program at a glance

MONDAY June 5 - Plenary, Overviews, Awards, and Posters

1:00 PM	Reviewer Orientation (Maryland A/B)
2:00 PM	Plenary Session (Marriott 2 & 3): Guest Speakers and Awards
4:15 PM	Break (Convention Registration Foyer)

	Marriott 3	Marriott 1
4:45 PM	Vehicle Technologies Analysis Overview	Hydrogen Production & Delivery Overview
5:15 PM	Energy-Efficient Mobility Systems Overview	Hydrogen Storage Overview
5:45 PM	Materials Overview	Fuel Cells Overview
6:15 PM	Electrochemical Energy Storage Overview	Manufacturing R&D Overview
6:45 PM	Reviewer Orientation (Maryland A/B)	
7:00 PM	**POSTER SESSION I** (Exhibit Halls B & C, Lower Level, 7:00–9:00 PM): Fuel Cells with ARPA-E; H2 Refuel; Manufacturing R&D	

Legend

ACS	Advanced Combustion Systems	FC	Fuel Cells
EDT	Electric Drive Technologies	H2IN	Hydrogen Infrastructure
EEMS	Energy-Efficient Mobility Systems	H2S	H2@Scale
ES	Electrochemical Storage	MN	Manufacturing R&D
FT	Fuel & Lubricant Technologies	MT	Market Transformation
GI	Grid and Infrastructure R&D	PD	Hydrogen Production & Delivery
LM	Lightweight Materials	SA	Systems Analysis
PM	Propulsion Materials	SCS	Safety, Codes & Standards
TI	Technology Integration	ST	Hydrogen Storage
VAN	Vehicle Technologies Analysis	TV	Technology Validation

Last update: 5/29/17 1:15 PM

TUESDAY June 6 - Overviews

	Marriott 3	Marriott 1
8:30 AM	Electric Drive/Grid/Charging R&D Overview	Technology Validation Overview
9:00 AM	Advanced Combustion Systems Overview	Market Transformation Overview
9:30 AM	Fuel and Lubricant Technologies R&D Overview	Safety, Codes & Standards Overview
10:00 AM	Technology Integration Overview	Systems Analysis Overview
10:30 AM	Break (Marriott 2)	

Oral Technical Sessions

TUESDAY June 6

Session Rooms	Maryland A/B	Virginia A/B	Marriott 3	Delaware A	Delaware B	Marriott 1	Washington 5	Washington 3	Lincoln 5	Maryland C
7:15 AM	Continental Breakfast (Marriott 2)									
8:00 AM										
8:30 AM										
9:00 AM										
9:30 AM										
10:00 AM										
10:30 AM	Break (Marriott 2, Exhibit Hall C)									
11:00 AM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
11:30 AM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
12:00 PM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
12:30 PM	Lunch Exhibit Hall A, 12:30–1:45 PM									
1:45 PM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
2:15 PM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
2:45 PM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
3:15 PM	ACS	EDT	ES	LM	GI	FC		SCS	SA	MN
3:45 PM	Break (Marriott 2, Exhibit Hall C)									
4:15 PM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	MN
4:45 PM	ACS	EDT	ES	LM	GI	FC	PD	SCS	SA	
5:15 PM			ES	LM	GI	FC	PD	SCS	SA	
5:45 PM			ES		GI	FC		SCS		
6:15 PM										

WEDNESDAY June 7

Session Rooms	Maryland A/B	Maryland C	Virginia A/B	Marriott 3	Delaware A	Delaware B	Marriott 1	Washington 5	Washington 3	Lincoln 5
7:15 AM	Continental Breakfast (Marriott 2, Exhibit Hall C)									
8:00 AM	ACS			ES	LM	GI				
8:30 AM	ACS		EDT	ES	LM	GI	FC	PD	MT	ST
9:00 AM	ACS		EDT	ES	LM	GI		PD	MT	ST
9:30 AM	ACS		EDT	ES	LM	GI	FC	PD	MT	ST
10:00 AM	ACS		EDT	ES	LM	GI	FC	PD	MT	ST
10:30 AM	Break (Marriott 2, Exhibit Hall C)									
11:00 AM	ACS		EDT	ES	LM	GI	FC	PD	MT	ST
11:30 AM	ACS		EDT	ES	LM	GI	FC	PD	MT	ST
12:00 PM	ACS		EDT	ES	LM	GI	FC	PD	SCS	ST
12:30 PM	Lunch Exhibit Hall A, 12:30–1:45 PM									
1:45 PM	ACS		FT	ES	LM	ACS	FC	PD	TV	ST
2:15 PM	ACS		FT	ES	LM	ACS	FC	PD	TV	ST
2:45 PM	ACS		FT	ES	LM	ACS	FC	PD	TV	ST
3:15 PM	ACS		FT	ES	LM	ACS	FC	PD	TV	ST
3:45 PM	Break (Marriott 2, Exhibit Hall C)									
4:15 PM	ACS	ACS	FT	ES	LM	EEMS	FC	PD		ST
4:45 PM	ACS	ACS	FT	ES	LM	EEMS	FC	PD	TV	ST
5:15 PM	ACS	ACS	FT	ES	LM	EEMS		PD	TV	ST
5:45 PM	ACS	ACS	FT	ES		EEMS		PD	TV	ST
6:15 PM										

POSTER SESSION II
(Exhibit Halls B & C, Lower Level, 6:30–8:30 PM):
Advanced Combustion Systems;
Electrochemical Energy Storage Part I;
Energy-Efficient Mobility Systems;
Hydrogen Production & Delivery with Basic Energy Sciences;
Technology Integration; Technology Validation

THURSDAY June 8

Session Rooms	Maryland A/B	Maryland C	Virginia A/B	Marriott 3	Delaware A	Delaware B	Marriott 1	Washington 5	Washington 3	Lincoln 5
7:15 AM	Continental Breakfast (Marriott 2, Exhibit Hall C)									
8:00 AM	ACS					EEMS				
8:30 AM	ACS	ACS	FT	ES		EEMS	FC	PD	H2S	ST
9:00 AM	ACS	ACS	FT	ES	LM	EEMS	FC	PD	H2S	ST
9:30 AM	ACS	ACS	FT	ES	LM	EEMS	FC	PD	H2S	ST
10:00 AM	ACS	ACS	FT	ES	LM	EEMS	FC	PD	H2S	ST
10:30 AM	Break (Marriott 2, Exhibit Hall C)									
11:00 AM	PM		FT	ES	TI	EEMS	FC	PD	H2S	ST
11:30 AM	PM		FT	ES	TI	EEMS	FC	PD		ST
12:00 PM	PM		FT	ES	TI	EEMS	FC			ST
12:30 PM	Lunch Exhibit Hall A, 12:30–1:45 PM									
1:45 PM	ACS		FT	ES	TI		FC		H2IN	ST
2:15 PM	ACS		FT	ES	TI	VAN	FC	PD	H2IN	ST
2:45 PM	ACS		FT	ES	TI	VAN	FC	PD	H2IN	ST
3:15 PM	ACS		FT		TI	VAN	FC	PD	H2IN	ST
3:45 PM	Break (Marriott 2, Exhibit Hall C)									
4:15 PM	ACS			ES	TI	VAN			H2IN	ST
4:45 PM	ACS			ES		VAN			H2IN	ST
5:15 PM	ACS			ES		VAN			H2IN	
5:45 PM	ACS					VAN			H2IN	
6:15 PM										

POSTER SESSION III
(Exhibit Halls B & C, Lower Level, 6:30–8:30 PM):
Electrochemical Energy Storage Part II;
Vehicle Technologies Analysis

FRIDAY June 9

Session Rooms	Maryland A/B		
7:15 AM	Cont. Breakfast (Marriott 2)		
8:00 AM	PM		
8:30 AM	ACS		
9:00 AM	PM		
9:30 AM	ACS		
10:00 AM	PM		
10:30 AM	Break (Marriott 2)		
11:00 AM	PM		
11:30 AM	ACS		
12:00 PM	PM		

