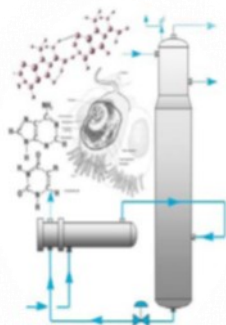


AICHE Chicago Section

April 2021 Newsletter



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Virtual Links:

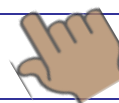


April 2021 Meeting

Speaker:	Theodore (Ted) Krause Chemical Sciences and Engineering Division Argonne National Laboratory
Topic:	The Hydrogen Economy – Is It Finally Coming?
Date	Tuesday, April 13, 2021
Registration Deadline:	5:30-7:30 PM
Program:	5:30 PM: Zoom Meeting opens 5:45 PM: Section Announcements 6:00 PM: Technical Presentation
Where:	Virtual Zoom Meeting
Cost:	Free

(To donate or learn about the local section student's scholarship program, please go to [this page](#).)

[Click to View Event Summary and Register](#)



Speaker's Bio:

Theodore (Ted) Krause is a Chemical Engineer and Theme Leader for the Catalysis and Energy Conversion Group in the Chemical Sciences and Engineering (CSE) Division at Argonne nearly 35 years of experience in the fields of catalysis and fuel cells. As theme leader, he manages R&D activities in fuels cells and catalysis. He currently serves as the Laboratory Program Manager for fuel cell and hydrogen R&D funding by the U.S. Department of Energy (DOE) Hydrogen and Fuel Cell Technologies Office (FCTO). He previously served as the Laboratory Program Manager to the DOE Office of Nuclear Energy Nuclear Hydrogen Initiative from 2008-2009. His areas of research and expertise include catalyst and process development for producing H₂ from fossil and renewable feedstocks for fuel cell applications; materials development for proton-conducting ceramic fuel cells; catalytic process development for converting biomass or natural gas to liquid fuels and/or value-added chemicals; and the application of high-throughput experimental tech-



Cont. on Page 3

Chair's Corner

Spring is here and the 2021 Midwest Regional Conference is in the rearview mirror. I hope that all of the dedicated volunteers who worked so hard to make the conference a success find some time to unwind, hopefully enjoying the outdoors!

Many thanks to Robert Tsai, Matthew Walters, Hakim Iddir, the many other volunteers, and the outstanding speakers who helped to make the conference a success.

At this time, our local section is finalizing the slate of candidates for board positions for the 2021-2022 year, as well as lining up volunteers to help in various areas. We are always eager to get new volunteers, so please contact me or Ha Dinh (Ha.Dinh@Honeywell.com) if you are interested in getting involved.

In the coming days and weeks, we will be announcing several award winners. The Harry McCormack Outstanding Senior Award will be presented to one student from each of the Chicago-area universities to acknowledge excellence in study, research, and extra-curricular activities. Further, the prestigious Ernest W. Thiele Award sponsored by BP will be given to a Midwest member of AIChE who has made an outstanding contribution to the practice of chemical engineering.

Jeffrey M. Zalc

jeffrey.zalc@bp.com

zalc@iit.edu

AIChE Chicago Section Chair

AIChE Senior Member



We want you for AIChE Chicago!

We need your help!

How many opportunities can you find to learn project management, delegation and leadership skills for free? Volunteering with the Chicago Section of AIChE is such an opportunity. While you're learning new skills, your professional network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AIChE is a way to add skills and accomplishments to your resume.



Volunteers are needed to help with:

- * Programming – arrange speakers for monthly meetings, and arrange catering and venues
- * Logistics – arrange catering and venues
- * Newsletter Editor – prepare and publish ten monthly newsletters
- * Newsletter Contributions – write meeting summaries, contribute photos, and more

- * Engineering Outreach – coordinate three annual K-12 outreach events with high schools and colleges
- * Professional Development and Sponsorship – arrange companies to sponsor pre-meeting talks to help fund student dinners
- * Awards and Scholarship Committees – Review applications for local Section award and scholarships
- * Midwest Regional Conference – many opportunities including programming, logistics, website, advertising, sponsorship, high school outreach, poster session and more!
- * Young Professionals – plan socials and programming for young professionals (under 35)

If you are interested in any of these positions, please contact us aichechicago@gmail.com.

<http://www.aiche.org/community/sites/local-sections/chicago/announcements/volunteerism>

Cont. from Page 1

April Meeting information

niques for accelerating material and process development for a wide range of chemical processes. He holds a Ph.D. degree in Chemical Engineering from the University of Delaware.

Abstract:

There is growing worldwide interest in hydrogen as an energy carrier to service multiple sectors of the economy as a means of reducing CO₂ emissions. Today, the U.S. produces about 10 million tons of hydrogen primarily for petroleum refining and ammonia production. Most of the hydrogen produced today, referred to as "gray" hydrogen, is produced by steam reforming of natural gas which results in considerable CO₂ emissions. Hydrogen can also be produced by electrolysis of water, and if the source of the electricity is renewable wind or solar energy or nuclear energy, there is no CO₂ emissions associated with its production, referred to as "green" hydrogen. There is growing interest in "green" hydrogen as a fuel or a feed stock to replace fossil fuels for a wide range of applications to reduce or eliminate CO₂ emissions. In the transportation sector, "green" hydrogen is being considered as a fuel for cars, buses, trucks, trains, ships, and planes. In the industrial sector, "green" hydrogen is being considered as a replacement for "gray" hydrogen in petroleum refining and ammonia production and new applications for "green" hydrogen are being developed in the metals and steel industries. In the energy sector, "green" hydrogen is being considered as a fuel for combustion-based technologies fueled today by coal or natural gas. This presentation will give an overview of some of the new "green" hydrogen technologies being developed, how they are being deployed in the U.S. and across the globe, and the challenges being faced towards wider adoption of these technologies.

