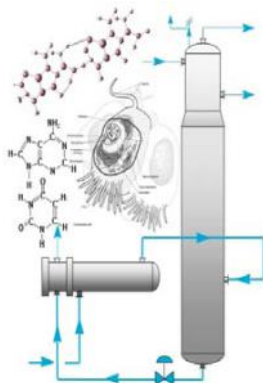


AIChE Chicago Section January Newsletter

Chicago Section

www.aiche.org/Chicago

January 2022



Inside this issue:

January Meeting	1
Chair's Corner	2
Thiele Award Nomination	3
MRC 2022	4
Young Professionals News	5
Upcoming AIChE Events	5
January History	6
Scholarship Information	6
Volunteer Opportunities	7
2021-2022 AIChE Chicago Meeting Schedule	8



Joint ACS/AIChE January 2022 Meeting

Speaker:	Professor Maureen Tang Chemical and Biological Engineering Drexel University
Topic:	"Beyond adsorption" phenomena in electrocatalytic hydrogen reactions
Date/ Registration Deadline:	Tuesday, January 18, 2022 6:30-8:00 PM
Program:	6:30 – 6:45 PM: Networking 6:45 – 7:00 PM: Announcements and Introduction 7:00 – 8:00 PM: Main Presentation
Where:	Virtual Zoom Meeting

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

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

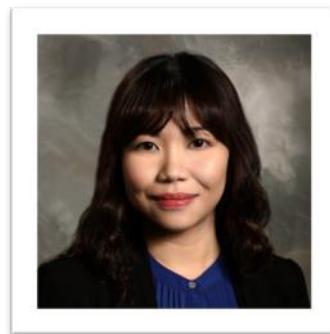
Biography:



Dr. Maureen Tang joined the faculty of Chemical and Biological Engineering at Drexel University in 2014. She received her BS in Chemical Engineering from Carnegie Mellon University in 2007 and her PhD from the University of California, Berkeley in 2012. While at Berkeley, she received a NSF Graduate Research Fellowship, an NSF East Asia Pacific Summer Fellowship, and the Daniel Cubicciotti Student Award of the Electrochemical Society. Dr. Tang completed postdoctoral work at Stanford University and research internships at Kyoto University, the University of Dortmund, and DuPont. She is the recipient of a 2018 NSF CAREER award, the 2019 College of Engineering Early Career Research Award, and a 2018 Award for Excellence in Peer Review from the ACS PRF. Her research at Drexel develops materials, architectures and fundamental insight for electrochemical energy storage and conversion.

Page 3

Chair's Corner



Happy New Year! I hope your family and you had a wonderful year-end break and are ready to start 2022. We are starting off 2022 with the January joint meeting with the Chicago Section of American Chemical Society (ACS). I am very excited for this annual event to partner with ACS, since both chemical engineering and chemistry fields always have common interests and potentials for collaboration. Although the meeting is virtual, I am looking forward to meeting and connecting with members of both organizations.

With the start of the new year, the Midwest Regional Conference is only less than two months away, and the Chicago Section is entering the last stage of preparation. Due to the recent development of the new variant and the increase in cases within the local community, the MRC organizing committee and the Section have decided to convert MRC to a virtual conference. Nevertheless, the programming committee has put together two full days of excellent programming, and we are actively working on creating more networking opportunities for conference attendees within the virtual platform. Registration is currently open at <https://www.aiche.org/conferences/midwest-regional-conference/2022>. Please pass along the word to your colleagues to attend the conference and consider joining the Chicago Section.

In addition to our technical programming, we have several volunteering opportunities coming up for our outreach programs such as Future City Competition, Dupage STEM Expo, and MRC high school outreach program. You can reach out to aichechicago@gmail.com for more information or express your interest in participating. I personally find outreach activities are both fulfilling and stimulating in meeting the next generation of chemical engineers.

Thank you for your continued support. I am looking forward to what's in place for us in 2022. Best wishes!

Ha Dinh

AIChE Chicago Section Chair

AIChE Senior Member

**Page 1****Abstract:**

In an energy landscape with increased environmental concerns and reduced availability of fossil fuels, electrochemical systems will likely play a major role for automotive and grid-storage applications. Our research strives to diagnose and overcome challenges related to electrochemical energy storage. We focus on mechanistic analysis that integrates both theory and experiment. One example of these challenges relates to the electrocatalytic hydrogen evolution and oxidation reactions (HER and HOR). The pH-dependence of HER and HOR kinetics remains a fundamental conundrum in modern electrochemistry. In this talk, I will discuss our work to elucidate this paradox using single-crystal voltammetry, microkinetic modeling, and kinetic isotope effects. We find that, contrary to some literature reports, the acidic and basic HER/HOR do not follow different pathways, nor do adsorption energies of active intermediates change. Rather, the interfacial water dynamics are fundamentally and qualitatively different in acid and base. Methods for quantifying these phenomena and implications of these findings on electrocatalyst design are discussed.

