

DOE Hydrogen Program 2021 AMR Preliminary Program-at-a-Glance

Topic	Monday, June 7	Tuesday, June 8				Wednesday, June 9				Thursday, June 10				Friday, June 11		
		Hydrogen Technologies	Fuel Cell Technologies	Systems Analysis/ Tech Acceleration	Intra-Agency Activities	Hydrogen Technologies	Fuel Cell Technologies	Technology Acceleration	Intra-Agency Activities	Hydrogen Technologies	Fuel Cell Technologies	Technology Acceleration	Interagency Activities	Hydrogen Technologies	Fuel Cell Technologies	Safety, Codes and Standards
#		1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	4.1	4.2	4.3
9:30 AM	*All times in Eastern Time	Presenter/Reviewer Tech Check				Presenter/Reviewer Tech Check				Presenter/Reviewer Tech Check				Presenter/Reviewer Tech Check		
10:00 AM	Presenter Tech Check	P148	FC160	SA169	FE001	P184	FC339	TA035	ARPAE001	IN021	FC336	TA017	IA001	ST001	FC145	SCS005
10:30 AM	PLENARY SESSION Opening Remarks, Panel Discussion, and DOE Hydrogen Program Overview	P191		SA174	FE002	P179		TA048	ARPAE002	IN022	FC334	TA001	IA003	ST100	FC317	SCS007
11:00 AM		P192	FC304	SA175	FE003	P182		TA018	ARPAE003	IN026	FC335	TA005	IA004	ST127	FC319	SCS010
11:30 AM		P193	FC171	SA176	FE004	P183	FC327	TA043	ARPAE004	IN029	FC333	TA007	IA006	ST209	FC117	SCS011
12:00 PM		Break	Break				Break				Break				Break	
12:30 PM	Break 12:30 - 1:00 PM	P194	FC302	SA177	FE005	P196	FC323	TA041	ARPAE005	IN025	FC330	TA050	IA007	ST212	FC309	SCS019
1:00 PM	PLENARY SESSION Panel Discussion and Subprogram RD&D Overviews	P195	FC303	SA178	FE006		FC326	TA024	ARPAE006	IN004	FC331	TA025	IA009	ST216	FC320	SCS021
1:30 PM		P190	FC170	SA179	FE007		FC156	TA016		IN016	FC313	TA026	IA010	ST217	FC341	SCS022
2:00 PM		P189	FC318	SA180	FE008		FC337	TA042		IN015	FC314	TA027	IA012	ST223	FC342	SCS029
2:30 PM	Break	Break				Break				Break				Break		
3:00 PM	PLENARY SESSION Subprogram RD&D Overviews, Panel Discussion, and AMR Awards	P188	FC305	TA028	BES001	IN001a	FC338	TA049	NE001	IN019	FC315	TA036	TA009	ST227	FC307	
3:30 PM		P187	FC172	TA030	BES002	IN001b	FC163	TA034	NE002	H2061	FC316	TA033	IA014	ST228	FC308	
4:00 PM		P185	FC158	TA037		IN020	FC332	TA047	NE003	IN030	FC324	TA032	IA015		FC310	
4:30 PM		P186	FC157										IA016			
5:00 PM						Networking: Informal gather-and-greet with colleagues							IA017			
5:30 PM																
6:00 PM																

Monday, June 7 Plenary Schedule

10:00 AM	Presenter Tech Check
10:30 AM	Welcome and Annual Merit Review Introduction Shawna McQueen, AMR Coordinator, and Dr. Sunita Satyapal, Director, Hydrogen and Fuel Cell Technologies Office (EERE-HFTO)
10:35 AM	Opening Remarks from Energy Secretary Jennifer M. Granholm
10:45 AM	Panel Discussion: H2@Scale Opportunities and Activities at DOE <i>Moderator: Kelly Speakes-Backman, Acting Assistant Secretary and Principal Deputy Assistant Secretary, Office of Energy Efficiency and Renewable Energy (EERE)</i> Dr. Jennifer Wilcox, Acting Assistant Secretary and Principal Deputy Assistant Secretary, Office of Fossil Energy (FE) Dr. Kathryn Huff, Acting Assistant Secretary and Principal Deputy Assistant Secretary, Office of Nuclear Energy (NE) (Invited) Dr. Stephen Binkley, Acting Director and Principal Deputy Director, Office of Science (SC)
11:15 AM	DOE Hydrogen Program Overview Dr. Sunita Satyapal, Director, Hydrogen and Fuel Cell Technologies Office (EERE-HFTO)
12:00 PM	Panel Discussion: DOE Hydrogen Program <i>Moderator: Sunita Satyapal (EERE-HFTO)</i> John Litynski (FE-Deputy Director Advanced Fossil Technology Systems) Alison Hahn (NE-Reactor Optimization and Modernization Team Lead) Linda Horton (SC-Associate Director of Science for Basic Energy Sciences) Scott Litzelman (Program Director, ARPA-E)
12:30 PM	Break
1:00 PM	Hydrogen Technologies R&D Overview Dr. Ned Stetson, Program Manager, Hydrogen Technologies, EERE-HFTO
1:45 PM	Fuel Cell Technologies R&D Overview Dr. Dimitrios Papageorgopoulos, Program Manager, Fuel Cell Technologies, EERE-HFTO
2:15 PM	Break
2:45 PM	Technology Acceleration Overview Dr. Jesse Adams, Program Manager, Technology Acceleration, EERE-HFTO
3:25 PM	Systems Analysis Overview Neha Rustagi, Team Lead – Systems Analysis, EERE-HFTO
3:45 PM	DOE Panel Discussion on the Role of Hydrogen in Integrated Energy Systems <i>Moderator: Dr. Eric Miller (EERE-HFTO)</i> Eric Hsieh (Office of Electricity) Paul Spitsen (EERE-Strategic Analysis) Jian Fu (EERE-Wind Energy Technologies Office) Avi Shultz (EERE-Solar Energy Technologies Office) Jason Marcinkoski (NE-Office of Nuclear Reactor Deployment) Bhima Sastri (FE-Crosscutting R&D and Systems Integration)
4:30 PM	AMR Award Ceremony Michael Berube, Assistant Secretary for Sustainable Transportation, EERE Dr. Sunita Satyapal, EERE-HFTO
4:45 PM	Closing Remarks - DOE
5:00 PM	Adjourn