MONDAY JUNE 5 Poster Presentations, 7:00–9:00 PM, Exhibit Halls B & C

Hydrogen and Fuel Cells Program – ARPA-E		
ARPAE17	A Novel Intermediate-Temperature Fuel Cell Tailored for Efficient Utilization of Methane	Meilin Liu, Georgia Tech
ARPAE18	Nanocomposite Electrodes for a Solid Acid Fuel Cell Stack Operating on Reformate	Tom Zawodzinski, ORNL/U. of Tennessee, Knoxville
ARPAE19	Low Temperature Solid Oxide Fuel Cells for Transformational Energy Conversion	Bryan Blackburn, Redox Power Systems
ARPAE20	Solid Acid Fuel Cell Stack for Distributed Generation Applications	Calum Chisholm, SAFCell
ARPAE21	Fuel Cells with Dynamic Response Capability Based on Energy Storage Electrodes with Catalytic Function	Yunfeng Lu, UCLA
ARPAE22	A Bifunctional Ceramic Fuel Cell Energy System	Kevin Huang, U. of South Carolina
ARPAE23	Development of an Intermediate Temperature Metal Supported Proton Conducting Solid Oxide Fuel Cell Stack	Tianli Zhu, UTRC
ARPAE24	Intermediate Temperature Hybrid Fuel Cell System for the Conversion of Natural Gas to Electricity, Liquid Fuels, and Chemicals	Ted Krause, ANL
ARPAE25	Dual Mode Intermediate Temperature Fuel Cell: Liquid Fuels and Electricity	Carl Willman, FuelCell Energy
ARPAE26	Intermediate-Temperature Electrogenerative Cells for Flexible Cogeneration of Power and Liquid Fuel	Greg Tao, MSRI
Hydrogen and Fuel Cells Program – Fuel Cells		
FC052	Technical Assistance to Developers	Tommy Rockward, LANL
FC115	Affordable, High Performance, Intermediate Temperature Solid Oxide Fuel Cells	Bryan Blackburn, Redox Power Systems
FC164	Development of Corrosion Resistant Carbon Support for Ultra-low PGM Catalysts	Prabhu Ganesan, Greenway Energy, LLC
FC165	Mesoporous Non-Carbon Catalyst Supports of PEMFC	Jacob Coppage-Gross, Certaintech, Inc.
FC166	Development of Durable Active supports for Low Platinum Group Metal Catalysts	Barr Halevi, Pajarito Powder
FC167	Multi-Functional Catalyst Support	Minette Ocampo, pH Matter LLC
FC168	Highly Robust Low-PGM MEAs Based upon Composite Supports	Arrelaine Dameron, Forge Nano
Hydrogen and Fuel Cells Program – H2 Refuel		
H2REFUEL	H2 Refuel	Darryl Pollica, SimpleFuel
Hydrogen and Fuel Cells Program – Manufacturing R&D		
MN019	Material-Process-Performance Relationships for R2R Coated PEM Electrodes	Scott Mauger, NREL

TUESDAY JUNE 6 Oral Presentations

Time	Maryland A/B	Virginia A/B	Marriott 3
11:00 AM	ACS001: Heavy-Duty Low-Temperature and Diesel Combustion & Heavy-Duty Combustion Modeling Mark Musculus, SNL	EDT074: Non-Rare Earth Electric Motors Tim Burress, ORNL	_____ ES297: Computer-Aided Engineering of Batteries (CAEBAT) Program Introduction Brian Cunningham, DOE
11:30 AM	ACS002: Light-Duty Diesel Combustion Stephen Busch, SNL	EDT075: Electric Motor Thermal Management Kevin Bennion, NREL	ES298: Efficient Simulation and Abuse Modeling of Mechanical-Electrochemical-Thermal Phenomena in Lithium-Ion Batteries Shriram Santhanagopalan, NREL
12:00 PM	ACS004: Low-Temperature Gasoline Combustion (LTGC) Engine Research John Dec, SNL	EDT015: Development of Radically Enhanced alnico Magnets (DREaM) for Traction Drive Motors Iver Anderson, Ames Laboratory	ES299: Microstructure Characterization and Modeling for Improved Electrode Design Kandler Smith, NREL
12:30 PM	**Lunch**		
1:45 PM	ACS006: Gasoline Combustion Fundamentals Isaac Ekoto, SNL	EDT076: Electric Drive Inverters Madhu Chinthavali, ORNL	ES300: Enhancement and Deployment of VIBE, the Open Architecture Software (OAS) Environment Srikanth Allu, ORNL
2:15 PM	ACS084: Advanced Ignition Systems for Gasoline Direct Injection (GDI) Engines Riccardo Scarcelli, ANL	EDT077: Wireless Power Transfer Integrated Chargers Veda Galigekere, ORNL	ES301: Experiments and Models for the Mechanical Behavior of Battery Materials Sergiy Kalnaus, ORNL
2:45 PM	ACS011: Advances in High-Efficiency Gasoline Compression Ignition Steve Ciatti, ANL	EDT078: Power Electronics Thermal Management Gilbert Moreno, NREL	ES302: Microstructure Imaging and Electrolyte Transport Property Measurements for Mathematical Modeling Venkat Srinivasan, ANL
3:15 PM	ACS016: High-Efficiency Clean Combustion in Multi-Cylinder Light-Duty Engines Scott Curran, ORNL	EDT087: Electrical Performance, Reliability Analysis, and Characterization Tim Burress, ORNL	ES303: Exploring How Electrode Structure Affects Electrode-Scale Properties Using 3-D Mesoscale Simulations Scott Roberts, SNL
3:45 PM	**Break**		
4:15 PM	ACS015: Stretch Efficiency for Combustion Engines: Exploiting New Combustion Regimes Jim Szybist, ORNL	EDT079: Materials for Advanced Packaging Andy Weresczack, ORNL	ES296: Development and Validation of a Simulation Tool to Predict the Combined Structural, Electrical, Electrochemical, and Thermal Responses of Automotive Batteries Chulheung Bae, Ford Motor Co.
4:45 PM	ACS017: Accelerating Predictive Simulation of IC Engines with High Performance Computing K. Dean Edwards, ORNL	EDT080: Performance and Reliability of Bonded Interfaces for High-Temperature Packaging Paul Paret, NREL	ES304: Extreme Fast Charge and Battery Cost Implications Shabbir Ahmed, ANL
5:15 PM			ES305: Extreme Fast Charging – A Battery Technology Gap Assessment Ira Bloom, ANL
5:45 PM			ES306: Thermal Implications for Extreme Fast Charge Matthew Keyser, NREL

TUESDAY JUNE 6 Oral Presentations

Time	Delaware A	Delaware B	Marriott 1
11:00 AM	LM080: Integrated Computational Materials Engineering Approach to Development of Lightweight 3GAHSS Vehicle Assembly Lou Hector, USAMP	GI029: Advanced Vehicle Testing & Evaluation Jeremy Diez, Intertek	FC135: FC-PAD: Fuel Cell Performance and Durability Consortium Rod Borup, LANL
11:30 AM	LM106: Enhanced Sheared Edge Stretchability of AHSS/UHSS Kyoo Sil Choi, PNNL	GI030: Advanced Technology Vehicle Lab Benchmarking (Level 1 & Level 2) Henning Lohse-Busch, ANL	FC136: FC-PAD: Components and Characterization Karren More, ORNL
12:00 PM	LM107: Optimizing Heat Treatment Parameters for Third Generation AHSS Using an Integrated Experimental-Computational Framework Xiaohua Hu, PNNL	GI001: Medium- and Heavy-Duty Vehicle Field Evaluations Robert Prohaska, NREL	FC137: FC-PAD: Electrode Layers and Optimization Adam Weber, LBNL
12:30 PM	**Lunch**		
1:45 PM	LM089: High-Strength Electroformed Nanostructured Aluminum for Lightweight Automotive Applications Robert Hilty, Xtalic Corporation	GI187: Comprehensive Assessment of On- and Off-Board Vehicle-to-Grid Technology Performance and Impacts on Battery and the Grid Sunil Chhaya, EPRI	FC155: Novel Ionomers & Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings Andrew Haug, 3M
2:15 PM	LM108: Development of Low Cost, High Strength Automotive Aluminum Sheet Russell Long, Arconic	GI188: Bi-Directional Wireless Power Flow for Medium Duty Vehicle-Grid Connectivity Jasna Tomic, CALSTART	FC156: Durable High-Power Membrane Electrode Assemblies with Low-Pt-Loading Swami Kumaraguru, General Motors
2:45 PM	LM109: High-Throughput Combinatorial Development of High-Entropy Alloys for Lightweight Structural Applications Jeroen van Duren, Intermolecular	GI095: EV-Smart Grid Research and Interoperability Activities Keith Hardy, ANL	FC157: High performance PEFC Electrode Structures Mike Perry, UTRC
3:15 PM	LM110: In-Situ Investigation of Microstructural Evolution During Solidification and Heat Treatment in a Die-Cast Magnesium Alloy Aashish Rohatgi, PNNL	GI096: Wireless & Conductive Charging Testing to Support Code & Standards Barney Carlson, INL	FC158: Fuel Cell Membrane-Electrode-Assemblies with Ultra-Low Pt Nanofiber Electrodes Peter Pintauro, Vanderbilt U.
3:45 PM	**Break**		
4:15 PM	LM111: Phase Transformation Kinetics and Alloy Microsegregation in High-Pressure Die Cast Magnesium Alloys John Allison, U. of Michigan	GI135: Advanced Climate Systems for EV Extended Range (ACSforEVER) John Meyer, Hanon Systems	FC105: Novel Structured Metal Bipolar Plates for Low Cost Manufacturing C.H. Wang, TreadStone Technologies, Inc.
4:45 PM	LM112: Cost-Effective Magnesium Extrusion Vineet Joshi, PNNL	GI136: ePATHS - electrical PCM Assisted Thermal Heating System Mingyu Wang, Mahle Behr USA, Inc.	FC021: Neutron Imaging Study of the Water Transport in Operating Fuel Cells David Jacobson, NIST
5:15 PM	LM113: Magnesium Corrosion Characterization and Prevention Donovan Leonard, ORNL	GI157: UTEMPRA - Unitary Thermal Energy Management for Propulsion Range Augmentation Sourav Chowdhury, Mahle Behr USA, Inc.	FC128: Facilitated Direct Liquid Fuel Cells with High Temperature Membrane Electrode Assemblies Emory DeCastro, Advent Technologies, Inc.
5:45 PM		GI165: Design and Implementation of a Thermal Load Reduction System in a Hyundai PHEV Cory Kreutzer, NREL	FC129: Advanced Catalysts and MEAs for Reversible Alkaline Membrane Fuel Cells Hui Xu, Giner, Inc.

