2013 DOE HYDROGEN and FUEL CELLS PROGRAM and VEHICLE TECHNOLOGIES PROGRAM ANNUAL MERIT REVIEW and PEER EVALUATION MEETING OVERALL SCHEDULE

	Monday May 13 - Gateway Hotel
1:00	Keynote Address: DOE Assistant Secretary David T. Danielson; Overviews of the Hydrogen and Fuel Cells Program and Vehicle Technologies Program (Salons III and IV)
3:00	Break
3:30	Hydrogen and Fuel Cells Sub-Program Overviews Sub-Program Overviews (Salon III) and Vehicle Technologies Program Sub-Program Overviews (Salon IV)
5:30	Break
5:45	Reviewer Orientation Salon II
6:00	**Poster Session I:** Electrochemical Storage and Vehicle and System Simulation

Schedule as of: 10-May-13

Crystal Gateway Marriott Hotel

Salon	Tuesday May 14 I	II	III	IV	V	VI	Wednesday May 15 I	II	III	IV	V	VI	Alex.*	Thursday May 16 I	II	III	IV	V	VI	Friday May 17 I	II	III	IV	V	VI
7:15 AM	Continental Breakfast						Continental Breakfast							Continental Breakfast											
8:15 AM	APE	AN		FC	ST	VsS		PD	ES			VSS	LM		PD										
8:30 AM	APE	AN	ES	FC	ST	VSS	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
9:00 AM	APE	AN	ES	FC	ST	VSS	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
9:30 AM	APE	AN	ES	FC	ST	VSS	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
10:00 AM	APE	AN	ES	FC	ST	VSS	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
10:30 AM	Break						Break							Break											
11:00 AM	APE	AN	ES	FC	ST	VSS	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
11:30 AM	APE	AN	ES	FC	ST	VSS	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
12:00 PM	APE	AN	ES	FC	ST	VSS		PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
12:30 PM	**Lunch** 12:30 PM - VT and H2 Educational Slideshow 1:00 PM - Sunita Satyapal: Hydrogen and Fuel Cell Technologies Program Awards						**Lunch** 1:00 PM - Presentation by Jim Alkire, DOE-GFO 1:15 PM - Patrick Davis: Vehicle Technologies Program Awards Presentations							**Lunch** 1:00 PM - Presentation by Mark Johnson, ARPA-E 1:15 PM - Sunita Satyapal: Special Recognition Awards Presentations											
1:45 PM	APE	AN	ES	FC	ST	VSS	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	VSS	VSS						
2:00 PM																									
2:15 PM	APE	AN	ES	FC	ST	VSS	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	VSS	VSS						
2:45 PM	APE	AN	ES	FC	ST	VSS	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	VSS	VSS						
3:15 PM	APE	AN	ES	FC	ST	VSS	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	VSS	VSS						
3:45 PM	Break						Break							Break											
4:15 PM	APE		ES	FC	ST	VSS	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	VSS	VSS						
4:45 PM	APE		ES	FC	ST	VSS	MN	PD	ES	FC	ST	VSS	LM		PD	ES	FC	VSS	VSS						
5:15 PM	APE		ES	FC		VSS		PD	ES	FC	ST	VSS			PD	ES	FC		VSS						
5:45 PM				FC		VSS					ST	VSS							VSS						

*Alexandria - second floor

H_2 & FC Program
- PD: Production & Delivery
- ST: Hydrogen Storage
- FC: Fuel Cells
- MN: Manufacturing
- TV: Technology Validation
- SCS: Safety,Codes,Stand.
- MT: Market Transformation
- AN: Analysis
- H2RA: Recovery Act

6:30 PM	**POSTER SESSION II:** Electrochemical Storage; Advanced Power Electronics; and Hydrogen Systems Analysis	**POSTER SESSION III:** Hydrogen Production and Delivery, Hydrogen Storage, Vehicle Technologies Analysis, and Hydrogen Manufacturing	**POSTER SESSION IV:** Technology Validation, Fuel Cells Fuel Cell Basic Energy Science, and ARPA-E Hydrogen and Fuel Cells
8:30 PM			