Tuesday, June 8 Oral Presentations

Time (EDT)	Hydrogen Technologies	Fuel Cell Technologies	Systems Analysis/Technology Acceleration	DOE Intra-Agency Activities
	1.1	1.2	1.3	1.4
9:30 AM	Presenter/Reviewer Tech Check			
10:00 AM	P148 HydroGEN Overview: A Consortium on Advanced Water Splitting Materials Huyen Dinh, NREL	FC160 ElectroCat 2.0 (Electrocatalysis Consortium) Deborah Myers, ANL & Piotr Zelenay, LANL	SA169 Market Segmentation Analysis of Medium and Heavy Duty Trucks with a Fuel Cell Emphasis Chad Hunter, NREL	Fossil Energy FE001 Performance Validation of a Thermally Integrated 50 kW High Temperature Electrolyzer System Tyler Westover, INL
10:30 AM	P191 Perovskite/Perovskite Tandem Photoelectrodes for Low-Cost Unassisted Photoelectrochemical Water Splitting Yanfa Yan, The University of Toledo		SA174 Technoeconomic and Life Cycle Analysis of Synthetic Fuels and Steelmaking Amgad Elgowainy, ANL	FE002 Integrated Water-Gas-Shift Pre-Combustion Carbon Capture Process Gokhan Alptekin, TDA Research, Inc.
11:00 AM	P192 Development of Composite Photocatalyst Materials That Are Highly Selective for Solar Hydrogen Production and Their Evaluation in Z-Scheme Reactor Designs Shane Ardo, University of California, Irvine	FC304 ElectroCat: Fuel Cell Membrane Electrode Assemblies with PGM-Free Nanofiber Cathodes Peter Pintau, Vanderbilt University	SA175 Regional Hybrid Energy Systems Technoeconomic Analysis Mark Ruth, NREL	FE003 Ammonia Gas Turbine Combustor Majed Toqan, Creative Power Solutions (USA), Inc.
11:30 AM	P193 Highly Efficient Solar Water Splitting Using 3D/2D Hydrophobic Perovskites with Corrosion Resistant Barriers Aditya D. Mohite, William Marsh Rice University	FC171 ElectroCat: Advanced PGM-Free Cathode Engineering for High Power Density and Durability Shawn Litster, Carnegie Mellon University	SA176 Annual Technology Baseline- Transportation Laura Vimmerstedt, NREL	FE004 A Highly Efficient and Affordable Hybrid System for Hydrogen and Electricity Production Ying Liu, Phillips 66 Company
12:00 PM	Break			
12:30 PM	P194 New High-Entropy Perovskite Oxides with Increased Reducibility and Stability for Thermochemical Hydrogen Generation Jian Luo, University of California, San Diego	FC302 ElectroCat: Developing Platinum Group Metal-Free Catalysts for Oxygen Reduction Reaction in Acid: Beyond the Single Metal Site Qingying Jia, Northeastern University	SA177 Analysis of Hydrogen Export Potential Ed Frank, ANL	FE005 Low Cost, Large Area SOEC Stack for H2 & Chemicals Olga Marina, PNNL
1:00 PM	P195 A New Paradigm for Materials Discovery and Development for Lower Temperature and Isothermal Thermochemical Hydrogen Production Jonathan Scheffe, University of Florida	FC303 ElectroCat: Mesoporous Carbon-Based PGM-Free Catalyst Cathodes Jian Xie, Indiana University Purdue University	SA178 Cradle-to-Grave Transportation Analysis Jarod Kelly, ANL	FE006 Microwave Catalysis for Process Intensified Modular Production of Carbon Nanomaterials from Natural Gas John Hu, West Virginia University Research Corporation
1:30 PM	P190 A Multifunctional Isostructural Bilayer Oxygen Evolution Electrode for Durable Intermediate-Temperature Electrochemical Water Splitting Kevin Huang, University of South Carolina	FC170 ElectroCat: Durable Mn-Based PGM-Free Catalysts for Polymer Electrolyte Membrane Fuel Cells Hui Xu, Giner, Inc.	SA179 Transportation Benefits Analysis Evan Reznicek, Aaron Brooker and Alicia Birky, NREL	FE007 Impacts of Hydrogen Blending in Natural Gas Networks Bri-Mathias Hodge, NREL
2:00 PM	P189 Scalable High-Hydrogen Flux, Robust Thin Film Solid Oxide Electrolyzer Colin Gore, Redox Power Systems, LLC	FC318 ElectroCat: Accessible PGM-Free Catalysts and Electrodes Jacob Spendelow, LANL	SA180 Advanced neTwork analysis of hydrogen fuel cell Automated vehicles for goods delivery (ATLAS) -- TCO of Autonomous Fuel Cell Fleet Vehicles Tim Lipman, LBNL	FE008 Modular Processing of Flare Gas for Carbon Nanoproducts Alan Weimer & Mija Hubler, University of Colorado - Boulder
2:30 PM	Break			
3:00 PM	P188 Advanced Coatings to Enhance the Durability of SOEC Stacks Emir Dogdibegovic, Nexceris, LLC	FC305 Active and Durable PGM-Free Cathodic Electrocatalysts for Fuel Cell Application Alexey Serov, Pajarito Powder	TA028 Demonstration of Electrolyzer Operation at a Nuclear Plant to Allow for Dynamic Participation in an Organized Electricity Market and In-House Hydrogen Supply Uuganbayar Otgonbaatar, Exelon	Basic Energy Sciences BES001 DOE Fuels from Sunlight Hub: The Joint Center for Artificial Photosynthesis Frances Houle, Lawrence Berkeley National Laboratory
3:30 PM	P187 Pure Hydrogen Production through Precious-Metal-Free Membrane Electrolysis of Dirty Water Shannon Boettcher, University of Oregon	FC172 ElectroCat: Highly Active and Durable PGM-Free ORR Electrocatalysts through the Synergy of Active Sites Yuyan Shao, PNNL	TA030 Demonstration of Integrated Hydrogen Production and Consumption for Improved Utility Operations Adam Paxson, Plug Power, Inc.	BES002 Combining Non-coupled Potentials and Charge Conservation to Access Electrochemical Barriers Frank Abild-Pedersen, SLAC National Accelerator Laboratory, SUNCAT Center for Interface Science and Catalysis
4:00 PM	P185 High-Performance AEM LTE with Advanced Membranes, Ionomers and PGM-Free Electrodes Paul A. Kohl, Georgia Institute of Technology	FC158 Fuel Cell Membrane Electrode Assemblies with Ultra-Low Pt Nanofiber Electrodes Peter Pintau, Vanderbilt University	TA037 Demonstration and Framework for H2@Scale in Texas and Beyond Nico Bouwkamp, Frontier Energy Inc.	
4:30 PM	P186 Performance and Durability Investigation of Thin, Low Crossover Proton Exchange Membranes for Water Electrolyzers Andrew Park, The Chemours Company FC, LLC	FC157 High Performance PEFC Electrode Structures Rob Darling, Raytheon Technologies		
5:00 PM				

Wednesday, June 9 Oral Presentations

Time (EDT)	Hydrogen Technologies	Fuel Cell Technologies	Technology Acceleration	DOE Intra-Agency Activities
	2.1	2.2	2.3	2.4
9:30 AM	Presenter/Reviewer Tech Check			
10:00 AM	P184 Scalable and Highly Efficient Microbial Electrochemical Reactor for Hydrogen Generation from Lignocellulosic Biomass and Waste Hong Liu, Oregon State University	FC339 M2FCT: Million Mile Fuel Cell Truck Consortium Rod Borup & Adam Weber, M2FCT	TA035 Power Converter for Electrolyzer Applications Robert Hovsopian, NREL	Advanced Research Projects Agency - Energy ARPAE001 ARPA-E Hydrogen and Fuel Cells Portfolio Grigori Soloveichik, U.S. Department of Energy
10:30 AM	P179 BioHydrogen (BioH2) Consortium to Advance Fermentative Hydrogen Production Katherine Chou, NREL		TA048 ARIES / Flatirons Facility - Hydrogen System Capability Buildout Daniel Leighton, NREL	ARPAE002 Development of PiperION Membranes and Ionomers Yushan Yan, Versogen
11:00 AM	P182 Binary Chloride Salts as Catalysts for Methane to Hydrogen and Graphitic Powder Fadl Saadi, C-Zero, LLC		TA018 High Temperature Electrolysis Test Stand Micah Casteel, INL	ARPAE003 Bipolar Membranes with an Electrospun 3D Junction Peter Pintauro, Vanderbilt University
11:30 AM	P183 Extremely Durable Concrete Using Methane Decarbonization Nanofiber Co-Products with Hydrogen Alan W. Weimer & Mija Hubler, University of Colorado, Boulder	FC327 Durable High Power Density Fuel Cell Cathodes for Heavy-Duty Vehicles Shawn Litster, Carnegie Mellon University	TA043 Electrolyzer Stack Development and Manufacturing Olga Marina, PNNL	ARPAE004 Cost-Effective, Intermediate-Temperature Fuel Cells for Carbon-Free Power Generation Greg Tao, Chemtronergy
12:00 PM	Break			
12:30 PM	P196 H2NEW Consortium: Hydrogen from Next-Generation of Electrolyzers of Water Bryan Pivovar, NREL & Richard Boardman, INL, NREL	FC323 Durable Fuel Cell MEA through Immobilization of Catalyst Particle and Membrane Chemical Stabilizer Nagappan Ramaswamy, GM	TA041 Truck Duty Cycle Analysis Jason Lustbader, NREL	ARPAE005 Adaptive SOFC for Ultra High Efficiency Systems Hossein Ghezeli-Ayagh, FuelCell Energy, Inc.
1:00 PM		FC326 Durable MEAs for Heavy-Duty Fuel Cell Electric Trucks John Slack, Nikola Motor Company	TA024 Analysis of Fuel Cells for Trucks: Real World Benefits Ram Vijayagopal, ANL	ARPAE006 Progress on SOFC/Turbine Hybrid Power System Design and Development Scott Swartz, Nexxeris, LLC
1:30 PM		FC156 Durable High-Power Membrane Electrode Assemblies with Low-Pt-Loading Swami Kumaraguru, GM	TA016 Fuel Cell Hybrid Electric Delivery Van Erik Brewer, Center for Transportation and the Environment	
2:00 PM		FC337 Cummins PEM Fuel Cell System for Heavy Duty Applications Darren Hickey, Cummins Inc.	TA042 Next Generation Hydrogen Station Analysis Genevieve Saur, NREL	
2:30 PM	Break			
3:00 PM	IN001a H-Mat Overview: Metals Chris San Marchi, SNL	FC338 Domestically Manufactured Fuel Cells for Heavy-Duty Applications John Lawler, Plug Power, LLC	TA049 High Pressure, High Flow Rate Dispenser and Nozzle Assembly for Heavy Duty Vehicles Spencer Quong, Electricore	Nuclear Energy NE001 Coupling an LWR Nuclear Plant to High Temperature Electrolysis Tyler Westover, INL
3:30 PM	IN001b H-Mat Overview: Polymers Kevin Simmons, PNNL	FC163 Fuel Cell Systems Analysis Brian James, Strategic Analysis, Inc.	TA034 Rail, Aviation, and Maritime Metrics Rajesh Ahluwalia, ANL	NE002 Technical and Economic Assessment of Hydrogen Production at Nuclear Plants Paul Talbot, INL
4:00 PM	IN020 Self-Healable Copolymer Composites for Extended Service Hydrogen Dispensing Hoses Marek Urban, Clemson University	FC332 Reversible Fuel Cell Cost Analysis Max Wei, LBNL	TA047 Rail Refueling Analysis Brian Ehrhart, SNL	NE003 Safety Analysis of Closely Coupled Nuclear Power Plants and Hydrogen Production Plants Richard Boardman, INL
4:30 PM				