TUESDAY JUNE 6 Oral Presentations

Time	Washington 5	Washington 3	Lincoln 5
11:00 AM	PD110: Low Cost Hydrogen Storage at 875 Bar Using Steel Liner and Steel Wire Wrap Ashok Saxena, Wiretough Cylinders	SCS010: R&D for Safety, Codes and Standards: Hydrogen Behavior Ethan Hecht, SNL	SA067: Resource Availability for Hydrogen Production Marc Melaina, NREL
11:30 AM	PD025: Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service Joe Ronevich, SNL	SCS011: Hydrogen Quantitative Risk Assessment Katrina Groth, SNL	SA063: Regional Supply of Hydrogen Michael Penev, NREL
12:00 PM	PD108: Hydrogen Compression Application of the Linear Motor Reciprocating Compressor (LMRC) Eugene Broerman, SwRI	SCS025: Enabling Hydrogen Infrastructure Through Science-based Codes and Standards Chris LaFleur, SNL	SA066: Life-Cycle Analysis of Air Pollutants Emission for Refinery and Hydrogen Production from SMR Amgad Elgowainy, ANL
12:30 PM	**Lunch**		
1:45 PM	PD136: Electrochemical Compression Monjid Hamdan, Giner, Inc.	SCS007: Fuel Quality Assurance R&D and Impurity Testing in Support of Codes & Standards Tommy Rockward, LANL	SA039: Regional Water Stress Analysis with Hydrogen Production at Scale Amgad Elgowainy, ANL
2:15 PM	PD137: Hybrid Electrochemical-Metal Hydride Compression Scott Greenway, Greenway Energy, Inc.	SCS028: Diode Laser Sensor for Contaminants in Hydrogen Fuel Mark Paige, Southwest Sciences	SA068: Benefits Analysis of Multi-Fuel/Vehicle Platforms with a Focus on Hydrogen Fuel Cell Electric Vehicles Tom Stephens, ANL
2:45 PM	PD138: Metal Hydride Compression Terry Johnson, SNL	SCS029: Electrochemical Hydrogen Contaminant Detection Trent Molter, Sustainable Innovations	SA059: Sustainability Analysis: Hydrogen Regional Sustainability (HyReS) Elizabeth Connelly, NREL
3:15 PM		SCS021: NREL Hydrogen Sensor Testing Laboratory Bill Buttner, NREL	SA035: Employment Impacts of Hydrogen and Fuel Cell Technologies Marianne Mintz, ANL
3:45 PM	**Break**		
4:15 PM	PD100: 700 bar Hydrogen Dispenser Hose Reliability Improvement Owen Smith, NREL	SCS005: R&D for Safety, Codes and Standards: Materials and Components Compatibility Chris San Marchi, SNL	SA044: Cost Benefits Analysis of Technology Improvement in Light Duty Fuel Cell Vehicles Aymeric Rousseau, ANL
4:45 PM	PD146: Advancing Hydrogen Dispenser Technology by Using Innovative Intelligent Networks Chris O'Brien, Ivys Inc.	SCS026: Compatibility of Polymeric Materials Used in the Hydrogen Infrastructure Kevin Simmons, PNNL	SA065: Agent-based Modeling of Consumer Behavior Matthew Mahalik, ANL
5:15 PM	PD135: Liquid Hydrogen Infrastructure Analysis Guillaume Petitpas, LLNL	SCS001: National Codes and Standards Deployment and Outreach Carl Rivkin, NREL	SA064: Greenhouse Gas (GHG) Emissions and Petroleum Use Reduction of Medium- and Heavy-Duty Trucks D-Y Lee, ANL
5:45 PM		SCS022: Fuel Cell & Hydrogen Energy Association Codes and Standards Support Karen Quackenbush, Fuel Cell & Hydrogen Energy Association	

TUESDAY JUNE 6 Oral Presentations

Time	Maryland C		
11:00 AM	MN001: Fuel Cell MEA Manufacturing R&D Michael Ulsh, NREL		
11:30 AM	MN012: Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies Pat Valente, Ohio Fuel Cell Coalition		
12:00 PM	MN013: Fuel Cell and Hydrogen Opportunity Center Alleyn Harned, Virginia Clean Cities at James Madison U.		
12:30 PM	Lunch		
1:45 PM	MN014: U.S. Clean Energy Hydrogen and Fuel Cell Technologies: A Competiveness Analysis Patrick Fullenkamp, GLWN – Westside Industrial Retention & Expansion Network		
2:15 PM	MN015: Continuous Fiber Composite Electrofusion Coupler Brett Kimball, Automated Dynamics		
2:45 PM	MN016: In-line Quality Control of PEM Materials Paul Yelvington, Mainstream		
3:15 PM	MN017: Manufacturing Competitiveness Analysis for Hydrogen Refueling Stations Ahmad Mayyas, NREL		
3:45 PM	Break		
4:15 PM	MN018: Roll to Roll Advanced Materials Manufacturing Lab Consortium Claus Daniel, ORNL		

WEDNESDAY JUNE 7 Oral Presentations

Time	Maryland A/B	Maryland C	Virginia A/B
8:00 AM	ACS013: Chemical Kinetic Models for Advanced Engine Combustion Bill Pitz, LLNL		
8:30 AM	ACS054: Rapid Compression Machine Studies to Enable Gasoline-Relevant Low-Temperature Combustion Scott Goldsborough, ANL		EDT061: Cost-Effective Fabrication of High-Temperature Ceramic Capacitors for Power Inverters Balu Balachandran, ANL
9:00 AM	ACS076: Improved Solvers for Advanced Engine Combustion Simulation Matthew McNenly, LLNL		EDT059: High Temperature DC-Bus Capacitor Cost Reduction and Performance Improvements Angelo Yializis, Sigma Technologies International
9:30 AM	ACS012: Model Development and Analysis of Clean & Efficient Engine Combustion Russell Whitesides, LLNL		EDT081: Multilayered Film Capacitors for Advanced Power Electronics and Electric Motors for Electric Traction Drives Deepak Langhe, Polymer Plus
10:00 AM	ACS007: Large Eddy Simulation (LES) Applied to Advanced Engine Combustion Research Joe Oefelein, SNL		EDT067: High-Efficiency High-Density GaN-Based 6.6kW Bidirectional On-Board Charger for PEVs Charles Zhu, Delta Products Corporation
10:30 AM	**Break**		
11:00 AM	ACS014: 2016 KIVA-hpFE Development: A Robust and Accurate Engine Modeling Software David Carrington, LANL		EDT072: A Disruptive Approach to Electric Vehicle Power Electronics Robert Erickson, U. of Colorado Boulder
11:30 AM	ACS005: Spray Combustion Cross-Cut Engine Research Lyle Pickett, SNL		EDT082: Highly Integrated Wide Bandgap Power Module for Next Generation Plug-In Vehicles Brian Peaslee, General Motors
12:00 PM	ACS010: Fuel Injection and Spray Research Using X-Ray Diagnostics Christopher Powell, ANL		EDT083: 650V SiC Integrated Power Module for Automotive Inverters Monty Hayes, Delphi Automotive Systems, LLC
12:30 PM	**Lunch**		
1:45 PM	ACS052: Neutron Imaging of Advanced Transportation Technologies Charles Finney, ORNL		FT047: Advanced Lubricant Technology -- Surface and Lubricant Interactions Oyelayo Ajayi, ANL
2:15 PM	ACS075: Advancements in Fuel Spray and Combustion Modeling with High-Performance Computing Resources Sibendu Som, ANL		FT048: Advanced Lubricant Technology -- Technology Innovation, Design, and Synthesis Lelia Cosimbescu, PNNL
2:45 PM	ACS022: Joint Development and Coordination of Emissions Control Data and Models (Cross-cut Lean Exhaust Emissions Reduction Simulations Analysis and Coordination) Josh Pihl, ORNL		FT049: Lubrican Effects on Combustion and Emissions Control John Storey, ORNL
3:15 PM	ACS023: Cross-cut Lean Exhaust Emisisons Reduction Simulation: Aftertreatment Modeling and Analysis Yong Wang, PNNL		FT025: Improved Fuel Economy through Formulation Design and Modeling Gefei Wu, Valvoline
3:45 PM	**Break**		
4:15 PM	ACS118: Advanced Emission Control for High-Efficiency Engines Yong Wang, PNNL	ACS104: Cavitation Within Fuel Injectors: Development and Multiscale Validation of Euler-Lagrange based Computational Methods for Modeling Cavitation within Fuel Injectors Emily Ryan, Boston U.	FT023: Polyalkylene Glycol (PAG) Based Lubricant for Light- and Medium-Duty Axles Nikolaus Jost, Ford Motor Co.
4:45 PM	ACS119: Development and Optimization of a Multi-Functional SCR-DPF Aftertreatment System for Heavy-Duty NOX and Soot Emission Reduction Ken Rappe, PNNL	ACS105: Turbulent Spray Atomization Model for Diesel Engine Simulations Caroline Genzale, Georgia Tech	FT050: Power-Cylinder Friction Reduction through Coatings, Surface Finish, and Design Arup Gangopadhyay, Ford Motor Co.
5:15 PM	ACS027: Next Generation Selective Catalytic Reduction-Dosing System Investigation Abhijeet Karkamkar, PNNL	ACS106: Multi-Component Fuel Vaporization and Flash Boiling Chia-Fon Lee, U. of Illinois	FT024: A Novel Lubricant Formulation Scheme for 2% Fuel Efficiency Improvement Q. Jane Wang, Northwestern U.
5:45 PM	ACS056: Fuel-Neutral Studies of Particulate Matter Transport Emissions Mark Stewart, PNNL	ACS107: High-Pressure Supercritical Fuel Injection at Diesel Conditions Ajay Agrawal, U. of Alabama	FT061: Methods to Measure, Predict, and Relate Friction, Wear, and Fuel Economy Steve Gravante, Ricardo