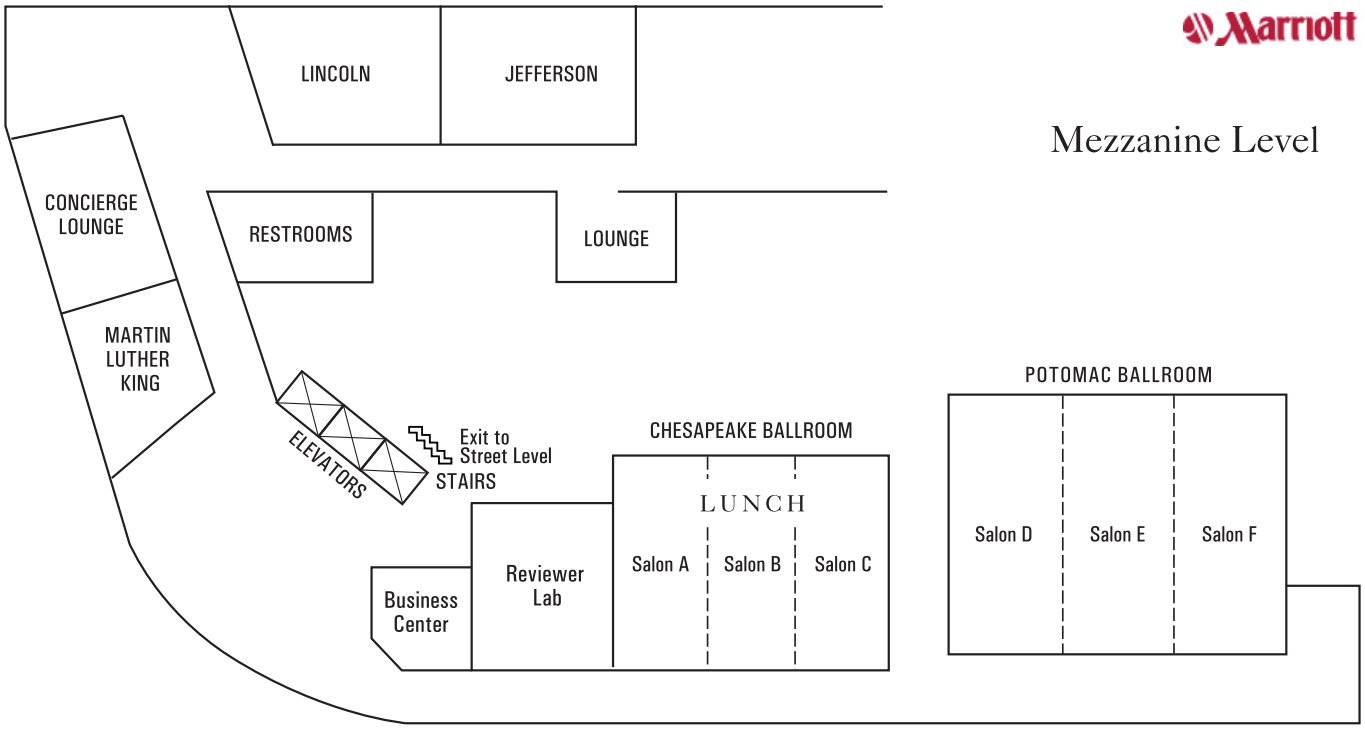
VT Program
- AC: Advanced Combustion
- ES: Energy Storage
- APE: Adv. Pwr. Electronics
- FT: Fuels Technologies
- PM: Propulsion Materials
- LM: Light-Weight Materials
- TI: Technology Integration
- VSS: Veh.& Sys.Simulation
- VAN: VT Analysis