Thursday, June 10 Oral Presentations

Time (EDT)	Hydrogen Technologies	Fuel Cell Technologies	Technology Acceleration	Interagency Activities
	3.1	3.2	3.3	3.4
Presenter/Reviewer Tech Check				
9:30 AM				
10:00 AM	IN021 Microstructural Engineering and Accelerated Test Method Development to Achieve Low Cost, High Performance Solutions for Hydrogen Storage and Delivery Kip Findley, Colorado School of Mines	FC336 A Systematic Approach to Developing Durable, Conductive Membranes for Operation at 120oC Tom Zawodzinski, University of Tennessee - Knoxville	TA017 Innovative Advanced Hydrogen Mobile Fueler Spencer Quong, Electricore	IA001 DOE Hydrogen Program – Interagency Collaboration Sunita Satyapal and Peter Devlin, U.S. Department of Energy Hydrogen and Fuel Cell Technologies Office
10:30 AM	IN022 Tailoring Carbide Dispersed Steels: A Path to Increased Strength and Hydrogen Tolerance Gregory Thompson, The University of Alabama	FC334 Extending PFSA Membrane Durability Through Enhanced Ionomer Backbone Stability Michael Yandrasits, 3M	TA001 MEA Manufacturing R&D Michael Ulsch, NREL	IA002 DOT-MARAD Update Michael Carter, U.S. Department of Transportation (DOT) - Maritime Administration IA003 California - New Awards and Funding Andrew Martinez, California Air Resources Board
11:00 AM	IN026 Tailoring Composition and Deformation Modes at the Microstructural Level for Next Generation Low-Cost High-Strength Austenitic Stainless Steels Jessica Krogstad, University of Illinois Urbana-Champaign	FC335 Additive Functionalized Polymers for Extended Heavy Duty Polymer Electrolyte Membrane Lifetimes Tom Corrigan, The Lubrizol Corporation	TA005 In-line Quality Control of PEM Materials Andrew Wagner, Mainstream Engineering	IA004 The Michigan Hydrogen Economy Joel Rinebold, Connecticut Center for Advanced Technology, Inc. IA005 Northeast Fuel Cell & Hydrogen: Heavy Duty Demand Clustering Charles Myers, Massachusetts Hydrogen Coalition
11:30 AM	IN029 Reducing the Cost of Fatigue Crack Growth Testing for Storage Vessel Steels in Hydrogen Gas Kevin Nibur, Hy-Performance	FC333 Advanced Membranes for Heavy Duty Fuel Cell Trucks Andrew Baker, Nikola Motor Company	TA007 Roll-to-Roll Advanced Materials Manufacturing Lab Collaboration Scott Mauger, NREL	IA006 Regional Hydrogen - Midwest Pat Valente, Ohio Fuel Cell Coalition
Break				
12:00 PM				
12:30 PM	IN025 ANL-H2 Delivery Technologies Analysis Amgad Elgowainy, ANL	FC330 High Efficiency Reversible Solid Oxide System Hossein Ghezal-Ayagh, FuelCell Energy, Inc.	TA050 Overall Research on Electrode Coating Processes (OREO) Scott Mauger, NREL	IA007 California Hydrogen and Fuel Cell Vehicle Activities: Market Launch to Market Acceleration Bill Elick, California Fuel Cell Partnership IA008 H2@Rescue: Design and Deployment of PEM Fuel Cell-Battery Powered Hybrid Emergency Relief Truck Nick Josefik, U.S. Army
1:00 PM	IN004 Magnetocaloric Hydrogen Liquefaction John Barclay, PNNL	FC331 A Novel Stack Approach to Enable High Round Trip Efficiencies in Unitized PEM Regenerative Fuel Cells Katherine Ayers, Nel Hydrogen	TA025 Laser 3D Printing of Highly Compacted Protonic Ceramic Electrolyzer Stack Jianhua "Joshua" Tong, Clemson University	IA009 Energy Management Overview and Hydrogen Research Initiatives David Cook, U.S. Navy
1:30 PM	IN016 Free-Piston Expander for Hydrogen Cooling Devin Halliday, Gas Technology Institute	FC313 Novel Bifunctional Electrocatalysts, Supports, and Membranes for High Performing and Durable Unitized Regenerative Fuel Cells Nem Danilovic, LBNL	TA026 Low-Cost, High Performance Catalyst Coated Membranes for PEM Water Electrolyzers Andrew Steinbach, 3M	IA010 Power Generation Needs of the Dismounted Soldier Shailesh Shah, U.S. Army IA011 U.S. Army Combat Capabilities Development Command: Hydrogen Fuel Cell Project Overview and Update Kevin Centek, U.S. Army
2:00 PM	IN015 Optimizing the Heisenberg Vortex Tube for Hydrogen Cooling Jacob Leachman, Washington State University	FC314 Efficient Reversible Operation and Stability of Novel Solid Oxide Cells Scott Barnett, Northwestern University	TA027 Catalyst Layer Design, Manufacturing, and In-line Quality Control Radenka Maric, University of Connecticut	IA012 FRA Hydrogen and Fuel Cell Research Program Melissa Shurland, DOT – Federal Railroad Administration
Break				
2:30 PM				
3:00 PM	IN019 Ultra-Cryopump for High Demand Transportation Fueling Greg Hupp & Dave Chalk, RotoFlow	FC315 High-Efficiency Reversible Alkaline Membrane Fuel Cells Hui Xu, Giner, Inc.	TA036 Advanced Electrode Manufacture to Enable Low-Cost PEM Electrolysis Chris Capuano, Nel Hydrogen	TA009 Maritime (Pierside Power) Fuel Cell Generator Project Lennie Klebanoff, SNL
3:30 PM	H2061 Innovating Hydrogen Station: Heavy-Duty Fueling Michael Peters, NREL	FC316 Durable, High-Performance Unitized Reversible Fuel Cells Based on Proton Conductors Meilin Liu, Georgia Institute of Technology	TA033 Developing Novel Electrodes with Ultralow Catalyst Loading for High Efficiency Hydrogen Production in Proton Exchange Membrane Electrolyzer Cells Feng-Yuan Zhang, University of Tennessee Space Institute	IA014 NASA Fuel Cell and Hydrogen Activities Ian Jakupca, National Aeronautics and Space Administration
4:00 PM	IN030 Micro-Mechanically Guided High-Throughput Alloy Design Exploration towards Metastability-Induced H Embrittlement Resistance C. Cem Tasan, Massachusetts Institute of Technology	FC324 Reversible Fuel Cell Stacks with Integrated Water Management Teddy (Zhang) Wang, Plug Power Inc.	TA032 Electrolyzer Integrated Modular Nano-Array Monolithic Catalytic Reactors Trent Molter, Skyre, Inc.	IA015 H2 Corridor Update Diane Turchetta, DOT - Federal Highway Administration
4:30 PM				IA016 Hydrogen Fuel Cells for Unmanned Systems Ben Gould, U.S. Naval Research Laboratory
4:50 PM				IA017 Hydrogen Integration in Utility, Transportation, and Expeditionary Systems Benjamin Wilcox, U.S. Navy
5:10 PM				