WEDNESDAY JUNE 7 Oral Presentations

Time	Marriott 3	Delaware A	Delaware B
8:00 AM	ES108: Overview and Progress of the Advanced Battery Materials Research (BMR) Program Tien Duong, DOE	LM103: E. coli Derived Spider Silk MaSp1 and MaSp2 Proteins as Carbon Fiber Precursors Randy Lewis, Utah State U.	GI161: Multi-Speed Transmission for Commercial Delivery Medium Duty Plug-In Electric Drive Vehicles Bulent Chavdar, Eaton
8:30 AM	ES232: High Energy Density Electrodes via Modifications to the Inactive Components and Processing Conditions Vincent Battaglia, LBNL	LM101: Integrated Computational Materials Engineering (ICME) Development of Carbon Fiber Composites for Lightweight Vehicles Xuming Su, Ford Motor Co.	GI189: Electric Truck with Range-Extending Engine (ETREE) John Kresse, Cummins
9:00 AM	ES220: Addressing Heterogeneity in Electrode Fabrication Processes Dean Wheeler, Brigham Young U.	LM117: Development and Integration of Predictive Models for Manufacturing and Structural Performance of Carbon Fiber Composites in Automotive Applications Venkat Aitharaju, General Motors	GI190: Medium-Duty Urban Range Extended Connected Powertrain (MURECP) Matt Thorington, Bosch
9:30 AM	ES334: Insights from Mesoscale Characterization Guides Rational LIB Design William Chueh, Stanford U.	LM084: Validation of Material Models for Crash Simulation of Automotive Carbon Fiber Composite Structures (VMM) Anthony Coppola, General Motors	GI115: Zero Emission Drayage Truck Demonstration (ZECT I) Brian Choe, SCAQMD
10:00 AM	ES049: Tailoring Integrated Layered- and Spinel Electrode Structures for High Capacity Lithium-Ion Cells Michael Thackeray, ANL	LM115: Predictive Engineering Tools for Injection-Molded, Long Carbon Fiber Thermoplastic Composites Dave Warren, ORNL	GI158: Zero Emission Cargo Transport II: San Pedro Bay Ports Hybrid & Fuel Cell Electric Vehicle Project Joseph Impullitti, SCAQMD
10:30 AM	**Break**		
11:00 AM	ES052: Design of High-Performance, High-Energy Cathode Materials Marca Doeff, LBNL	LM116: Predictive Engineering Tools for Injection-Molded, Long Carbon Fiber Thermoplastic Composites Leo Fifield, PNNL	GI116: Hydrogen Fuel-Cell Electric Hybrid Truck & Zero Emission Delivery Vehicle Deployment Andrew DeCandis, Houston-Galvelston Area Council
11:30 AM	ES056: Development of High-Energy Cathode Materials Jason Zhang, PNNL	LM098: Brazing Dissimilar Metals with a Novel Composite Foil Tim Weihs, John Hopkins U.	GI191: Medium Duty Vehicle Powertrain Electrification and Demonstration Wiley McCoy, McLaren
12:00 PM	ES183: In Situ Solvothermal Synthesis of Novel High-Capacity Cathodes Feng Wang, BNL	LM087: Active, Tailorable Adhesives for Dissimilar Material Bonding, Repair, and Assembly Mahmood Haq, Michigan State U.	GI192: Hybridization of Class 8 Line Haul And Regional Refrigeration Trucks CRADA Dean Deter, ORNL
12:30 PM	**Lunch**		
1:45 PM	ES307: Discovery of High-Energy Lithium-Ion Battery Materials Wei Tong, LBNL	LM104: Solid-State Body-in-White Spot Joining of Aluminum to AHSS at Prototype Scale Zhili Feng, ORNL	ACS113: DOE's Effort to Improve Heavy Vehicle Fuel Efficiency through Improved Aerodynamics Kambiz Salari, LLNL
2:15 PM	ES235: Characterization Studies of High Capacity Composite Electrode Structures Jason Croy, ANL	LM099: High Strength, Dissimilar Alloy Aluminum Tailor-Welded Blanks Piyush Upadhyay, PNNL	ACS114: Improved Tire Efficiency through Elastomeric Polymers Enhanced with Carbon-Based Nanostructured Materials Georgios Polyzos, ORNL
2:45 PM	ES106: High Capacity Multi-Lithium Oxide Cathodes and Oxygen Stability Jagjit Nanda, ORNL	LM105: Friction Stir Scribe Joining of Aluminum to Steel Piyush Upadhyay, PNNL	ACS115: Advanced Bus and Truck Radial Materials for Fuel Efficiency Lucas Dos Santos Freire, PPG
3:15 PM	ES231: High Energy Density Lithium Battery Stanley Whittingham, Binghamton U.-SUNY	LM114: Friction Stir Scribe Joining of Carbon Fiber Reinforced Polymer to Aluminum Blair Carlson, General Motors	ACS116: Advanced Non-Tread Materials for Fuel-Efficient Tires Tim Okel, PPG
3:45 PM	**Break**		
4:15 PM	ES085: Interfacial Processes in EES Systems Advanced Diagnostics Robert Kostecki, LBNL	LM118: Functionally Designed Ultra-Lightweight Carbon Fiber Reinforced Thermoplastic Composites Door Assembly Srikanth Pilla, Clemson U.	EEMS001: Energy Impact of Connected and Automated Vehicles Huei Peng, U. of Michigan
4:45 PM	ES059: Advanced In Situ Diagnostic Techniques for Battery Materials Xiao-Qing Yang, BNL	LM119: Ultra-Light Hybrid Composite Door Design, Manufacturing, and Demonstration Nate Gravelle, TPI	EEMS002: SMART Mobility -- Connected and Automated Vehicles Eric Rask, ANL
5:15 PM	ES055: NMR and MRI Studies of SEI, Dendrites, and Electrode Structures Clare Grey, U. of Cambridge	LM120: Ultra-Light Door Design Tim Reaburn, Magna	EEMS003: SMART Mobility -- Advanced Fueling Infrastructure John Smart, INL
5:45 PM	ES091: Predicting and Understanding Novel Electrode Materials From First-Principles Kristin Persson, LBNL		EEMS004: SMART Mobility -- Multi-Modal Diane Davidson, ORNL