Crystal City Marriott Hotel

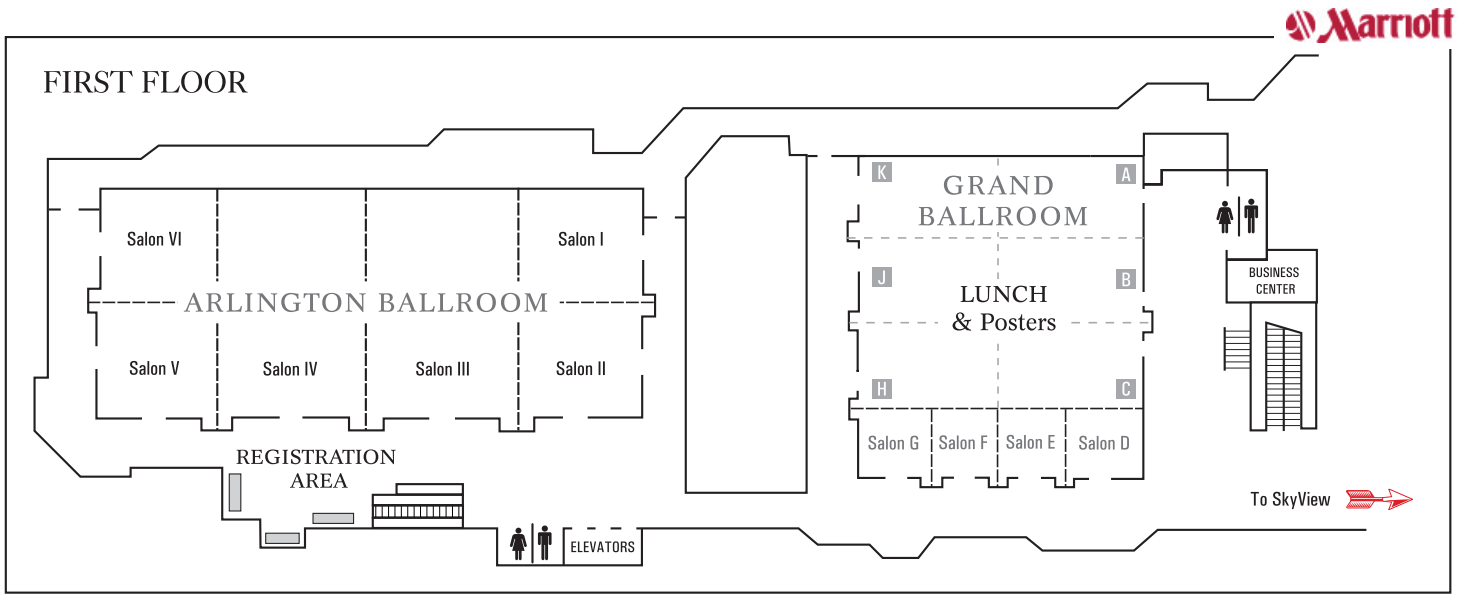
Salon	Tuesday May 14 D	E	F	Wednesday May 15 D	E	F	Thursday May 16 D	E	F	Friday May 17 D	E	F
7:15 AM	Continental Breakfast			Continental Breakfast			Continental Breakfast			Continental Breakfast		
8:00 AM											AC	
8:15 AM	PM	AC	SCS			MT/H2RA						
8:30 AM	PM	AC	SCS	TI	AC	MT	TI	AC			AC	AC
9:00 AM	PM	AC	SCS	TI	AC	MT	TI	AC			AC	AC
9:15 AM									VAN			
9:30 AM	PM	AC	SCS	TI	AC	MT	TI	AC	VAN		AC	AC
10:00 AM	PM	AC	SCS	TI	AC	MT	TI	AC	VAN		AC	AC
10:30 AM	Break			Break			Break			Break		
11:00 AM	PM	AC	SCS	TI	AC	MT		AC	VAN		AC	AC
11:15 AM							FT					
11:30 AM	PM	AC	SCS	TI	AC	MT	FT	AC	VAN		AC	AC
12:00 PM	PM	AC	SCS	TI	AC		FT	AC	VAN		AC	AC
12:30 PM	Lunch*			Lunch*			Lunch*					
1:30 PM					AC			AC	TV			
1:45 PM	PM	AC	SCS	TI	AC	H2RA	FT	AC	TV			
2:15 PM	PM	AC	SCS	TI	AC	H2RA	FT	AC	TV			
2:45 PM	PM	AC	SCS	TI	AC	H2RA	FT	AC	TV			
3:15 PM	PM	AC	SCS	TI	AC	H2RA	FT	AC	TV			
3:45 PM	Break			Break			Break					
4:00 PM												
4:15 PM	PM	AC		TI	AC		FT	AC	TV			
4:45 PM	PM	AC		TI	AC			AC	TV			
5:00 PM												
5:15 PM	PM	AC		TI	AC			AC				
5:45 PM		AC										