Friday, June 11 Oral Presentations

Time (EDT)	Hydrogen Technologies	Fuel Cell Technologies	Safety, Codes and Standards
	4.1	4.2	4.3
9:30 AM	Presenter/Reviewer Tech Check		
10:00 AM	ST001 System Level Analysis of Hydrogen Storage Options Rajesh Ahluwalia, ANL	FC145 Corrosion-Resistant Non-Carbon Electrocatalyst Supports for PEFCs Vijay Ramani, Washington University	SCS005 R&D for Safety, Codes and Standards: Materials and Components Compatibility Joe Ronevich, SNL
10:30 AM	ST100 Hydrogen Storage Cost Analysis Cassidy Houchins, Strategic Analysis, Inc.	FC317 Stationary Direct Methanol Fuel Cells Using Pure Methanol Dr. Xianglin Li, University of Kansas	SCS007 Fuel Quality Assurance R&D and Impurity Testing in Support of Codes and Standards Tommy Rockward, LANL
11:00 AM	ST127 HyMARC Overview Mark Allendorf, SNL	FC319 Low Cost Gas Diffusion Layer Materials and Treatments for Durable High Performance PEM Fuel Cells Rod Borup, LANL	SCS010 R&D for Safety, Codes and Standards: Hydrogen Behavior Ethan Hecht, SNL
11:30 AM	ST209 HyMARC Seedling: Theory-Guided Design and Discovery of Materials for Reversible Methane and Hydrogen Storage Omar Farha, Northwestern University	FC117 FY18 SBIR IIB: Ionomer Dispersion Impact on Advanced Fuel Cell Performance and Durability Hui Xu, Giner, Inc.	SCS011 Hydrogen Quantitative Risk Assessment Brian Ehrhart, SNL
12:00 PM	Break		
12:30 PM	ST212 HyMARC Seedling: Methane and Hydrogen Storage with Porous Cage-Based Composite Materials Eric Bloch, University of Delaware	FC309 ILBCP-IL Composite Ionomers for High Current Density Performance Joshua Snyder, Drexel University	SCS019 Hydrogen Safety Panel, Safety Knowledge Tools, and First Responder Training Resources Nick Barilo, PNNL
1:00 PM	ST216 HyMARC Seedling: Hydrogen Release from Concentrated Media with Reusable Catalysts Travis Williams, University of Southern California	FC320 Electrode Ionomers for High Temperature Fuel Cells Michael Hibbs, SNL	SCS021 NREL Hydrogen Sensor Testing Laboratory William Buttner, NREL
1:30 PM	ST217 HyMARC Seedling: A Reversible Liquid Hydrogen Carrier System Based on Ammonium Formate and Captured CO ₂ Hongfei Lin, Washington State University	FC341 Advanced AEMFCs through Material Innovation Yu Seung Kim, LANL	SCS022 Fuel Cell and Hydrogen Energy Association Codes and Standards Support Karen Quackenbush, Fuel Cell and Hydrogen Energy Association
2:00 PM	ST223 Cost Assessment and Evaluation of Liquid Hydrogen Storage for Medium- and Heavy-Duty Transportation Applications Rajesh Ahluwalia, ANL	FC342 Advanced Ionomers & MEAs for Alkaline Membrane Fuel Cells (AMFCs) Bryan Pivovar, NREL	SCS029 Point of Use Hydrogen Purification and Impurity Reporting Systems that Utilize Metal-Organic Frameworks William Morris, NuMat
2:30 PM	Break		
3:00 PM	ST227 Integrated Onsite Waste-Heat Driven Hydrogen Carrier System for Steel and Renewables Hanna Breunig, LBNL	FC307 Cyclic Olefin Copolymer-Based Alkaline Exchange Polymers and Reinforced Membranes Chulsung Bae, RPI	
3:30 PM	ST228 Determining the Value Proposition of Materials-based Hydrogen Storage for Stationary Bulk Storage of Hydrogen Bruce Hardy, SRNL	FC308 Advanced AEMs with Tunable Water Transport for PGM-Free AEMFCs Michael Hickner, The Pennsylvania State University	
4:00 PM		FC310 Composite PEMs from Electrospun Crosslinkable Poly(Phenylene Sulfonic Acid)s Ryszard Wycisk, Vanderbilt University	
4:30 PM			

Poster Presentations

Fuel Cell Technologies

FC167	FY20 SBIR IIA: Multi-Functional Catalyst Support	Minette Ocampo, pH Matter, LLC
FC321	Lab Call FY19: Solid Phase Processing for Reduced Cost and Improved Efficiency of Bipolar Plates	Ken Ross, PNNL
FC325	FY19 SBIR II: Controlled Porosity and Surface Coatings for Advanced Gas Diffusion Layers	Kristina Bennett, Physical Sciences, Inc.
FC328	FY19 SBIR II: Novel Fluorinated Ionomer for PEM Fuel Cells	Hui Xu, Giner, Inc.
FC343	FY20 SBIR II: Improved Ionomers and Membranes for Fuel Cells	Chris Topping, Tetramer Technologies, LLC

Hydrogen Technologies - Production

H2057	Electrolyzer/Bioreactor Integration (EBI)	Kevin Harrison, NREL
P102	Hydrogen Production and Delivery Analysis	Brian James, Strategic Analysis, Inc.
P148A	HydroGEN: Low Temperature Electrolysis	Shaun Alia, NREL
P148B	HydroGEN: HydroGEN: High Temperature Electrolysis	Dong Ding, INL
P148C	HydroGEN: Photoelectrochemical (PEC) Water Splitting	Francesca Toma, LBNL
P148D	HydroGEN: Solar Thermochemical Hydrogen (STCH) Water Splitting	Anthony McDaniel, SNL
P148E	HydroGEN: Cross-Cut Modeling	Tadashi Ogitsu, LLNL
P152	Proton-Conducting Solid Oxide Electrolysis Cells for Large-Scale Hydrogen Production at Intermediate Temperatures	Prabhakar Singh, University of Connecticut
P153	Degradation Characterization and Modeling of a New Solid Oxide Electrolysis Cell Utilizing Accelerated Life Testing	Scott Barnett, Northwestern University
P154	Thin-Film, Metal-Supported High-Performance and Durable Proton-Solid Oxide Electrolyzer Cell	Tianli Zhu, Raytheon Technologies Research Center
P161	Protective Catalyst Systems on III-V and Si-Based Semiconductors for Efficient, Durable Photoelectrochemical Water Splitting Devices	Thomas Jaramillo, Stanford University
P162	Novel Chalcopyrites for Advanced Photoelectrochemical Water-Splitting	Nicolas Gaillard, University of Hawaii
P165	Accelerated Discovery of Solar Thermochemical Hydrogen Production Materials via High-Throughput Computational and Experimental Methods	Ryan O'Hayre, Colorado School of Mines
P166	Computationally Accelerated Discovery and Experimental Demonstration of High-Performance Materials for Advanced Solar Thermochemical Hydrogen Production	Charles Musgrave, University of Colorado, Boulder
P167	Transformative Materials for High-Efficiency Thermochemical Production of Solar Fuels	Chris Wolverton, Northwestern University
P168	Mixed Ionic Electronic Conducting Quaternary Perovskites: Materials by Design for Solar Thermochemical Hydrogen	Ellen Stechel, Arizona State University
P175	Intermediate Temperature Proton-Conducting Solid Oxide Electrolysis Cells with Improved Performance and Durability	Xingbo Liu, West Virginia University
P176	Development of Durable Materials for Cost Effective Advanced Water Splitting Utilizing All Ceramic Solid Oxide Electrolyzer Stack Technology	John Pietras, Saint-Gobain
P177	Proton-Conducting Ceramic Electrolyzers for High-Temperature Water Splitting	Hossein Ghezel-Ayagh, FuelCell Energy, Inc.
P196A	H2NEW LTE: Durability and AST Development	Deborah Myers, ANL
P196B	H2NEW LTE: Benchmarking and Performance	Nem Danilovic
P196C	H2NEW LTE: Manufacturing, Scale-Up, and Integration	Nem Danilovic, LBNL
P196D	H2NEW LTE: System and Techno-economic Analysis -- Hydrogen from Next-Generation Electrolyzers	Bryan Pivovar, NREL
P196E	H2NEW HTE: Durability and AST Development	Olga Marina, PNNL
P196F	H2NEW HTE: Cell Characterization	David Ginley, NREL
P196G	H2NEW HTE: Multiscale Degradation Modeling	Brandon Wood, LLNL
P197	Advanced Manufacturing Processes for Gigawatt-Scale Proton Exchange Membrane Water Electrolyzer Oxygen Evolution Reaction Catalysts and Electrodes	Andrew Steinbach, 3M
P198	Enabling Low Cost PEM Electrolysis at Scale Through Optimization of Transport Components and Electrode Interfaces	Chris Capuano, Nel Hydrogen
P199	Integrated Membrane Anode Assembly & Scale-up	Adam Paxson, Plug Power