WEDNESDAY JUNE 7 Oral Presentations

Time	Marriott 1	Washington 5	Washington 3
8:30 AM	FC160: ElectroCat (Electrocatalysis Consortium) Piotr Zelenay, LANL	PD130: Improved Hydrogen Liquefaction through Heisenberg Vortex Separation of para and ortho-hydrogen Christopher Ainscough, NREL	MT011: Fuel Cell Powered Airport Ground Support Equipment Deployment Jim Petrecky, Plug Power
9:00 AM		PD131: Magnetocaloric Hydrogen Liquefaction Jamie Holladay, PNNL	MT013: Maritime Fuel Cell Generator Project Joe Pratt, SNL
9:30 AM	FC140: Tailored High Performance Low-PGM Alloy Cathode Catalysts Vojislav Stamenkovic, ANL	PD031: Renewable Electrolysis Integrated System Development and Testing Michael Peters, NREL	MT014: Demonstration of Fuel Cell Auxiliary Power Unit (APU) to Power Truck Refrigeration Units (TRUs) in Refrigerated Trucks Kriston Brooks, PNNL
10:00 AM	FC141: Platinum Monolayer Electrocatalysts Radoslav Adzic, BNL	PD103: High-Performance, Long-Lifetime Catalysts for Proton Exchange Membrane Electrolysis Hui Xu, Giner, Inc.	MT008: Hydrogen Energy Systems as a Grid Management Tool Mitch Ewan, Hawaii Natural Energy Institute
10:30 AM	**Break**		
11:00 AM	FC142: Extended Surface Electrocatalyst Development Bryan Pivovar, NREL	PD147: Economical Production of Hydrogen Through Development of Novel, High Efficiency Electrocatalysts for Alkaline Membrane Electrolysis Kathy Ayers, Proton Onsite	MT017: FedEx Express Hydrogen Fuell Cell Extended-Range Battery Electric Vehicles Thomas Griffin, FedEx Express
11:30 AM	FC143: Highly Active, Durable, and Ultra-low PGM NSTF Thin Film ORR Catalysts and Supports Andrew Steinbach, 3M	PD124: Solid Oxide Based Electrolysis and Stack Technology with Ultra-High Electrolysis Current Density (>3A/cm2) and Efficiency Randy Petri, FuelCell Energy	MT021: Northeast Demonstration and Deployment of FCRx200 Abas Goodarzi, US Hybrid
12:00 PM	FC144: Highly-Accessible Catalysts for Durable High-Power Performance Anu Kongkanand, General Motors	PD143: High Temperature Alkaline Water Electrolysis Hui Xu, Giner, Inc.	SCS030: Advancing Fuel Cell Electric Vehicles in San Francisco and Beyond Suzanne Loosen, City and County of San Francisco
12:30 PM	**Lunch**		
1:45 PM	FC145: Corrosion-Resistant Non-Carbon Electrocatalyst Supports for PEFCs Vijay Ramani, Washington U.	PD144: Multi-Scale Ordered Cell Structure for Cost Effective Production of Hydrogen by HTWS Elango Elangovan, Ceramatec	TV034: Fuel Cell Hybrid Electric Delivery Van Project Jason Hanlin, Center for Transportation and the Environment
2:15 PM	FC161: Advanced Electro-Catalysts through Crystallographic Enhancement Jacob Spendelow, LANL	PD038: Biomass to Hydrogen (B2H2) Pin-Ching Maness, NREL	TV008: Fuel Cell Bus Evaluations Leslie Eudy, NREL
2:45 PM	FC162: Vapor Deposition Process for Engineering of Dispersed PEMFC ORR Pt/NbOx/C Catalysts Jim Waldecker, Ford Motor Co.	PD127: Sweet Hydrogen: High-Yield Production of Hydrogen from Biomass Sugars Catalyzed by in vitro Synthetic Biosystems Y-H Percival Zhang, Virginia Tech	TV001: Fuel Cell Electric Vehicle Evaluation Jennifer Kurtz, NREL
3:15 PM	FC130: Development of PGM-free Catalysts for Hydrogen Oxidation Reaction in Alkaline Media Alexey Serov, U. of New Mexico	PD129: Novel Hybrid Microbial Electrochemical System for Efficient Hydrogen Generation from Biomass Hong Liu, Oregon State U.	TV039: Innovative Advanced Hydrogen Mobile Fueler Spencer Quong, Electricore
3:45 PM	**Break**		
4:15 PM	FC132: Innovative Non-PGM Catalysts for High-Temperature PEMFCs Sanjeev Mukerjee, Northeastern U.	PD102: Analysis of Advanced H2 Production Pathways Brian James, Strategic Analysis, Inc.	
4:45 PM	FC154: Regenerative Fuel Cell System (SBIR Phase II) Paul Matter, pH Matter LLC	BESH2020: Tailoring Hydrogen Evolution Reaction (HER) Catalysts for Operation at Specific pH Values Bianca Ceballos, U. of California, Irvine	TV029: Performance and Durability Testing of Volumetrically Efficient Cryogenic Vessels and High Pressure Liquid Hydrogen Pump Salvador Aceves, LLNL
5:15 PM		BESH2021: Multiple Approaches to Photocatalytic Hydrogen Production using Photosystem I as a Light Harvesting Module Michael Gorka, Pennsylvania State U.	TV042: Optimal Stationary Fuel Cell Integration and Control (Energy Dispatch Controller) Genevieve Saur, NREL
5:45 PM		BESH2022: Hybrid Perovskites and Non-adiabatic Dynamics Simulations: Catching Realistic Aspects of the Charge Recombination Process Joanna Jankowska, U. of Southern California	TV037: Hydrogen Meter Benchmark Testing Michael Peters, NREL

WEDNESDAY JUNE 7 Oral Presentations

Time	Lincoln 5		
8:30 AM	ST127: HyMARC: A Consortium for Advancing Solid-State Hydrogen Storage Materials Mark Allendorf, SNL		
9:00 AM	ST129: HyMARC: LLNL Technical Effort Brandon Wood, LLNL		
9:30 AM	ST130: HyMARC: LBNL's Technical Efforts David Prendergast, LBNL		
10:00 AM	ST128: HyMARC: Sandia's Technical Effort Vitalie Stavila, SNL		
10:30 AM	**Break**		
11:00 AM	ST137: HyMARC Seedling: Electrolyte Assisted Hydrogen Storage Reactions Channing Ahn, Liox Power		
11:30 AM	ST140: HyMARC Seedling: Developing a Novel Hydrogen Sponge with Ideal Binding Energy and High Surface Area for Practical Hydrogen Storage Mike Chung, Penn State		
12:00 PM	ST136: HyMARC Seedling: "Graphene-Wrapped" Complex Hydrides as High-Capacity, Regenerable Hydrogen Storage Materials Di Jia Liu, ANL		
12:30 PM	**Lunch**		
1:45 PM	ST139: HyMARC Seedling: Fundamental Studies of Surface-Functionalized Mesoporous Carbons for Thermodynamic Stabilization and Reversibility of Metal Hydrides Eric Majzoub, U. of Missouri—St. Louis		
2:15 PM	ST138: HyMARC Seedling: Development of Magnesium Boride Etherates as Hydrogen Storage Materials Godwin Severa, U. of Hawaii		
2:45 PM	ST118: Improving the Kinetics and Thermodynamics of Mg(BH4)2 for Hydrogen Storage Brandon Wood, LLNL		
3:15 PM	ST119: High-capacity Hydrogen Storage Systems via Mechanochemistry Vitalij Pecharsky, Ames Laboratory		
3:45 PM	**Break**		
4:15 PM	ST131: HySCORE: H2 Storage Characterization and Optimization Research Efforts--NREL's Technical Efforts Thomas Gennett, NREL		
4:45 PM	ST132: HySCORE: PNNL's Technical Efforts Tom Autrey, PNNL		
5:15 PM	ST133: Hydrogen Storage Optimization and Characterization Research Efforts Jeffrey Long, LBNL		
5:45 PM	ST135: HySCORE: Technical Activities at NIST Mirjana Dimitrievska, NIST		

WEDNESDAY JUNE 7 Poster Presentations, 6:30–8:30 PM, Exhibit Halls B & C

Hydrogen and Fuel Cells Program – Basic Energy Sciences		
BESH2020P	Tailoring Hydrogen Evolution Reaction (HER) Catalysts for Operation at Specific pH Values	Bianca Ceballos, U. of California, Irvine
BESH2021P	Electron Extraction from the A1A and A1B Sites of Photosystem I for Hydrogen Production	Michael Gorka, Pennsylvania State U.
BESH2024P	Bioenergetics of Photosynthetic Energy Transduction: Control of Pathways through Redox Biochemistry	David Mulder, NREL
Hydrogen and Fuel Cells Program – Hydrogen Production & Delivery		
PD111	Monolithic Piston-Type Reactor for Hydrogen Production through Rapid Swing of Reforming/Combustion Reactions	Kenneth Rappe, PNNL
PD118	New Metal Oxides for Efficient Hydrogen Production via Solar Water Splitting	Baicheng Weng, U. of Toledo
PD119	NSF/DOE Solar Hydrogen Fuel: Engineering Surfaces, Interfaces, and Bulk Materials for Unassisted Solar Photoelectrochemical (PEC) Water Splitting	Tom Jaramillo, Stanford U.
PD120	Accelerated Discovery of Advanced RedOx Materials for STWS to Produce Renewable Hydrogen	Charles Musgrave, U. of Colorado Boulder
PD121	Tunable Photoanode-Photocathode-Catalyst Interface Systems for Efficient Solar Water Splitting	G. Charles Dismukes, Rutgers U.
PD123	High Performance Platinum Group Metal Free Membrane Electrode Assemblies Through Control of Interfacial Processes	Katherine Ayers, Proton OnSite
Hydrogen and Fuel Cells Program – Technology Validation		
TV019	Hydrogen Component Validation	Daniel Terlip, NREL
TV025	Performance Evaluation of Delivered Hydrogen Fueling Stations	Ted Barnes, GTI
TV038	Overview of an Integrated Research Facility for Advancing Hydrogen Infrastructure	Michael Peters, NREL
TV040	High Temperature Electrolysis Test Stand	Richard Boardman, INL
Vehicle Technologies Office – Advanced Combustion Systems		
ACS117	HD Powertrain Optimization	Paul Chambon, ORNL
Vehicle Technologies Office – Electrochemical Energy Storage Part I		
ES201	Electrochemical Performance Testing	Ira Bloom, ANL
ES202	INL Electrochemical Performance Testing	Matt Shirk, INL
ES203	Battery Safety Testing	Leigh Anna Steele, SNL
ES204	Battery Thermal Characterization	Matthew Keyser, NREL
ES240	High Energy Anode Material Development for Lithium-Ion Batteries	Cary Hayner, SiNode Systems
ES241	Advanced High-Performance Batteries for Electric Vehicle (EV) Applications	Ionel Stefan, Amprius
ES243	Dramatically Improve the Safety Performance of Lithium-Ion Battery Separators and Reduce the Manufacturing Cost Using UV Curing and High Precision Coating Technologies	John Arnold, Miltec UV International
ES247	High Energy Lithium Batteries for Electric Vehicles	Herman Lopez, Envia Systems
ES288	Construction of High Energy Density Batteries	Christopher Lang, Physical Sciences Inc.
ES289	Advanced Polyolefin Separators for Lithium-Ion Batteries Used in Vehicle Applications	Weston Wood, Entek
ES290	Hybrid Electrolytes for PHEV Applications	Surya Moganty, NOHMs Technologies
ES291	SAFT-USABC 12V Start-Stop Phase II	Joong Sun Park, Saft
ES293	A Closed Loop Process for the End-of-Life Electric Vehicle Lithium-Ion Batteries	Yan Wang, WPI
ES331	Development of a High Energy Density EV Cell	Mohamed Alamgir, LG Chem Power
ES332	High Electrode Loading EV Cell	William Woodford, 24M Technologies
ES333	Silicon Electrolyte Interface Stabilization Focus Group	Anthony Burrell, NREL

