

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Chemical Engineering in the 21st Century: Challenges and Opportunities

Energy Team Meeting

February 4, 2021

11:00 am – 1:00 pm ET

Join Link:

<https://nasem.zoom.us/j/99542002504?pwd=MWVldURqeHRhbkQWFBQkxzMjM2Zz09>

Open Session Agenda

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| 11:00 AM | Future of perovskite-based solar cells
<i>Dr. Henry Snaith</i>
University of Oxford |
| 11:30 AM | CO₂ Sequestration, and the Future Opportunities and Challenges of Carbon Capture, Utilization and Storage
<i>Dr. Alissa Park</i>
Columbia University |
| 12:00 PM | The Future of Hydrogen-Based Fuels, its Storage, and Distribution
<i>Dr. Bryan Pivovar</i>
National Renewable Energy Lab |
| 12:30 PM | Discussion |
| 1:00 PM | Adjourn Open Session |

Speaker Biographies

Bryan Pivovar is Senior Research Fellow/Group Manager at the National Renewable Energy Laboratory (NREL) in Golden, CO where he oversees NREL's electrolysis and fuel cell research and development with an annual budget of ~\$10M. He has been a pioneer in several areas of fuel cell development for vehicle applications, taking on leadership roles and organizing workshops for the Department of Energy in the areas of sub-freezing effects, alkaline membranes, and extended surface electrocatalysis. Starting in June of 2015, he led a multi-National Laboratory team pursuing 'Hydrogen at Scale' as a pathway for energy system-wide benefits of increased H₂ implementation, currently a multi-million-dollar DOE program supported by multiple program offices. He led fuel cell R&D at Los Alamos National Laboratory (LANL) prior to joining NREL. He received the 2021 Energy Technology Division Research Award and 2012 Tobias Young Investigator Award from the Electrochemical Society. Dr. Pivovar has co-authored over 150 papers with over 11,000 citations in the general area of fuel cells and electrolysis. He received his PhD in Chemical Engineering from the University of Minnesota.