Hydrogen Technologies - Infrastructure

H2041	California Hydrogen Research Consortium	Sam Sprik, NREL
H2042	Hydrogen Contaminant Detector	Bill Butner, NREL
H2060	Hydrogen Blending into Natural Gas Pipelines	Chris San Marchi, SNL
IN001	H-Mat Overview	Chris San Marchi, SNL
IN010	Cryogenically Flexible, Low Permeability Hydrogen Hose (SBIR)	Jennifer Lalli, NanoSonic
IN014	NDE Techniques for Pressure Vessels (SBIR): Detection of Micron-Scale Flaws through Nonlinear Wave Mixing	Matthew Webster, Luna Innovations Inc.
IN018	Heavy-Duty Compressor Development	Josh Adams, Nel Hydrogen

Hydrogen Technologies - Storage

ST008	Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements	Matt Thornton, NREL
ST143	HyMARC Seedling: ALD (Atomic Layer Deposition) Synthesis of Novel Nanostructured Metal Borohydrides	Steven Christensen, NREL

Poster Presentations

ST144	HyMARC Seedling: Optimized Hydrogen Adsorbents via Machine Learning and Crystal Engineering	Don Siegel, University of Michigan
ST148	Novel Plasticized Melt Spinning Process of PAN Fibers Based on Task-Specific Ionic Liquids	Sheng Dai, ORNL
ST202	HyMARC—NREL Activities	Tom Gennett, NREL
ST204	HyMARC—PNNL Activities	Mark Bowden, PNNL
ST207	HyMARC—LLNL Activities	Brandon Wood, LLNL
ST210	HyMARC Seedling: Metal-Organic Frameworks Containing Frustrated Lewis Pairs for Hydrogen Storage at Ambient Temperature	Shengqian Ma, University of South Florida
ST211	HyMARC Seedling: Optimal Adsorbents for Low-Cost Storage of Natural Gas and Hydrogen: Computational Identification, Experimental Demonstration, and System-Level Projection	Don Siegel, University of Michigan
ST213	HyMARC Seedling: Uniting Theory and Experiment to Deliver Flexible MOFs for Superior Methane (NG) Storage	Brian Space, University of South Florida
ST214	HyMARC Seedling: Heteroatom-Modified and Compacted Zeolite-Templated Carbons for Gas Storage	Nicholas Stadie, Montana State University
ST215	HyMARC Seeding: Developing A New Natural Gas Super-Absorbent Polymer	Mike Chung, The Pennsylvania State University
ST218	HyMARC Seedling: High Capacity Step-Shaped Hydrogen Adsorption in Robust, Pore-Gating Zeolitic Imidazolate Frameworks	Michael McGuiirk, Colorado School of Mines
ST222	HyMARC: Characterization of Hydrogen Storage Materials at ORNL's Spallation Neutron Source	Rafael Balderas-Xicohtencatl, ORNL
ST224	HyMARC—LBNL Activities	Jeffrey Long, LBNL
ST225	HyMARC—LBNL/ALS Activities	David Prendergast, LBNL
ST231	Precursor Processing Development for Low Cost, High Strength Carbon Fiber for Composite Overwrapped Pressure Vessel Applications	Matthew Weisenberger, University of Kentucky
ST233	HyMARC—SNL Activities	Mark Allendorf, SNL
ST234	Development of Magnesium Borane Containing Solutions of Furans and Pyroles as Reversible Liquid Hydrogen Carriers	Craig Jensen, University of Hawaii
Technology Acceleration		
TA008	Material-Process-Performance Relationships in PEM Catalyst Inks and Coated Layers	Scott Mauger, NREL
TA013	Fuel Cell Bus Evaluations	Leslie Eudy, NREL
TA029	Autonomous Hydrogen Fueling Station	Dustan Skidmore, Plug Power, Inc.
TA039	Solid Oxide Electrolysis System Demonstration	Hossein Ghezeli-Ayagh, FuelCell Energy, Inc.
TA040	Hydrogen Storage Tank Packaging Onboard Heavy-Duty Trucks	Shaun Onorato, NREL
TA044	System Demonstration for Supplying Clean, Reliable and Affordable Electric Power to Data Centers using Hydrogen Fuel	Paul Wang, Caterpillar, Inc.
TA045	Marine Hydrogen Demonstration	Narendra Pal, Hornblower
TA051	Low Total Cost of Hydrogen by Exploiting Offshore Wind and PEM Electrolysis Synergies	Hui Xu, Giner, Inc.
TA052	Solid Oxide Electrolysis Cells (SOEC) Integrated with Direct Reduced Iron (DRI) Plants for Producing Green Steel	Jack Brouwer, University of California, Irvine
TA053	Grid-Interactive Steelmaking with Hydrogen (GISH)	Ronald O'Malley, Missouri University of Science & Technology
Systems Analysis		
H2059	Electrolytic Renewable Fuel Production Optimal Operation Investigation	Omar Guerra, NREL
SA181	Global Change Analysis Model Expansion- Hydrogen Pathways	Page Kyle, PNNL
Safety, Codes and Standards		
H2053	Hydrogen Safety Panel Evaluation of Hydrogen Facilities	Nick Barilo, PNNL
H2056	Hydrogen Safety Outreach to Expedite H2 Fueling and Energy Project Deployment and Promote Public Acceptance for Zero Emission Vehicles and Reliable Distributed Power Generation	Nick Barilo, PNNL
SCS001	Component Failure R&D	Kevin Hartmann, NREL
SCS027	Guidance for Indoor Hydrogen Sensor Placement	Andrei Tchouvelev, A.V.Tchouvelev & Associates
SCS028	Hydrogen Education for a Decarbonized Global Economy (H2EDGE)	Thomas Reddoch, EPRI
DOE Intra-Agency Activities		
AMO001	Flexible Natural Gas/Hydrogen Engine for CHP Applications	Jaswinder Singh, Caterpillar, Inc.
ARPAE007	Channeling Engineering of Hydroxide Ion Exchange Polymers and Reinforced Membranes	Chulsung Bae, RPI
ARPAE008	Modular Ultrastable Alkaline Exchange Ionomers to Enable High Performance Fuel Cells and Electrolyzer Systems	Kristina Hugar, Ecoltecto, Inc.
ARPAE009	Stable Diacid Coordinated Quaternary Ammonium Polymers for 80 – 230 °C Fuel Cells	Yu Seung Kim, LANL
ARPAE010	Metal-Supported SOFCs for Ethanol-Fueled Vehicles	Michael Tucker, LBNL