Vehicle Technologies Office – Energy-Efficient Mobility Systems		
EEMS013	A New System Simulation Framework for SMART Mobility	Phil Sharer, ANL
EEMS014	Agent-Based Transportation System Modeling with POLARIS	Josh Auld, ANL
EEMS015	Calibration of Activity-Based Transportation System Simulation Tools using High-Performance Computing	Vadim Sokolov, George Mason U.
EEMS016	Energy Efficient Connected and Automated Vehicles	Dominik Karbowski, ANL
EEMS017	Impact of CAV Technologies on Travel Demand and Energy	Josh Auld, ANL
EEMS018	Extended Urban Modeling for Smart Mobility	Budhu Bhaduri, ORNL
EEMS019	Smart Urban Signal Infrastructure and Control	H M Abdul Aziz, ORNL
EEMS020	Energy Impact of Different Penetrations of Connected and Automated Vehicles	Jackeline Rios-Torres, ORNL
EEMS022	A Model to Assess Impacts on Fleet-Wide Energy Use from Multi-Modal Opportunities -- Freight Fleet-Level Energy Estimation Tool (FFLEET)	Tim LaClair, ORNL
EEMS023	WholeTraveler Survey on Life Trajectories and Mobility Decisions	Anna Spurlock, LBNL
EEMS024	MA3T-MobilityChoice: Analyzing the Competition, Synergy and Adoption of Fuel and Mobility Technologies	Zhenhong Lin, ORNL
EEMS025	National Scale Multi-Modal Energy and GHG Analysis of Inter-City Freight	Yan Zhou, ANL
EEMS026	Expanding Regional Simulations of CAVs to the National Level and Assessing Uncertainties	Tom Stephens, ANL
EEMS027	Opportunities for Improving the Energy Efficiency of Multi-Modal Intra-City Freight Movement	Kevin Walkowicz, NREL
Vehicle Technologies Office – Technology Integration		
TI078	Gaseous Fuel Facility Analysis (Natural Gas and Propane Vehicles)	Myra Blaylock, SNL

THURSDAY JUNE 8 Oral Presentations

Time	Maryland A/B	Maryland C	Virginia A/B
8:00 AM	ACS024: Ash-Durable Catalyzed Filters for Gasoline Direct Injection (GDI) Engines Hee Je Seong, ANL		
8:30 AM	ACS033: Emissions Control for Lean Gasoline Engines Jim Parks, ORNL	ACS108: Spray-Wall Interaction at High-Pressure and High-Temperature Conditions Seung-Young Lee, Michigan Tech	FT037: Co-Optimization of Fuels and Engines (Co-Optima) -- Overview John Farrell, NREL
9:00 AM	ACS085: Low-Temperature Emission Control to Enable Fuel-Efficient Engine Commercialization Todd Toops, ORNL	ACS109: Predictive Models for In-Cylinder Radiation and Heat Transfer Dan Haworth, Penn State	FT051: Co-Optimization of Fuels and Engines (Co-Optima) -- Fuel Propertiy Characterization and Prediction Robert McCormick, NREL
9:30 AM	ACS032: Cummins-ORNL Emissions CRADA: NOx Control & Measurement Technology for Heavy-Duty Diesel Engines Bill Partridge, ORNL	ACS110: Engine Knock Prediction Seung Hyun Kim, Ohio State U.	FT052: Co-Optimization of Fuels and Engines (Co-Optima) -- Topic 7 - Fuel Kinetics and Its Simulation Matthew McNenly, LLNL
10:00 AM	ACS095: Metal Oxide Nano-Array Catalysts for Low-Temperature Diesel Oxidation Pu-Xian Gao, U. of Connecticut	ACS111: Lagrangian Soot Model Considering Gas Kinetics and Surface Chemistry Sage Kokjohn, U. of Wisconsin	FT053: Co-Optimization of Fuels and Engines (Co-Optima) -- Fuel-Property Impacts on Spark Ignition Efficiency, Part 1: Research Octane Number, Sensitivity, and Heat of Vaporization Jim Szybist, ORNL
10:30 AM	**Break**		
11:00 AM	PM066: Innovative SCR Materials and Systems for Low Temperature Aftertreatment Craig DiMaggio, FCA		FT054: Co-Optimization of Fuels and Engines (Co-Optima) -- Fuel-Property Impacts on Spark Ignition Efficiency, Part 2 Chris Kolodziej, ANL
11:30 AM	PM067: Next Generation Three-Way Catalysts for Future, Highly Efficient Gasoline Engines Christine Lambert, Ford Motor Co.		FT055: Co-Optimization of Fuels and Engines (Co-Optima) -- Multimode Lean Spark Ignition: Experiments and Simulation Magnus Sjoberg, SNL
12:00 PM	PM068: Sustained Low Temperature NOx Reduction (SLTNR) Yuhui Zha, Cummins		FT056: Co-Optimization of Fuels and Engines (Co-Optima) -- Exploratory Advanced Compression Ignition Combustion Tasks John Dec, SNL
12:30 PM	**Lunch**		
1:45 PM	ACS092: High-Efficiency Variable Compression Ratio Engine with Variable Valve Actuation and New Supercharging Technology Charles Mendler, Envera LLC		FT057: Co-Optimization of Fuels and Engines (Co-Optima) -- Emissions, Emission Control, and Sprays Todd Toops, ORNL
2:15 PM	ACS099: Improved Fuel Efficiency through Adaptive Radio Frequency Controls and Diagnostics for Advanced Catalyst Systems Alexander Sappok, Filter Sensing Technologies, Inc.		FT058: High-Efficiency Cost-Effective Natural Gas Engine Steve White, Bosch
2:45 PM	ACS098: Cummins 55% Brake Thermal Efficiency Project Lyle E. Kocher, Cummins		FT059: High BMEP and High Efficiency Micro-Pilot Ignition Natural Gas Engine Jeffrey Naber, Michigan Tech
3:15 PM	ACS097: Affordable Rankine Cycle (ARC) Waste Heat Recovery for Heavy Duty Trucks Swami Subramanian, Eaton		FT060: Single-Fuel Reactivity Controlled Compression Ignition Combustion Enabled by Onboard Fuel Reformation Ben Lawler, Stony Brook U.
3:45 PM	**Break**		
4:15 PM	ACS100: Improving Transportation Efficiency through Integrated Vehicle, Engine, and Powertrain Research - SuperTruck II Justin Yee, Daimler Trucks North America		
4:45 PM	ACS101: Volvo SuperTruck 2: Pathway to Cost-Effective Commercialized Freight Efficiency Pascal Amar, Volvo		
5:15 PM	ACS102: Cummins/Peterbilt SuperTruck II Michael Ruth, Cummins		
5:45 PM	ACS103: Development and Demonstration of a Fuel-Efficient Class 8 Tractor & Trailer SuperTruck Russ Zukouski, Navistar		

