

June 2, 2023 | 168 SN | 11:00am—12:00pm

*Hosted By: The Mechanical & Industrial Engineering Department*

## Electrochemistry: Fundamental Research, Academic Culture and Education



**Abstract:** Electrochemistry represents one of the most complicated topics in science that nonetheless attracts thousands of researchers, generates hundreds of papers per day and enables technologies that are critical for everyday life. However, due to the pressure of metrics-oriented goals and ranking-focused academic culture, there is a lack of thoroughness and depth required for advancement of such a complicated field. In my talk, I will first review the key challenges and research questions in electrochemistry. Then, I will discuss how fundamental research, academic culture and education are all interrelated and serve as essential components for advancing the fields of electrochemistry, electrocatalysis, and ultimately energy technologies.

**Dr. Andrew Akbashev**  
Paul Scherrer Institute, Switzerland

**Biography:** Andrew Akbashev leads a group at Paul Scherrer Institute (Switzerland) since 2020. Previously, he worked at Stanford University as a postdoctoral researcher. He received his PhD in Materials Science and Engineering at Drexel University. Andrew's research encompasses electrochemistry and electrocatalysis on model materials, operando microscopy and spectroscopy of electrode-electrolyte interfaces, X-ray/photoemission spectroscopies and atomic-scale characterization of materials. He is the founder and solo organizer of the Electrochemical Online Colloquium (total audience ~ 6,000 scientists, live audience = 100-700 people), a free platform where leading experts, including Nobel laureates, give highly fundamental and educational talks about their fields. He is also well known on social media (>40,000 followers) for discussing various issues in academia and advocating for higher quality of research.

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