



# NSERC CREATE ME<sup>2</sup> Materials for Electrochemical Energy Solutions

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## *CREATE and Use Hydrogen 4<sup>th</sup> Annual Conference*

Conference  
August 25, 2022  
08:00 AM– 6:30 PM MST

**Location: Taylor Institute for Teaching and Learning**

### Conference Program

Time	Topic	Speaker
<b>08:00 – 08:30</b>	<b>Registration &amp; Breakfast</b>	
08:30 – 08:45	Introduction	<b>Kunal Karan</b> CREATE ME2 & CESAR PI University of Calgary
08:45 – 09:00	Opening remarks	<b>Andres Nygren</b> Vice Dean, Schulich School of Engineering
09:00 - 09:45	Hydrogen Production, Utilization, and Hubs, Oh My	<b>Adam Weber</b> Lawrence Berkeley National Lab
09:45 - 10:00	Q&A	
<b>10:00 – 10:20</b>	<b>COFFEE BREAK</b>	
10:20 - 10:40	Porous Materials and/or PNM, Spun Towards H <sub>2</sub>	<b>Amin Sadeghi</b> HQP/University of Waterloo
10:40 – 11:00	Modeling Nafion Ionomer During Catalyst Layer Fabrication Process of Polymer Electrolyte Fuel Cell Using Molecular Dynamics Method	<b>Atefeh Tarokh</b> HQP/University of Calgary
11:00 - 11:30	Economics and Environmental Impacts	<b>Joule Bergerson &amp; Sean McCoy</b> University of Calgary
11:30 - 12:00	Production, Storage and/or Distribution	<b>Ryan Laverty</b> TC Energy, Canada
<b>12:00 - 13:00</b>	<b>LUNCH BREAK</b>	



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13:00 -13:30	Current state of hydrogen fuel cells	<b>Iryna Zenyuk</b> University of California- Irvine
13:30 – 14:00	Industry Perspective on Research Needs for Hydrogen Production Via PEM Electrolysis, and Fuel Cell and Electrolyzer Manufacturing and Recycling	<b>Karen Lyon-Swidler</b> Plug Power, USA
14:00 – 14:20	Investigating the Two-phase Flow in Proton Exchange Membrane Fuel Cells Using Self-developed Single-flow Channel and Water Balance	<b>Wei Fei</b> HQP/University of Alberta
14:20 – 14:40	Designing Hierarchical monoliths of Graphene out of Polymer Blend Nanocomposites	<b>Aylin Habibiyan</b> HQP/ University of Calgary
<b>14:40 – 15:00</b>	<b>COFFEE BREAK</b>	
15:00 – 15:20	The Impact of Policy on Energy Storage Patenting Activity	<b>Arthur Novaes de Amorim</b> HQP/ University of Calgary
15:20 – 15:50	Hydrogen on The Road	<b>David Layzell</b> CESAR; University of Calgary
<b>15:50 – 16:30</b>	<b>Panel Discussion Keynote Speakers</b>	
<b>16:30 - 17:45</b>	<b>HQP Poster Session &amp; Networking Host Bar</b>	
<b>17:45 – 18:00</b>	Award Ceremony for Best HQP Oral and Poster Presentation	<b>Behzad Fuladpanjeh Hojaghan</b> CREATE ME2 HQP Association President
<b>18:00 – 18:10</b>	<b>Closing Remarks &amp; Introducing the Innovation Fair</b>	<b>Ted Roberts</b> CREATE ME2 Program Director University of Calgary