THURSDAY JUNE 8 Oral Presentations

Time	Marriott 3	Delaware A	Delaware B
8:00 AM			EEMS005: SMART Mobility -- Mobility Decision Science Anand Gopal, LBNL
8:30 AM	ES226: Microscopy Investigation on the Fading Mechanism of Electrode Materials Chongmin Wang, PNNL		EEMS006: SMART Mobility -- Urban Science Stan Young, NREL
9:00 AM	ES274: Nanoscale Interfacial Engineering for Stable Lithium Metal Anodes Yi Cui, Stanford U.	LM121: Carbon Fiber Technology Facility Amit Naskar, ORNL	EEMS007: Smart Mobility Stakeholders – Curating Urban Data & Models Joshua Sperling, NREL
9:30 AM	ES273: Composite Electrolyte to Stabilize Metallic Lithium Anodes Nancy Dudney, ORNL	LM122: Close Proximity Electromagnetic Carbonization (CPEC) Truman Bonds, RMX Technologies	EEMS008: Impact of Population Shift on Energy Use: Detroit Use Case Josh Auld, ANL
10:00 AM	ES275: Lithium Dendrite Prevention for Lithium-Ion Batteries Wu Xu, PNNL	LM123: Safety Statistical Analysis Tom Wenzel, LBNL	EEMS009: Energy Assessment of Automated Mobility Districts Yuche Chen, NREL
10:30 AM	**Break**		
11:00 AM	ES276: Mechanical Properties at the Protected Lithium Interface Nancy Dudney, ORNL	TI001: VTO Clean Cities Overview Dennis Smith, DOE	EEMS010: Definition of Connected and Automated Vehicle (CAV) Concepts for Evaluation Steven Shladover, LBNL
11:30 AM	ES277: Solid Electrolytes for Solid-State and Lithium-Sulfur Batteries Jeff Sakamoto, U. of Michigan	TI071: Midwest D.R.I.V.E.S. Matt Stephens-Rich, Clean Fuels Ohio	EEMS011: Multimodal Travel Behavior Modeling in Urban Areas using BEAM Colin Sheppard, LBNL
12:00 PM	ES278: Overcoming Interfacial Impedance in Solid State Batteries Eric Wachsman, U. of Maryland	TI072: Penske Truck Leasing Alternative Fuel Vehicle (AFV) Demonstration and Enhanced Driver Experience Project Dean Stapleton, Penske Truck Leasing Co.	EEMS012: Modeling and Analysis of Plug-in Electric Vehicle Charging Infrastructure Supporting Shared Mobility Yan Zhou, ANL
12:30 PM	**Lunch**		
1:45 PM	ES054: First Principles Calculations of Existing and Novel Electrode Materials Gerbrand Ceder, LBNL	TI073: Southeast Alternative Fuels Demonstration Initiative (SADI) Andrea Eilers, Triangle J Council of Governments	
2:15 PM	ES309: Electrode Materials Design and Failure Predicition Venkat Srinivasan, ANL	TI074: Filling Critical Gaps Through Innovative Cradle-To-Grave Training Pamela Burns, North Central Texas Council of Governments	VAN999: Overview of VTO Analysis Program Rachael Nealer, DOE
2:45 PM	ES225: Design and Synthesis of Advanced High-Energy Cathode Materials Guoying Chen, LBNL	TI075: Creating an Alternative Fuel Training Network for Florida Colleen Kettles, U. of Central Florida	VAN019: ParaChoice Model Brandon Heimer, SNL
3:15 PM		TI076: Increasing Nationwide ZEV Adoption -- Enhanced Joint Procurement Process for Public Fleets Jasna Tomic, CALSTART	VAN020: Applied Analysis of Connected and Automated Vehicles Tom Stephens, ANL
3:45 PM	**Break**		
4:15 PM	ES310: Advancing Solid-State Interfaces in Lithium-Ion Batteries Nenad Markovic, ANL	TI077: Aggregated Alternative Technology Alliance Philip Kreycik, Meister Consultants Group	VAN021: Transportation Energy Evolution Modeling (TEEM) Program Zhenhong Lin, ORNL
4:45 PM	ES311: Understanding and Mitigating Interfacial Reactivity Between Electrode and Electrolyte Larry Curtiss, ANL		VAN022: Connected and Automated Vehicles Aymeric Rousseau, ANL
5:15 PM	ES312: Daikin Advanced Lithium-Ion Battery Technology -- High-Voltage Electrolyte Joe Sunstrom, Daikin America		VAN024: Considerations for Corridor and Community DC Fast Charging Complex System Design John Smart, INL
5:45 PM			VAN025: Modeling Framework and Results to Inform Charging Infrastructure Investments Marc Melaina, NREL

THURSDAY JUNE 8 Oral Presentations

Time	Marriott 1	Washington 5	Washington 3
			Hydrogen at Scale Session
8:30 AM	FC017: Fuel Cell System Modeling and Analysis Rajesh Ahluwalia, ANL	PD113: High Efficiency Solar Thermochemical Reactor for Hydrogen Production Tony McDaniel, SNL	TV044: Introduction to H2@Scale Bryan Pivovar, NREL
9:00 AM	FC163: Fuel Cell Systems Analysis Brian James, Strategic Analysis, Inc.	PD114: Flowing Particle Bed Solarthermal RedOx Process to Split Water Al Weimer, U. of Colorado Boulder	TV045: H2@Scale Analysis Mark Ruth, NREL
9:30 AM	FC081: Fuel Cell Technology Status: Degradation Jennifer Kurtz, NREL	PD115: High-Efficiency Tandem Absorbers for Economical Solar Hydrogen Production Todd Deutsch, NREL	TV043: Integrated Systems Modeling of the Interactions between Stationary Hydrogen, Vehicle, and Grid Resources Samveg Saxena, LBNL
10:00 AM	FC109: New Fuel Cell Membranes with Improved Durability and Performance Michael Yandrasits, 3M	PD116: Wide Bandgap Chalcopyrite Photoelectrodes for Direct Solar Water Splitting Nicolas Gaillard, U. of Hawaii	TV031: Dynamic Modeling and Validation of Electrolyzers in Real Time Grid Simulation Rob Hovsapian, INL
10:30 AM	**Break**		
11:00 AM	FC110: Advanced Hybrid Membranes for Next Generation PEMFC Automotive Applications Andrew Herring, Colorado School of Mines	PD125: Tandem Particle-Slurry Batch Reactors for Solar Water Splitting Shane Ardo, U. of California, Irvine	TV041: Modular SOEC System for Efficient H2 Production at High Current Density Hossein Ghezel-Ayagh, Fuel Cell Energy
11:30 AM	FC116: Smart Matrix Development for Direct Carbonate Fuel Cell A Hilmi, FuelCell Energy	PD148: HydroGEN: A Consortium on Advanced Water Splitting Materials Huyen Dinh, NREL	
12:00 PM	FC117: Ionomer Dispersion Impact on PEM Fuel Cell and Electrolyzer Durability Hui Xu, Giner, Inc.		
12:30 PM	**Lunch**		
			Hydrogen Infrastructure Session
1:45 PM	FC131: Highly Stable Anion-Exchange Membranes for High-Voltage Redox-Flow Batteries Yushan Yan, U. of Delaware		PD014: Hydrogen Refueling Analysis of Heavy-Duty Fuel Cell Vehicle Fleet Amgad Elgowainy, ANL
2:15 PM	FC146: Advanced Materials for Fully-Integrated MEAs in AEMFCs Yu Seung Kim, LANL	BESH2023: Nano-bio Systems for Light-Driven Hydrogen Production Kara Bren, U. of Rochester	PD133: H2FIRST--Consolidation Daniel Terlip, NREL
2:45 PM	FC147: Advanced Ionomers & MEAs for Alkaline Membrane Fuel Cells Bryan Pivovar, NREL	BESH2024: Mechanistic Investigations on Hydrogen Catalysis by [FeFe]-Hydrogenase David Mulder, NREL	SA062: Hydrogen Financial Analysis Scenario Tool (H2FAST) Updates with Analysis of 101st Station Michael Penev, NREL
3:15 PM	FC148: New High Performance Water Vapor Membranes to Improve Fuel Cell Balance of Plant Efficiency and Lower Costs Earl Wagener, Tetramer Technologies	BESH2025: Reversible Conversion between CO2/H2 and Formic Acid by Molecular Catalysts Etsuko Fujita, BNL	SA055: Hydrogen Analysis with the Sandia ParaChoice Model Rebecca Levinson, SNL
3:45 PM	**Break**		
4:15 PM			SCS019: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources Nick Barilo, PNNL
4:45 PM			TV017: Hydrogen Station Data Collection and Analysis Sam Sprik, NREL
5:15 PM			PD139: Reference Station Design, Phase II Ethan Hecht, SNL
5:45 PM			PD140: Dispenser Reliability Mike Peters, NREL

THURSDAY JUNE 8 Oral Presentations

Time	Lincoln 5		
8:30 AM	ST014: Hydrogen Sorbent Measurement Qualification and Characterization Phil Parilla, NREL		
9:00 AM	ST120: Design and Synthesis of Materials with High Capacities for Hydrogen Physisorption Channing Ahn, California Institute of Technology		
9:30 AM	ST122: Hydrogen Adsorbents with High Volumetric Density: New Materials and System Projections Don Siegel, U. of Michigan		
10:00 AM	ST063: Formation and Regeneration of Alane Ragaiy Zidan, SRNL		
10:30 AM	**Break**		
11:00 AM	ST116: Low-Cost a-Alane for Hydrogen Storage Steve Crouch-Baker, SRI		
11:30 AM	ST008: Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements Kriston Brooks, PNNL		
12:00 PM	ST134: Investigation of Solid State Hydrides for Autonomous Fuel Cell Vehicles Joseph Teprovich, SRNL		
12:30 PM	**Lunch**		
1:45 PM	ST114: Next Generation Hydrogen Storage Vessels Enabled by Carbon Fiber Infusion with a Low Viscosity, High Toughness Resin System Brian Edgecombe, Materia		
2:15 PM	ST126: Conformable Hydrogen Storage Coil Reservoir Erik Bigelow, Center for Transportation and the Environment		
2:45 PM	ST113: Innovative Development, Selection and Testing to Reduce Cost and Weight of Materials for BOP Components Jon Zimmerman, SNL		
3:15 PM	ST141: Integrated Insulation System for Automotive Cryogenic Storage Tanks Barry Meneghelli, Vencore		
3:45 PM	**Break**		
4:15 PM	ST100: Hydrogen Storage Cost Analysis Brian James, Strategic Analysis, Inc.		
4:45 PM	ST001: System Level Analysis of Hydrogen Storage Options Rajesh Ahluwalia, ANL		