Poster Presentations

ARPAE011	Low-Cost Intermediate-Temperature, Fuel-Flexible Protonic Ceramic Fuel Cell Stack	Ryan O'Hayre, Colorado School of Mines
BES003	Fundamental Research Underpinning Hydrogen and Fuel Cells	Raul Miranda, U.S. Department of Energy
WPTO001	Marine Energy to Hydrogen Analysis Project	Jacob Thorson, NREL
HFTO Postdoctoral Recognition Awards		
PRA001	2020 HFTO Postdoctoral Recognition Award - First Place: Development of Polymer Electrolytes for Electrochemical Devices	Eun Joo (Sarah) Park, LANL
PRA002	2020 HFTO Postdoctoral Recognition Award - Runner Up: Platinum Group Metal-Free Catalysts for Proton Exchange Membrane Fuel Cells – Electrode Diagnostics for Performance and Durability	Luigi Osmieri, LANL
PRA003	2020 HFTO Postdoctoral Recognition Award - Runner Up: Self-Improving GaN/Si Photocathode in PEC Water Splitting	Guosong Zeng, LBNL

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Abild-Pedersen	Frank	SLAC National Accelerator Laboratory, SUNCAT Center for Interface Science and Catalysis	6/8/21 3:30 PM	BES002	Intra-Agency Activities
Adams	Josh	Nel Hydrogen		IN018	Poster
Ahluwalia	Rajesh	ANL	6/11/21 10:00 AM	ST001	Hydrogen Technologies
Ahluwalia	Rajesh	ANL	6/11/21 2:00 PM	ST223	Hydrogen Technologies
Ahluwalia	Rajesh	ANL	6/9/21 3:30 PM	TA034	Technology Acceleration
Alia	Shaun	NREL		P148A	Poster
Allendorf	Mark	SNL	6/11/21 11:00 AM	ST127	Hydrogen Technologies
Allendorf	Mark	SNL		ST233	Poster
Alptekin	Gokhan	TDA Research, Inc.	6/8/21 10:30 AM	FE002	Intra-Agency Activities
Ardo	Shane	University of California, Irvine	6/8/21 11:00 AM	P192	Hydrogen Technologies
Ayers	Katherine	Nel Hydrogen	6/10/21 1:00 PM	FC331	Fuel Cell Technologies
Bae	Chulsung	RPI	6/11/21 3:00 PM	FC307	Fuel Cell Technologies
Bae	Chulsung	RPI		ARPAE007	Poster
Baker	Andrew	Nikola Motor Company	6/10/21 11:30 AM	FC333	Fuel Cell Technologies
Balderas-Xicohtencatl	Rafael	ORNL		ST222	Poster
Barclay	John	PNNL	6/10/21 1:00 PM	IN004	Hydrogen Technologies
Barilo	Nick	PNNL		H2053	Poster
Barilo	Nick	PNNL		H2056	Poster
Barilo	Nick	PNNL	6/11/21 12:30 PM	SCS019	Safety, Codes and Standards
Barnett	Scott	Northwestern University	6/10/21 2:00 PM	FC314	Fuel Cell Technologies
Barnett	Scott	Northwestern University		P153	Poster
Bennett	Kristina	Physical Sciences, Inc.	6/10/21 1:30 PM	FC325	Poster
Birky	Alicia	NREL	6/8/21 1:30 PM	SA179	Systems Analysis
Bloch	Eric	University of Delaware	6/11/21 12:30 PM	ST212	Hydrogen Technologies
Boardman	Richard	INL	6/9/21 4:00 PM	NE003	Intra-Agency Activities
Boardman	Richard	INL	6/9/21 12:30 PM	P196	Hydrogen Technologies
Boettcher	Shannon	University of Oregon	6/8/21 3:30 PM	P187	Hydrogen Technologies
Borup	Rod	LANL	6/11/21 11:00 AM	FC319	Fuel Cell Technologies
Borup	Rod	M2FCT	6/9/21 10:00 AM	FC339	Fuel Cell Technologies
Bouwkamp	Nico	Frontier Energy Inc.	6/8/21 4:00 PM	TA037	Systems Analysis
Bowden	Mark	PNNL		ST204	Poster
Breunig	Hanna	LBNL	6/11/21 3:00 PM	ST227	Hydrogen Technologies
Brewer	Erik	Center for Transportation and the Environment	6/9/21 1:30 PM	TA016	Technology Acceleration
Brooker	Aaron	NREL	6/8/21 1:30 PM	SA179	Systems Analysis
Brouwer	Jack	University of California, Irvine		TA052	Poster
Butner	Bill	NREL		H2042	Poster
Buttner	William	NREL	6/11/21 1:00 PM	SCS021	Safety, Codes and Standards
Capuano	Chris	Nel Hydrogen	6/10/21 3:00 PM	TA036	Technology Acceleration
Capuano	Chris	Nel Hydrogen		P198	Poster
Carter	Michael	DOT	6/10/21 10:20 AM	IA002	Interagency Activities
Casteel	Micah	INL	6/9/21 11:00 AM	TA018	Technology Acceleration
Centeck	Kevin	U.S. Army	6/10/21 1:50 PM	IA011	Interagency Activities
Chalk	Dave	RotoFlow	6/10/21 3:00 PM	IN019	Hydrogen Technologies
Chou	Katherine	NREL	6/9/21 10:30 AM	P179	Hydrogen Technologies
Christensen	Steven	NREL		ST143	Poster
Chung	Mike	The Pennsylvania State University	6/10/21 3:00 PM	ST215	Poster
Cook	David	U.S. Navy	6/10/21 1:10 PM	IA009	Interagency Activities
Corrigan	Tom	The Lubrizol Corporation	6/10/21 11:00 AM	FC335	Fuel Cell Technologies
Dai	Sheng	ORNL		ST148	Poster
Danilovic	Nem	LBNL	6/10/21 1:30 PM	FC313	Fuel Cell Technologies
Danilovic	Nem	LBNL		P196b	Poster
Danilovic	Nem	LBNL		P196c	Poster
Darling	Rob	Raytheon Technologies	6/8/21 4:30 PM	FC157	Fuel Cell Technologies
Ding	Dong	INL		P148B	Poster
Dinh	Huyen	NREL	6/8/21 10:00 AM	P148	Hydrogen Technologies
Dogdibegovic	Emir	Nexceris, LLC	6/8/21 3:00 PM	P188	Hydrogen Technologies
Ehrhart	Brian	SNL	6/11/21 11:30 AM	SCS011	Safety, Codes and Standards
Ehrhart	Brian	SNL	6/9/21 4:00 PM	TA047	Technology Acceleration
Elgowainy	Amgad	ANL	6/10/21 12:30 PM	IN025	Hydrogen Technologies
Elgowainy	Amgad	ANL	6/8/21 10:30 AM	SA174	Systems Analysis
Elrick	Bill	CaFCP	6/10/21 12:30 PM	IA007	Interagency Activities
Eudy	Leslie	NREL		TA013	Poster
Farha	Omar	Northwestern University	6/11/21 11:30 AM	ST209	Hydrogen Technologies
Findley	Kip	Colorado School of Mines	6/10/21 10:00 AM	IN021	Hydrogen Technologies
Frank	Ed	ANL	6/8/21 12:30 PM	SA177	Systems Analysis
Gaillard	Nicolas	University of Hawaii		P162	Poster
Gennett	Tom	NREL		ST202	Poster