NOMINATIONS REQUESTED FOR THE ERNEST W. THIELE AWARD

The Ernest W. Thiele award is sponsored by bp and recognizes the outstanding contributions to our profession by a Midwest region chemical engineer. This award was established by the AIChE Chicago Section and is presented annually to a Midwest region AIChE member. This internationally recognized award consists of an engraved plaque and \$1,000 honorarium presented at a monthly section meeting.

Nomination forms and additional information can be obtained from the Thiele Committee Chair. Completed nominations are due to the committee chair no later than **April 01, 2022**.

One of the highest honors a distinguished chemical engineer can receive is our AIChE Chicago Section Thiele award. Please consider nominating a deserving engineer for this prestigious award.

To nominate, please contact:

Jeffrey Zalc

bp Solutions, P&O

phone: 630.881.5478

email: jeffrey.zalc@bp.com

More information about this award and the past winners:

<https://www.aiche.org/community/sites/chicago-local-section/ernest-w-thiele-award>

<https://www.aiche.org/community/sites/local-sections/chicago/thiele-award-past-winners>



2022 AIChE Midwest Regional Virtual Conference

March 1 & 2, 2022

<https://www.aiche.org/conferences/midwest-regional-conference/2022>

MRC organizing committee is planning this year's conference in a variety of different areas.

Registration is now open

For submission questions please contact the Programming Chairs:
Belma Demirel (Belma.Demirel@bp.com) and Hakim Iddir (iddir@anl.gov)

For volunteer opportunities please contact the Conference Chairs:
Matthew Walters (mwalters@exponent.com) and Jessica Morris (jmorris@exponent.com)

Assistance is needed with programming, sponsorship, educational outreach, and more so please consider helping your technical community.

Keynote Speakers

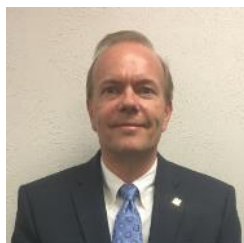


Stephen Klejst

*Executive Director of Investigations & Recommendations
U.S. Chemical Safety and Hazard Investigation Board (CSB)*

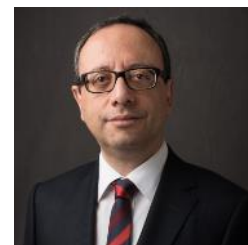


Simona Rollinson
*Chief Technology Officer
ISACA*



Henrik Rasmussen

*Vice President of Catalyst and Technology and Managing Director for the Americas
Haldor Topsoe*



Manos Mavrikakis
*Ernest Micek Distinguished Chair
University of Wisconsin-Madison*



Fouad Teymour

*S.C. Johnson Professor of Chemical Engineering and Director of the Center for Complex Systems and Dynamics
Illinois Institute of Technology*

Young Professionals December Social Summary

Happy New Year! Hope 2022 brings more joy, laughter, great memories and more AIChE in person events. Thanks to YPs for participating in the last event of 2021!



Young Professionals Committee

Upcoming AIChE Conferences, Meetings and Webinars

AIChE Conferences	
Jan 19, 2022 (webinar)	Modeling and Simulation of Fuel Cells and Electrolyzers
Jan 26, 2022 (webinar)	Digital Transformation to Achieve PSM Excellence
Feb 1, 2022	International Congress on Sustainability Science & Engineering (ICOSSE '22) , The University of Auckland, New Zealand
Feb 9-10, 2022	2022 Ethylene Middle East Technology Conference (EMET) , Gulf Hotel and Convention Centre, Kingdom of Bahrain
Mar 1-2, 2022	14th AIChE Midwest Regional Conference
Mar 21, 2022	PD2M Singapore Conference , Singapore City, Singapore
Apr 1-3, 2022	Quantum Computing Applications in Chemical and Biochemical Engineering Workshop , Copenhagen, Denmark
Apr 10-14, 2022	2022 Spring Meeting and 18th Global Congress on Process Safety , Henry B. González Convention Center, Hyatt Riverwalk, San Antonio, TX

January: from the Past

Jan 7, 1913	Patent No. 1,049,667 was granted to William Burton for the manufacture of gasoline.
Jan 17, 1882	Leroy Firman received a patent for the telephone switchboard.
Jan 20, 1857	William Kelly patented the blast furnace for manufacturing steel.
Jan 28, 1807	London's Pall Mall became the first street lit by gaslight.
Jan 28, 1873	Patent No. 135,245 was obtained by French chemist Louis Pasteur for a process of brewing beer and ale.

Attention Students and Parents!

If you are an undergraduate chemical engineering student or have a son or daughter that plans to study chemical engineering you may be interested in the Chicago Section's scholarship program.

Applications are due **March 1st**.

Please [click here](#) to read rules and eligibility.

For a Link to the Electronic Version of the AIChE Chicago Scholarship Application Form, Click on the Link Below:

<http://form.jotform.us/form/42814483647159>



Connect with members & participate in discussions on Engage!