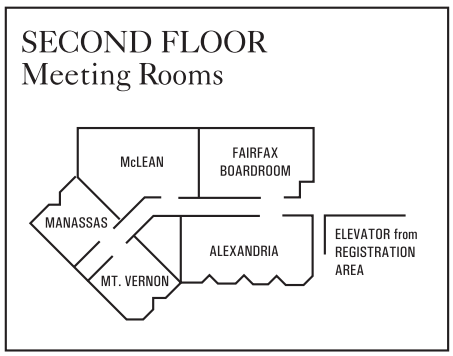
Save the date: the 2014 AMR will be June 16-20

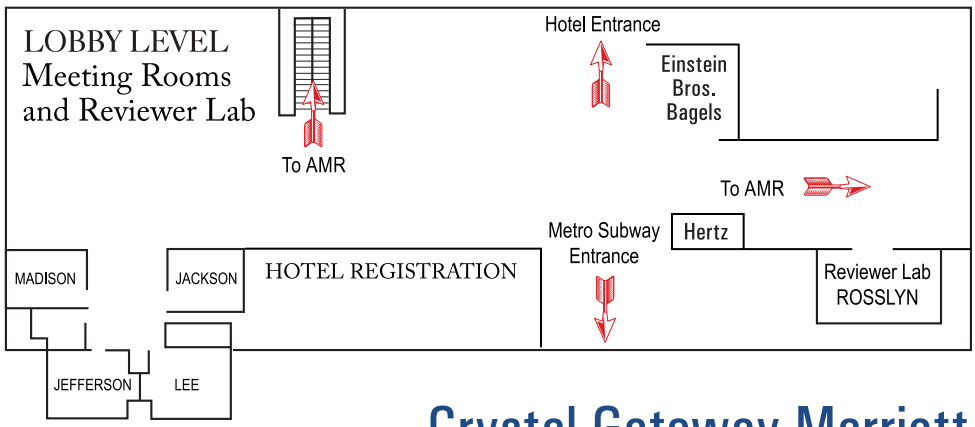
*Awards Ceremonies and Speakers will be in the Crystal Gateway hotel