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Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.	6/10/21 12:30 PM	FC330	Fuel Cell Technologies
Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.		P177	Poster
Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.		TA039	Poster
Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.	6/9/21 12:30 PM	ARPAE005	Intra-Agency Activities
Ginley	David	NREL		P196f	Poster
Gore	Colin	Redox Power Systems, LLC	6/8/21 2:00 PM	P189	Hydrogen Technologies
Gould	Ben	NRL	6/10/21 4:30 PM	IA016	Interagency Activities
Guerra	Omar	NREL		H2059	Poster
Halliday	Devin	Gas Technology Institute	6/10/21 1:30 PM	IN016	Hydrogen Technologies
Hardy	Bruce	SRNL	6/11/21 3:30 PM	ST228	Hydrogen Technologies
Harrison	Kevin	NREL		H2057	Poster
Hartmann	Kevin	NREL		SCS001	Poster
Hecht	Ethan	SNL	6/11/21 11:00 AM	SCS010	Safety, Codes and Standards
Hibbs	Michael	SNL	6/11/21 1:00 PM	FC320	Fuel Cell Technologies
Hickey	Darren	Cummins Inc.	6/9/21 2:00 PM	FC337	Fuel Cell Technologies
Hickner	Michael	The Pennsylvania State University	6/11/21 3:30 PM	FC308	Fuel Cell Technologies
Hodge	Bri-Mathias	NREL	6/8/21 1:30 PM	FE007	Intra-Agency Activities
Houchins	Cassidy	Strategic Analysis, Inc.	6/11/21 10:30 AM	ST100	Hydrogen Technologies
Houle	Frances	LBNL	6/8/21 3:00 PM	BES001	Intra-Agency Activities
Hovsapian	Robert	NREL	6/9/21 10:00 AM	TA035	Technology Acceleration
Hu	John	West Virginia University Research Corporation	6/8/21 1:00 PM	FE006	Intra-Agency Activities
Huang	Kevin	University of South Carolina	6/8/21 1:30 PM	P190	Hydrogen Technologies
Hubler	Mija	University of Colorado, Boulder	6/9/21 11:30 AM	P183	Hydrogen Technologies
Hubler	Mija	University of Colorado - Boulder	6/8/21 2:00 PM	FE008	Intra-Agency Activities
Hugar	Kristina	Ecoltecto, Inc.		ARPAE008	Poster
Hunter	Chad	NREL	6/8/21 10:00 AM	SA169	Systems Analysis
Hupp	Greg	RotoFlow	6/10/21 3:00 PM	IN019	Hydrogen Technologies
Jakupca	Ian	NASA Glenn	6/10/21 3:50 PM	IA014	Interagency Activities
James	Brian	Strategic Analysis, Inc.	6/9/21 3:30 PM	FC163	Fuel Cell Technologies
James	Brian	Strategic Analysis, Inc.		P102	Poster
Jaramillo	Thomas	Stanford University		P161	Poster
Jensen	Craig	University of Hawaii		ST234	Poster
Jia	Qingying	Northeastern University	6/8/21 12:30 PM	FC302	Fuel Cell Technologies
Josefik	Nick	U.S. Army	6/10/21 12:50 PM	IA008	Interagency Activities
Kelly	Jarod	ANL	6/8/21 1:00 PM	SA178	Systems Analysis
Kim	Yu Seung	LANL	6/11/21 1:30 PM	FC341	Fuel Cell Technologies
Kim	Yu Seung	LANL		ARPAE009	Poster
Klebanoff	Lennie	SNL	6/10/21 3:00 PM	TA009	Interagency Activities
Kohl	Paul A.	Georgia Institute of Technology	6/8/21 4:00 PM	P185	Hydrogen Technologies
Krogstad	Jessica	University of Illinois Urbana-Champaign	6/10/21 11:00 AM	IN026	Hydrogen Technologies
Kumaraguru	Swami	GM	6/9/21 1:30 PM	FC156	Fuel Cell Technologies
Kyle	Page	PNNL		SA181	Poster
Lalli	Jennifer	NanoSonic		IN010	Poster
Lawler	John	Plug Power, LLC	6/9/21 3:00 PM	FC338	Fuel Cell Technologies
Leachman	Jacob	Washington State University	6/10/21 2:00 PM	IN015	Hydrogen Technologies
Leighton	Daniel	NREL	6/9/21 10:30 AM	TA048	Technology Acceleration
Li	Dr. Xianglin	University of Kansas	6/11/21 10:30 AM	FC317	Fuel Cell Technologies
Lin	Hongfei	Washington State University	6/11/21 1:30 PM	ST217	Hydrogen Technologies
Lipman	Tim	LBNL	6/8/21 2:00 PM	SA180	Systems Analysis
Litster	Shawn	Carnegie Mellon University	6/8/21 11:30 AM	FC171	Fuel Cell Technologies
Litster	Shawn	Carnegie Mellon University	6/9/21 11:30 AM	FC327	Fuel Cell Technologies
Liu	Meilin	Georgia Institute of Technology	6/10/21 3:30 PM	FC316	Fuel Cell Technologies
Liu	Xingbo	West Virginia University		P175	Poster
Liu	Hong	Oregon State University	6/9/21 10:00 AM	P184	Hydrogen Technologies
Liu	Ying	Phillips 66 Company	6/8/21 11:30 AM	FE004	Intra-Agency Activities
Long	Jeffrey	LBNL		ST224	Poster
Luo	Jian	University of California, San Diego	6/8/21 12:30 PM	P194	Hydrogen Technologies
Lustbader	Jason	NREL	6/9/21 12:30 PM	TA041	Technology Acceleration
Ma	Shengqian	University of South Florida		ST210	Poster
Maric	Radenka	University of Connecticut	6/10/21 2:00 PM	TA027	Technology Acceleration
Marina	Olga	PNNL	6/9/21 11:30 AM	TA043	Technology Acceleration
Marina	Olga	PNNL		P196e	Poster
Marina	Olga	PNNL	6/8/21 12:30 PM	FE005	Intra-Agency Activities
Martinez	Andrew	CARB	6/10/21 10:40 AM	IA003	Interagency Activities
Mauger	Scott	NREL	6/10/21 11:30 AM	TA007	Technology Acceleration
Mauger	Scott	NREL		TA008	Poster
Mauger	Scott	NREL	6/10/21 12:30 PM	TA050	Technology Acceleration
McDaniel	Anthony	SNL		P148D	Poster

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McGuirk	Michael	Colorado School of Mines	6/10/21 3:30 PM	ST218	Poster
Miranda	Raul	U.S. Department of Energy		BES003	Poster
Mohite	Aditya D.	William Marsh Rice University	6/8/21 11:30 AM	P193	Hydrogen Technologies
Molter	Trent	Skyre, Inc.	6/10/21 4:00 PM	TA032	Technology Acceleration
Morris	William	NuMat	6/11/21 2:00 PM	SCS029	Safety, Codes and Standards
Musgrave	Charles	University of Colorado, Boulder		P166	Poster
Myers	Charles	MA H2 Coalition	6/10/21 11:20 AM	IA005	Interagency Activities
Myers	Deborah	ANL		P196a	Poster
Myers	Deborah	ANL	6/8/21 10:00 AM	FC160	Fuel Cell Technologies
Nibur	Kevin	Hy-Performance	6/10/21 11:30 AM	IN029	Hydrogen Technologies
Ocampo	Minette	pH Matter, LLC	6/10/21 1:00 PM	FC167	Poster
Ogitsu	Tadashi	LLNL		P148E	Poster
O'Hayre	Ryan	Colorado School of Mines		P165	Poster
O'Hayre	Ryan	Colorado School of Mines		ARPAE011	Poster
O'Malley	Ronald	Missouri University of Science & Technology		TA053	Poster
Onorato	Shaun	NREL		TA040	Poster
Osmieri	Luigi	LANL		PRA002	Poster
Otgonbaatar	Uuganbayar	Exelon	6/8/21 3:00 PM	TA028	Systems Analysis
Pal	Narendra	Hornblower		TA045	Poster
Park	Andrew	The Chemours Company FC, LLC	6/8/21 4:30 PM	P186	Hydrogen Technologies
Park	Eun Joo (Sarah)	LANL		PRA001	Poster
Paxson	Adam	Plug Power, Inc.	6/8/21 3:30 PM	TA030	Systems Analysis
Paxson	Adam	Plug Power		P199	Poster
Peters	Michael	NREL	6/10/21 3:30 PM	H2061	Hydrogen Technologies
Pietras	John	Saint-Gobain		P176	Poster
Pintauro	Peter	Vanderbilt University	6/8/21 4:00 PM	FC158	Fuel Cell Technologies
Pintauro	Peter	Vanderbilt University	6/8/21 11:00 AM	FC304	Fuel Cell Technologies
Pintauro	Peter	Vanderbilt University	6/9/21 11:00 AM	ARPAE003	Intra-Agency Activities
Pivovar	Bryan	NREL	6/11/21 2:00 PM	FC342	Fuel Cell Technologies
Pivovar	Bryan	NREL		P196d	Poster
Pivovar	Bryan	NREL	6/9/21 12:30 PM	P196	Hydrogen Technologies
Prendergast	David	LBNL		ST225	Poster
Quackenbush	Karen	Fuel Cell and Hydrogen Energy Association	6/11/21 1:30 PM	SCS022	Safety, Codes and Standards
Quong	Spencer	Electricore	6/10/21 10:00 AM	TA017	Technology Acceleration
Quong	Spencer	Electricore	6/9/21 3:00 PM	TA049	Technology Acceleration
Ramani	Vijay	Washington University	6/11/21 10:00 AM	FC145	Fuel Cell Technologies
Ramaswamy	Nagappan	GM	6/9/21 12:30 PM	FC323	Fuel Cell Technologies
Reddoch	Thomas	EPRI		SCS028	Poster
Reznicek	Evan	NREL	6/8/21 1:30 PM	SA179	Systems Analysis
Rinebold	Joel	CCAT	6/10/21 11:00 AM	IA004	Interagency Activities
Rockward	Tommy	LANL	6/11/21 10:30 AM	SCS007	Safety, Codes and Standards
Ronevich	Joe	SNL	6/11/21 10:00 AM	SCS005	Safety, Codes and Standards
Ross	Ken	PNNL		FC321	Poster
Ruth	Mark	NREL	6/8/21 11:00 AM	SA175	Systems Analysis
Saadi	Fadl	C-Zero, LLC	6/9/21 11:00 AM	P182	Hydrogen Technologies
San Marchi	Chris	SNL		H2060	Poster
San Marchi	Chris	SNL		IN001	Poster
San Marchi	Chris	SNL	6/9/21 3:00 PM	IN001a	Hydrogen Technologies
Satyapal	Sunita	DOE-HFTO	6/10/21 10:00 AM	IA001	Interagency Activities
Saur	Genevieve	NREL	6/9/21 2:00 PM	TA042	Technology Acceleration
Scheffe	Jonathan	University of Florida	6/8/21 1:00 PM	P195	Hydrogen Technologies
Serov	Alexey	Pajarito Powder	6/8/21 3:00 PM	FC305	Fuel Cell Technologies
Shah	Shailesh	U.S. Army	6/10/21 1:30 PM	IA010	Interagency Activities
Shao	Yuyan	PNNL	6/8/21 3:30 PM	FC172	Fuel Cell Technologies
Shurland	Melissa	DOT FRA	6/10/21 2:10 PM	IA012	Interagency Activities
Siegel	Don	University of Michigan		ST144	Poster
Siegel	Don	University of Michigan	6/10/21 11:00 AM	ST211	Poster
Simmons	Kevin	PNNL	6/9/21 3:30 PM	IN001b	Hydrogen Technologies
Singh	Prabhakar	University of Connecticut		P152	Poster
Singh	Jaswinder	Caterpillar, Inc.		AM0001	Poster
Skidmore	Dustan	Plug Power, Inc.		TA029	Poster
Slack	John	Nikola Motor Company	6/9/21 1:00 PM	FC326	Fuel Cell Technologies
Snyder	Joshua	Drexel University	6/11/21 12:30 PM	FC309	Fuel Cell Technologies
Soloveichik	Grigorii	U.S. Department of Energy	6/9/21 10:00 AM	ARPAE001	Intra-Agency Activities
Space	Brian	University of South Florida		ST213	Poster
Spendelow	Jacob	LANL	6/8/21 2:00 PM	FC318	Fuel Cell Technologies
Sprick	Sam	NREL		H2041	Poster
Stadie	Nicholas	Montana State University	6/10/21 11:30 AM	ST214	Poster

