

## Rocky Mountain AIChE News

December 2020

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### December Section Meeting: Insights from Magnetic Resonance Applied to Chemical Engineering Problems

Magnetic resonance (MR) has well-known applications in the worlds of chemistry and medicine, such as the use of NMR to determine molecular structures and using MRI to investigate the human brain. Although these applications are wildly different, they are based on the same core physical principles. This presentation will give an overview of how MR works and then discuss how the versatility of MR allows it to be applied to problems in chemical engineering such as studying granular systems, in-situ chemistry at extreme conditions, and flow of supercritical fluids.



### December Section Meeting

<b>Topic:</b>	Insights from Magnetic Resonance Applied to Chemical Engineering Problems
<b>Speaker:</b>	Hilary Fabich, PhD ABQMR, Inc.
<b>Date:</b>	Tuesday, December 8th
<b>Time:</b>	6:00 – Career Discussion 6:15 – Presentation and Q & A
<b>Cost:</b>	Free, Registration Required
<b>Location:</b>	Online Webex meeting

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

[Register](#)

After your request has been approved, you'll receive instructions via email for joining the meeting.

Need help? Go to <http://help.webex.com>

Dr. Hilary Fabich is the president of ABQMR, a small research company in Albuquerque, NM that provides research services and one-of-a-kind fabrication of magnetic resonance (MR) devices. ABQMR's niche is the application of MR physics to unusual analytical challenges in systems as diverse as high temperature and pressure chemistry, granular flow, and plant roots in the agricultural field.

Hilary is originally from Livingston, MT and attended Montana State University (MSU) for her undergraduate degree in chemical engineering. She spent four years as an undergraduate researcher in the MR lab at MSU where she discovered her love for research. This was strengthened during a summer as an REU student at Harvard University. Following her victory lap (5th year) at MSU, she accepted a position as a researcher at Chalmers University of Technology in Gothenburg, Sweden. After six months in Sweden, she started her PhD in chemical engineering at the University of Cambridge, UK as a Gates-Cambridge Scholar. During her PhD she developed a rapid MR imaging method to track bubble formation in fluidized beds. Hilary joined ABQMR as a postdoc, using MR to study supercritical fluids, before accepting a scientist position and later being elected as company president. She thoroughly enjoys exploring unique applications of MR at ABQMR and, when not at work, all that New Mexico's wild places have to offer.

## UNIVERSITY LIAISONS WANTED

Our Rocky Mountain Local Section executive board is looking for liaisons for universities in Colorado, Wyoming, South Dakota, and Montana to help facilitate student participation. If you would be interested in getting the word out about our AIChE meetings to students at your university, please consider joining our Officer Team. Contact [Marc Paffhausen](#) for more information at 406-544-5871.

## MENTORS NEEDED

In support of our STEM Outreach initiative as a local section, we would like to support the New Mexico and Colorado Chapters of the [Future City](#) where students learn to apply math and science to real-world issues. The [Future City Competition](#) is currently in progress through February 2021. Both chapters are looking for volunteer mentors and judges. If you are interested, please send an email to [Marc Paffhausen](#) or [Dr. Corey Leclerc](#).



# AIChE Meetings

## 2020

Dec 1-3	<a href="#">Regenerative Engineering Society Symposium</a> Virtual
Dec 1-3	<a href="#">3<sup>rd</sup> Annual Water Conference</a> Virtual
Dec 2	<a href="#">Don't Experiment with Safety – Choosing the Right Lab Coat</a> Live Webinar
Dec 3-4	<a href="#">Renewable Natural Gas Summit</a> Virtual
Dec 3-4	<a href="#">Biosecurity, Biosafety, and Bioethics Conference</a> Virtual
Dec 7-9	<a href="#">3<sup>rd</sup> Int'l Conference on Microbiome Engineering</a> Virtual

### National AIChE Contact Info

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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) organizations and thus all donations are tax deductible.

## MEETING SCHEDULE

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

## CALL FOR PRESENTERS

Do you have a presentation to share with our AIChE group? We are looking for presenters for our February through May meeting. Contact [Nick Thornburg](mailto:Nick.Thornburg@rockymountainaiche.org) at 303-506-9824