Check out AIChE's member benefit, AIChE Engage. Use the robust directory search to find and connect with members. Participate in technical, career, and academic discussions about chemical engineering.

Thread Subject	Replies	Last Post
Improving Soft Skills Through Mentorship article- Aiche/CEP December 2020 CEP	0	9 hours ago by Chris
PhD Thesis		
Pressure setting for manway cover for tank emergency		by Anil Ramdeo
Digitalization in the process industry		yesterday by John Braccili Original post by Rohit Korde
Slow Progress of New-Age Tools in Chemical Eng	6	3 days ago by Jacob Albrecht Original post by Kushal Sinha



Volunteers Needed for Chicago Local Section

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.

Why Renew Your AIChE Membership?

Renew your membership now to keep learning and growing.

Renew Membership



Stay Connected to 40,000+ international members who take advantage of:

- Subscription to AIChE's flagship publication: CEP*
- Education—Access to e-learning courses and instructor-led training, offering Continuing Education Units and PDHs
- Access to CareerEngineer—a comprehensive job site tailored to chemical engineers
- Access to the AIChE eLibrary—a wealth of information from Knovel Life Sciences and the McGraw-Hill AccessEngineering Library collections

[View COMPLETE benefits](#)

2021-2022 Meeting Schedule and Speakers

Month	Date	Speaker	Affiliation	Topic
January	Tuesday 18th	Prof. Maureen Tang	Drexel	“Beyond adsorption” phenomena in electrocatalytic hydrogen reactions
February		TBD		
March	Tuesday 1st	Prof. Fouad Teymour	IIT	

AIChE Volunteer and Meeting Attendee Conduct Guidelines

AIChE’s volunteers are the core of the Institute and make all of its programs, conferences and educational efforts possible. These offerings provide excellent opportunities for AIChE members and meeting attendees to gain greater technical expertise, grow their networks, and enhance their careers. AIChE events provide engineers, scientists, and students a platform to present, discuss, publish and exhibit their discoveries and technical advances.

At all times, volunteers and meeting attendees should act in accordance with AIChE’s Code of Ethics, upholding and advancing the integrity, honor and dignity of the chemical engineering profession. AIChE’s Board of Directors has developed these guidelines to foster a positive environment of trust, respect, open communications, and ethical behavior. These guidelines apply to meetings, conferences, workshops, courses and other events organized by AIChE or any of its entities and also to volunteers who conduct other business and affairs on behalf of AIChE.

Specifically

1. Volunteers and meeting attendees should understand and support AIChE’s Code of Ethics.
2. Volunteers and meeting attendees should contribute to a collegial, inclusive, positive and respectful environment for fellow volunteers and attendees, and other stakeholders,

including AIChE staff.

3. Volunteers and meeting attendees should avoid making inappropriate statements or taking inappropriate action based on race, gender, age, religion, ethnicity, nationality, sexual orientation, gender expression, gender identity, marital status, political affiliation, presence of disabilities, or educational background. We should show consistent respect for colleagues, regardless of discipline, employment status, and organizations for which they work, whether industry, academia, or government.
4. Disruptive, harassing or other inappropriate statements or behavior toward other volunteers, members, and other stakeholders, including AIChE staff, is unacceptable.
5. Volunteers and meeting attendees should obey all applicable laws and regulations of the relevant governmental authorities while volunteering or attending meetings. Volunteers and meeting attendees taking part in any AIChE event, including the ChemECar Competition™, should also comply with all applicable safety guidelines.

Violations of this conduct policy should be reported promptly to the AIChE President or Executive Director.

[**Read AIChE's Code of Ethics**](#)

AICHE CHICAGO SECTION

AICHE Chicago Section
13964 Doral Lane
Homer Glen, IL 60491
aichechicago@gmail.com

<https://www.facebook.com/AICHEChicagoSection>

<https://www.linkedin.com/groups/4538581>

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

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Officers and Contact Information

Chair	<i>Ha Dinh</i>
Chair Elect	<i>Sarika Goel</i>
Past-Chair	<i>Jeffrey Zalc</i>
Programming	<i>Belma Demirel</i>
	<i>David Hietala</i>
Social Media	<i>Sanaz Taghvaii</i>
Treasurer	<i>McKay Rytting</i>
Directors at Large	<i>Jarad Champion</i>
	<i>Pat Shannon</i>
	<i>Robert Tsai</i>
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	<i>Seetha Manickam</i>
	<i>Kashif Uddin</i>
	<i>Yechan Won</i>
Newsletter Editors	<i>Robert Tsai</i>

We want you for AICHE-Chicago!

AICHE is committed to promoting a fair, just, and equitable profession and society. AICHE believes that all who wish to be a part of the chemical engineering community should have equal opportunity to pursue and achieve success. We work toward a better future for all —through our technical expertise; through how we inspire, engage, retain, and advance future talent; and through how we treat each other within and beyond the profession.

[AICHE Equity, Diversity, and Inclusion Statement | AICHE](#)

We need your help!

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aichechicago@gmail.com

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



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.

