the 2014 Michigan Green Chemistry and Engineering Conference, scheduled for November 12, 2014, at Michigan State University in East Lansing, Michigan. Business leaders, engineers, chemists, researchers, teachers, policymakers, and anyone else interested in moving green chemistry and engineering forward in Michigan are invited to participate in this conference.

CONFERENCE OBJECTIVES

The Michigan “GreenUp” Conference is designed to be a valuable platform for sharing information, networking, and learning - this year’s theme is *Cultivating Next Generation Solutions*. Green chemistry and engineering can revolutionize the way we work and live, by employing less toxic materials and processes in the manufacture and design of the products we use every day while protecting human health and the environment. Green chemistry and engineering can also help businesses create new markets, reduce costs, increase safety, and gain a competitive edge. The specific objectives for the conference are to:

1. Provide a comprehensive approach in content (introductory to expert) and format (lecture and case studies) on the value, future, and issues pertinent to green chemistry and engineering in Michigan.
2. Identify tools, resources, and content that drive green chemistry and engineering concepts into research, academics, industry, and advocacy arenas.
3. Create a rich and motivational experience for attendees to take home information and tools, and ultimately act to change behavior in their organizations.
4. Foster networking to promote knowledge sharing, develop connections, and discover business opportunities.
5. Strengthen collaboration efforts between university researchers and industry representatives to accelerate innovation in Michigan.

Past conference proceedings and agendas are available online at www.michigan.gov/greenchemistry.

FOCUS AREAS: Oral and poster presentations may focus on the following areas:

Cutting Edge Research

This area will highlight new fundamental research breakthroughs for advancing one (or more) of the 12 principles of green chemistry and engineering and discuss the next steps needed to develop the emerging technologies. A key sub focus will be on synthesis of alternative routes, methods, and compounds.

Example presentation topics might include:

- Bio-economic development
- Identification and scale up of novel, more sustainable chemicals and materials
- Connecting universities and businesses
- Green energy and fuels for the future
 - This area will focus on how the principles of green chemistry and engineering can help emerging energy technologies like solar, wind, advanced batteries, etc. become even “greener” by eliminating or reducing toxic chemicals from their processes and products.

Educating for a Sustainable Future

This focus area seeks updates on what schools and universities are doing to promote inter-disciplinary programs that focus on the benefits of green chemistry and engineering to students from science, engineering, business, law, policy, education, and public health perspectives.

Example presentation topics might include:

- Green chemistry in higher education
- Green chemistry in K-12 education

The Business Case for Green Chemistry and Engineering

This area may include case studies where companies have explored green markets and opportunities for innovation and business growth by minimizing the use of toxic chemicals, reducing raw material needs, cutting waste and disposal costs, and reducing energy costs to meet corporate sustainability goals. What tools, such as alternatives assessment and life-cycle analysis, inform decision making?

This area may also include initiatives such as minimizing environmental impact through materials selection, including renewable feedstock and bio-based materials; solvents; paints and coatings; minimization of waste through reuse and recycling; and supply chain inclusion and communication.

Example presentation topics might include:

- Placing green chemistry in the big picture of corporate sustainability
- Applications in manufacturing
- Connecting supply chains for cooperative innovation
- Disclosure, transparency, and certification
- Advances in Life Cycle Analysis
- Best practices to create an organizational green chemistry initiative
- Technical assistance approaches

Public Health

This area will focus on identifying the existing links between green chemistry and human and environmental health, toxicology, and environmental epigenomics.













Example presentation topics might include:

- Great Lakes science
 - Identifying green chemistry opportunities
 - Developing understanding of legacy and emerging contaminants
 - Creating partnerships for a proactive approach













Policy Updates

This area will focus on changes in regulations or policies (at both state and federal levels) that are providing financial incentives that enhance the attractiveness of green chemistry and engineering and stimulate economic growth.

The 12 Principles of Green Chemistry

- | | |
|---|--|
|  Prevention |  Use of Renewable Feedstocks |
|  Atom Economy |  Reduce Derivatives |
|  Less Hazardous Chemical Syntheses |  Catalysis |
|  Designing Safer Chemicals |  Design for Degradation |
|  Safer Solvents and Auxiliaries |  Real-time analysis for Pollution Prevention |
|  Design for Energy Efficiency |  Inherently Safer Chemistry for Accident Prevention |

The 12 Principles of Green Engineering

- | | |
|---|--|
|  Inherent Rather Than Circumstantial |  Durability Rather Than Immortality |
|  Prevention Instead of Treatment |  Meet Need, Minimize Excess |
|  Design for Separation |  Minimize Material Diversity |
|  Maximize Efficiency |  Integrate Material and Energy Flows |
|  Output-Pulled Versus Input-Pushed |  Design for Commercial “Afterlife” |
|  Conserve Complexity |  Renewable Rather Than Depleting |

PROPOSAL INFORMATION

Proposals will be evaluated for:

- Relevance – meets conference objectives and if possible, relates to theme “Cultivating Next Generation Solutions”
- Applying principles of [green chemistry](#) and/or [green engineering](#)
- Technical quality
- Current/Cutting edge
- Providing solutions and tools for takeaways

Preference will be given to Michigan organizations. Presentations must be strictly educational, providing fair, full disclosure and equitable balance of all aspects of a topic being presented. No endorsement, commercialism or selling will be permitted. All program materials must be free from promotional influence and/or marketing content.

Oral Presentations

Breakout session presentations may be offered in 20 or 45 minute time slots with possible Q&A and/or panel discussion in both the morning and afternoon sessions. The conference steering committee reserves the right to develop these sessions using a combination of proposals and/or invited presenters. As a benefit to approved speakers, conference registration fees will be waived. Due to budget constraints, the Michigan Department of Environmental Quality (DEQ) has limited funds available for other expense reimbursement. Please note any reimbursement requirements you may need as part of your proposal.

Submission deadline for oral presentations is July 11, 2014!

Poster Proposals

Poster displays will help deliver and demonstrate tools, resources, and content that drives green chemistry and engineering concepts into research, academics, industry, and advocacy arenas. Maximum size for posters is 46" x 46" and will be mounted to poster boards with either push pins or Velcro. Poster presenters will still be expected to register for the conference and pay the full registration fee. **Students will have a discounted registration fee and are eligible to participate in a student poster competition the day of the conference.** More information about the conference registration, schedule for the day, and student poster competition will be given upon acceptance.

Submission deadline for poster presentations is October 8, 2014!

SUBMISSION PROCESS

Please go to www.michigan.gov/greenchemistry to complete the online forms for speakers and/or posters. Accepted speakers will be notified in July/August 2014. Accepted posters will be notified after review of proposal.

If you have questions about the submission process, please contact Chris Affeldt at affeldtc@michigan.gov or Ned Jackson at jackson@chemistry.msu.edu. If you have questions about poster proposals, please contact Sudhakar Reddy at redv@umich.edu or 734-763-4615.