

January Section Meeting: Polymers for Electrochemical Energy

Globally, we are facing an imminent challenge to replace petroleum-based energy with renewable alternatives. Ion-conducting polymer membranes are of high interest for utilization as solid-state electrolytes within electrochemical energy technologies (e.g., fuel cells, electrolyzers, redox flow batteries). Relative to standard proton exchange membrane (PEM) devices, the alkaline environment of anion exchange membrane (AEM) corollaries offers the opportunity for lower cost catalysts and separator materials, as well as improved water management and reduced gas crossover. In this seminar, numerous AEMs are compared as hydroxide conducting solid-state electrolytes. Methods are established for high throughput, parallel characterization of AEM materials evaluating conductivity, ion exchange capacity, chemical stability, and water uptake, as well as true hydroxide-ion properties. Standardized comparisons of the top performing hydroxide conducting AEMs of different backbone types provides valuable insight into optimal membrane chemistries for achieving high conductivity and durability. Structure-property relationships and their effects on AEM performance will be presented.

January Section Meeting

Topic: Polymers for Electrochemical Energy

Speaker: Kelly M. Meek, PhD

Date: Tuesday, January 18th

Time: 6:00 – Introduction
6:05 - Career & Technical Discussion
7:05 – Q & A

Cost: Free, Registration Required

Location: Online Zoom meeting

REGISTRATION REQUIRED. More information can be found on our [website](#).

[Register](#)

After you register, you will receive instructions via email for joining the meeting.

View our December Meeting Presentation



For members and students that may have missed our December meeting presentation by Scott Elrod on “The Growing Pains of Becoming a Chemical Engineer – After You’re a Chemical Engineer,” we would like to offer it to you once again. The topic hits remarkably close to home for many recent graduates of B.S. Chemical Engineering programs. There was also a lively discussion at the end among the limited attendees that spans a couple of generations.

[View December presentation](#)

Speaker Biography: Prof. Meek completed her BS in Chemical Engineering at the University of Arkansas in 2011. Next, she completed her PhD in Chemical Engineering at Texas A&M University in 2016, where she researched polymers for energy storage and conversion. She continued her research through postdoctoral fellowships at two US DOE labs: Oak Ridge National Laboratory and the National Renewable Energy Laboratory. Prof. Meek joined the Department of Chemical and Biological Engineering at the University of Ottawa as a tenure-track Assistant Professor in July 2020.

Happy
New
Year

AIChE Meetings

2022

- Apr 10-14 [2022 Spring Meeting and 18th Global Conference on Process Safety](#)
San Antonio, TX
- May 2-5 [2022 Synthetic Biology; Evolution, Engineer and Design \(SEED\)](#)
Arlington, VA
- June 1-3 [Advanced Manufacturing and Processing Conference](#)
Bethesda, MD
- June 7-9 [Process Development Symposium](#)
Philadelphia, PA
- June 26-28 [NDEW-ChE: National Diversity Equity Workshop for Chemical Engineering Academic Leaders](#)
Baltimore, MD

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The objectives of AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members, and to serve society, particularly where chemical, engineering can contribute to the public interest.
AIChE Rocky Mountain is a public non-profit 501(c)(3)

VOLUNTEER AS A YOUNG PROFESSIONAL LIAISON (YPL)

We are looking for Young Professional Liaisons for each state – CO, NM, WY, SD & MT. Please send nominations to any section officer listed above.

MEETING SCHEDULE

The Rocky Mountain Local Section (RMLS) of AIChE generally meets the second or third Tuesday of every month, September through May.