THURSDAY JUNE 8 Poster Presentations, 6:30–8:30 PM, Exhibit Halls B & C

Vehicle Technologies Office – Electrochemical Energy Storage, Part II		
ES028	Materials Benchmarking Activities For CAMP Facility	Wenquan Lu, ANL
ES030	Cell Analysis, Modeling, and Prototyping (CAMP) Facility Research Activities	Andrew Jansen, ANL
ES144	Stable Operation of Silicon-Based Anode for Lithium-Ion Batteries	Jason Zhang, PNNL
ES164	Thick Low-Cost, High-Power Lithium-Ion Electrodes via Aqueous Processing	Jianlin Li, ORNL
ES166	Post-Test Analysis of Lithium-Ion Battery Materials	Ira Bloom, ANL
ES167	Process Development and Scale-Up of Advanced Active Battery Materials -- Gradient Cathode Materials	Youngho Shin, ANL
ES168	Process Development and Scale-Up of Critical Battery Materials -- Continuous Flow Produced Materials	Krzysztof Pupek, ANL
ES207	Towards Solventless Processing of Thick Electron-Beam (EB) Cured Lithium-Ion Battery Cathodes	David Wood, ORNL
ES224	Fundamental Studies of Lithium-Sulfur Cell Chemistry	Nitash Balsara, LBNL
ES230	Design of Sulfur Cathodes for High Energy Lithium-Sulfur Batteries	Yi Cui, Stanford U.
ES233	Efficient Rechargeable Li/O2 Batteries Utilizing Stable Inorganic Molten Salt Electrolytes	Vincent Giordani, Liox Power
ES245	Low Cost, Structurally Advanced Novel Electrode and Cell Manufacturing	William Woodford, 24M Technologies
ES252	Enabling High-Energy/Voltage Lithium-Ion Cells: Electrolytes and Additives	Daniel Abraham, ANL
ES253	Enabling High-Energy/Voltage Lithium-Ion Cells: Theory and Modeling	Hakim Iddir, ANL
ES254	Enabling High-Energy/Voltage Lithium-Ion Cells: Materials Characterization	John Vaughey, ANL
ES261	Next Generation Anodes for Lithium-Ion Batteries: Overview	Dennis Dees, ANL
ES262	Next-Generation Anodes for Lithium-Ion Batteries: Fundamental Studies of Si-C Model Systems	Robert Kostecki, LBNL
ES263	Electrodeposition for Low-Cost, Water-Based Electrode Manufacturing	Stuart Hellring, PPG
ES264	Li-Ion Battery Anodes from Electrospun Nanoparticle/Conducting Polymer Nanofibers	Peter Pintauro, Vanderbilt U.
ES265	UV Curable Binder Technology to Reduce Manufacturing Cost and Improve Performance of Lithium-Ion Battery Electrodes	John Arnold, Miltec UV International
ES266	Co-Extrusion (CoEx) for Cost Reduction of Advanced High-Energy-and-Power Battery Electrode Manufacturing	Ranjeet Rao, PARC
ES267	Commercially Scalable Process to Fabricate Porous Silicon	Peter Aurora, Navitas Systems
ES268	Low Cost Manufacturing of Advanced Silicon-Based Anode Materials	Henry Costantino, Group14 Technologies
ES269	An Integrated Flame Spray Process for Low Cost Production of Battery Materials	Yangchuan (Chad) Xing, U. of Missouri
ES271	New Advanced Stable Electrolytes for High Voltage Electrochemical Energy Storage	Peng Du, Silatronix
ES279	New Lamination and Doping Concepts for Enhanced Lithium-Sulfur Battery Performance	Prashant Kumta, U. of Pittsburgh
ES281	Multi-Functional Cathode Additives for Lithium-Sulfur Battery Technology	Hong Gan, BNL
ES283	Addressing Internal "Shuttle" Effect: Electrolyte Design and Cathode Morphology Evolution in Lithium-Sulfur Batteries	Perla Balbuena, Texas A&M
ES284	Statically and Dynamically Stable Lithium-Sulfur Batteries	Arumugam Manthiram, U. of Texas, Austin
ES285	Mechanistic Investigation for the Rechargeable Lithium-Sulfur Batteries	Deyang Qu, UW Milwaukee
ES286	Lithium-Air Batteries	Khalil Amine, ANL
ES313	Performance Effects of Electrode Processing for High-Energy Lithium-Ion Batteries	David Wood, ORNL
ES315	Developing Flame Spray Production Level Process for Active Materials	Greg Krumdick, ANL
ES317	Battery500 Consortium	Jun Liu, PNNL
ES318	In Situ Diagnostics of Coupled Electrochemical-Mechanical Properties of Solid Electrolyte Interphases on Lithium Metal for Rechargeable Batteries	Xingcheng Xiao, General Motors
ES319	Advanced Microscopy and Spectroscopy for Probing and Optimizing Electrode-Electrolyte Interphases in High-Energy Lithium Batteries	Shirley Meng, UC San Diego
ES320	Multifunctional, Self-Healing Polyelectrolte Gels for Long Cycle Life, High-Capicty Sulfur Cathodes in Lithium-Sulfur Batteries	Jihui Yang, U. of Washington
ES321	Solid-State Inorganic Nanofiber Network-Polymer Composite Electrolytes for Lithium Batteries	Nianqiang Wu, West Virginia U.
ES322	High Conductivity and Flexible Hybrid Solid State Electrolyte	Eric Wachsman, U. of Maryland
ES323	Self-Forming Thin Interphases and Electrodes Enabling 3-D Structured High Energy Density Batteries	Glenn Amatucci, Rutgers U.
ES324	Dual-Function Solid State Battery with Self-Forming, Self-Healing Electrolyte and Separator	Esther Takeuchi, Stony Brook U.
ES325	Lithium Batteries with Higher Capacity and Voltage	Yutao Li, U. of Texas, Austin
ES326	Self-Assembling Rechargeable Lithium Batteries from Alkali and Alkaline-Earth Halides	Yet-Ming Chiang, MIT

ES327	Engineering Approaches to Dendrite-Free Lithium Anodes	Prashant Kumta, U. of Pittsburgh
ES328	Dendrite Growth Morphology Modeling in Liquid and Solid Electrolytes	Yue Qi, Michigan State U.
ES329	Understanding and Strategies for Controlled Interfacial Phenomena in Lithium-Ion Batteries and Beyond	Perla Balbuena, Texas A&M
ES330	Electrochemically Responsive Self-Formed Lithium-Ion Conductors for High-Performance Lithium-Metal Anodes	Donghai Wang, Penn State
ES335	Next Generation Anodes for Lithium-ion Batteries: Materials Advancements	Zhengcheng Zhang, ANL
ES336	Extreme Fast Charging (XFC) Gap Assessment	Christopher Michelbacher, INL
Vehicle Technologies Office – Vehicle Technologies Analysis		
VAN016	Transportation Data Program: A Multi-Lab Coordinated Project	Stacy Davis, ORNL
VAN017	ANL Vehicle Technologies Analysis Modeling Program	Michael Wang, ANL
VAN018	VTO Program Benefits Analysis	Tom Stephens, ANL
VAN023	Assessing the Energy and Cost Impact of Advanced Technologies through Model Based Design	Aymeric Rousseau, ANL

FRIDAY JUNE 9 Oral Presentations

Time	Maryland A/B		
8:00 AM	PM057: Applied Computational Methods for New Propulsion Materials: Future Engine Requirements Charles Finney, ORNL		
8:30 AM	ACS094: Ultra Efficient Light-Duty Powertrain with Gasoline Low-Temperature Combustion Keith Confer, Delphi Powertrain		
9:00 AM	PM061: Computational Design and Development of a New, Lightweight Cast Alloy for Advanced Cylinder Heads in High-Efficiency, Light-Duty Engines Mike Walker, General Motors		
9:30 AM	ACS093: Lean Miller Cycle System Development for Light-Duty Vehicles David Sczomak, General Motors		
10:00 AM	PM060: ICME Guided Development of Advanced Cast Aluminum Alloys for Automotive Engine Applications Mei Li, Ford Motor Co.		
10:30 AM	**Break**		
11:00 AM	PM053: High Temperature Engine Materials: Valve Materials Subtask G. Muralidharan, ORNL		
11:30 AM	ACS112: Integrated Boosting and Hybridization for Extreme Fuel Economy and Downsizing Chinmaya Patil, Eaton		
12:00 PM	PM062: High Performance Cast Aluminum Alloys for Next Generation Passenger Vehicle Engines Amit Shyam, ORNL		