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Stechel	Ellen	Arizona State University		P168	Poster
Steinbach	Andrew	3M	6/10/21 1:30 PM	TA026	Technology Acceleration
Steinbach	Andrew	3M		P197	Poster
Swartz	Scott	Nexceris, LLC	6/9/21 1:00 PM	ARPAE006	Intra-Agency Activities
Talbot	Paul	INL	6/9/21 3:30 PM	NE002	Intra-Agency Activities
Tao	Greg	Chemtronergy	6/9/21 11:30 AM	ARPAE004	Intra-Agency Activities
Tasan	C. Cem	Massachusetts Institute of Technology	6/10/21 4:00 PM	IN030	Hydrogen Technologies
Tchouvelev	Andrei	A.V.Tchouvelev & Associates		SCS027	Poster
Thompson	Gregory	The University of Alabama	6/10/21 10:30 AM	IN022	Hydrogen Technologies
Thornton	Matt	NREL		ST008	Poster
Thorson	Jacob	NREL		WPT0001	Poster
Toma	Francesca	LBNL		P148C	Poster
Tong	Jianhua "Joshua"	Clemson University	6/10/21 1:00 PM	TA025	Technology Acceleration
Topping	Chris	Tetramer Technologies, LLC	6/10/21 12:30 PM	FC343	Poster
Toqan	Majed	Creative Power Solutions (USA), Inc.	6/8/21 11:00 AM	FE003	Intra-Agency Activities
Tucker	Michael	LBNL		ARPAE010	Poster
Turchetta	Diane	FHWA	6/10/21 4:10 PM	IA015	Interagency Activities
Ulsh	Michael	NREL	6/10/21 10:30 AM	TA001	Technology Acceleration
Urban	Marek	Clemson University	6/9/21 4:00 PM	IN020	Hydrogen Technologies
Valente	Pat	Ohio Fuel Cell Coaliton	6/10/21 11:40 AM	IA006	Interagency Activities
Vijayagopal	Ram	ANL	6/9/21 1:00 PM	TA024	Technology Acceleration
Vimmerstedt	Laura	NREL	6/8/21 11:30 AM	SA176	Systems Analysis
Wagner	Andrew	Mainstream Engineering	6/10/21 11:00 AM	TA005	Technology Acceleration
Wang	Teddy (Zhang)	Plug Power Inc.	6/10/21 4:00 PM	FC324	Fuel Cell Technologies
Wang	Paul	Caterpillar, Inc.		TA044	Poster
Weber	Adam	M2FCT	6/9/21 10:00 AM	FC339	Fuel Cell Technologies
Webster	Matthew	Luna Innovations Inc.		IN014	Poster
Wei	Max	LBNL	6/9/21 4:00 PM	FC332	Fuel Cell Technologies
Weimer	Alan W.	University of Colorado, Boulder	6/9/21 11:30 AM	P183	Hydrogen Technologies
Weimer	Alan W.	University of Colorado - Boulder	6/8/21 2:00 PM	FE008	Intra-Agency Activities
Weisenberger	Matthew	University of Kentucky		ST231	Poster
Westover	Tyler	INL	6/8/21 10:00 AM	FE001	Intra-Agency Activities
Westover	Tyler	INL	6/9/21 3:00 PM	NE001	Intra-Agency Activities
Wilcox	Benjamin	U.S. Navy	6/10/21 4:50 PM	IA017	Interagency Activities
Williams	Travis	University of Southern California	6/11/21 1:00 PM	ST216	Hydrogen Technologies
Wolverton	Chris	Northwestern University		P167	Poster
Wood	Brandon	LLNL		ST207	Poster
Wood	Brandon	LLNL		P196g	Poster
Wycisk	Ryszard	Vanderbilt University	6/11/21 4:00 PM	FC310	Fuel Cell Technologies
Xie	Jian	Indiana University Purdue University	6/8/21 1:00 PM	FC303	Fuel Cell Technologies
Xu	Hui	Giner, Inc.	6/11/21 11:30 AM	FC117	Fuel Cell Technologies
Xu	Hui	Giner, Inc.	6/8/21 1:30 PM	FC170	Fuel Cell Technologies
Xu	Hui	Giner, Inc.	6/10/21 3:00 PM	FC315	Fuel Cell Technologies
Xu	Hui	Giner, Inc.	6/10/21 2:00 PM	FC328	Poster
Xu	Hui	Giner, Inc.		TA051	Poster
Yan	Yanfa	The University of Toledo	6/8/21 10:30 AM	P191	Hydrogen Technologies
Yan	Yushan	Versogen	6/9/21 10:30 AM	ARPAE002	Intra-Agency Activities
Yandrasits	Michael	3M	6/10/21 10:30 AM	FC334	Fuel Cell Technologies
Zawodzinski	Tom	University of Tennessee - Knoxville	6/10/21 10:00 AM	FC336	Fuel Cell Technologies
Zelenay	Piotr	LANL	6/8/21 10:00 AM	FC160	Fuel Cell Technologies
Zeng	Guosong	LBNL		PRA003	Poster
Zhang	Feng-Yuan	University of Tennessee Space Institute	6/10/21 3:30 PM	TA033	Technology Acceleration
Zhu	Tianli	Raytheon Technologies Research Center		P154	Poster