Election Of Section Officers - Absentee Ballots

Election of officers will be held at the annual meeting on May 18. If you expect to be absent from this meeting, you may vote by absentee ballot. Please contact our secretary at aichechicago@gmail.com to obtain one.



The Nobel Prize in Chemistry 2020

The Nobel Prize in Chemistry 2020 was awarded jointly to Emmanuelle Charpentier and Jennifer A. Doudna "for the development of a method for **genome editing.**"

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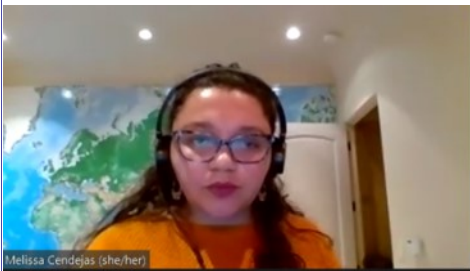
2021 Meeting Schedule and Speakers

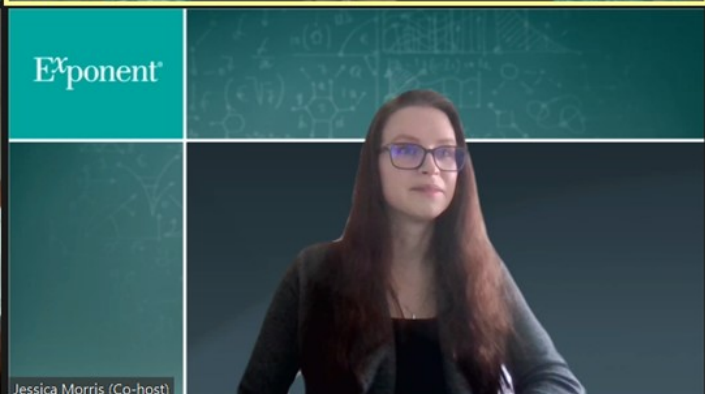
Month	Date	Speaker	Affiliation	Topic
April	Tuesday 13 th	Dr. Ted Krause	Argonne	H ₂ generation and utilization
May	Tuesday 18 th	Prof. Liane Rossi	Universidade de São Paulo	Catalyst design for sustainable transformations

Thanks to all individuals who contributed to the 2021 MRC

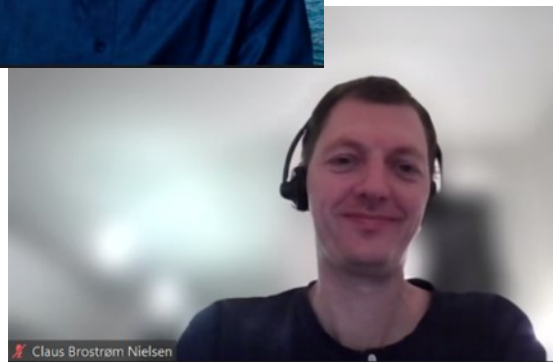


Midwest Regional Conference In pictures





Watch your inbox for MRC 2022 information



AICHE CHICAGO SECTION INFORMATION

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Homer Glen, IL 60491
aichechicago@gmail.com

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<https://www.aiche.org/community/sites/local-sections/chicago>

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Genetic scissors:

A tool for rewriting the code of life

Emmanuelle Charpentier and Jennifer A. Doudna have discovered one of gene technology's sharpest tools: the CRISPR/Cas9 genetic scissors. Using these, researchers can change the DNA of animals, plants and microorganisms with extremely high precision. This technology has had a revolutionary impact on the life sciences, is contributing to new cancer therapies and may make the dream of curing inherited diseases come true.



© Nobel Prize Outreach. Photo: Bernhard Ludwig
 Emmanuelle Charpentier
 Prize share: 1/2



© Nobel Prize Outreach. Photo: Brittany Hovoss-Smol
 Jennifer A. Doudna
 Prize share: 1/2

<https://www.nobelprize.org/prizes/chemistry/2020/prize-announcement/>

<https://www.cbsnews.com/news/crispr-jennifer-doudna-walter-isacson-the-code-breaker/>



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Submitting Articles to AICHe Columns

We welcome email submissions for our monthly newsletter. Commercial announcements are subject to the fee schedule below. News stories, editorials, technical or career related non-commercial contributions are always welcome with no charge. We consider job postings, announcements of for-fee training courses, expositions, conferences as commercial. Categorization of announcements is at the sole discretion of the Chicago AICHe Board of Directors. Chicago AICHe may publicize activities of interest to our members by cooperating professional societies and other non-profits without charge.

Please submit your material to aichechicago@gmail.com with "newsletter article" as a subject line.