Crystal City Marriott





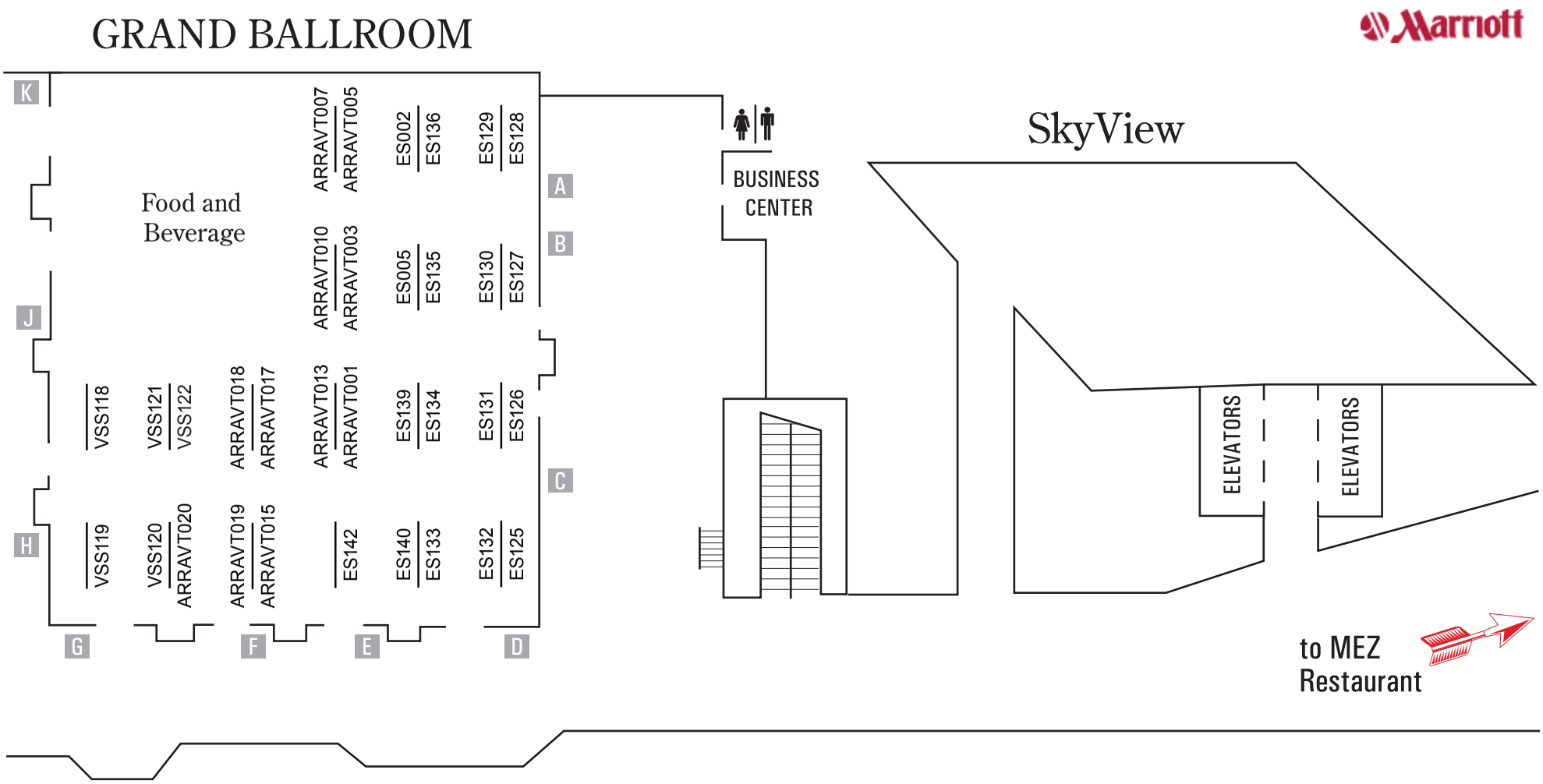


Crystal Gateway Marriott

Monday, May 13 - Poster Presentations

Crystal Gateway Hotel - Grand Ballroom, 6:00-8:00 PM

Electrochemical Storage
ES125; Donghai Wang, Pennsylvania State University: Development of High Energy Density Lithium-Sulfur Cells
ES126; Ionel Stefan, Amprius: Silicon Nanostructure-based Technology for Next Generation Energy Storage
ES127; Han Wu, Dow Kokam: Development of Large Format Lithium Ion Cells with Higher Energy Density
ES128; Sergey Lopatin, Applied Materials: Modular Process Equipment for Low Cost Manufacturing of High Capacity Prismatic Li-Ion Cell Alloy Anodes
ES129; Hany Eitouni, Seeo: High-Voltage Solid Polymer Batteries for Electric Drive Vehicles
ES130; Yimin Zhu, Nanosys: Innovative Cell Materials and Designs for 300 Mile Range EVs
ES131; Kevin Eberman, 3M Company: High Energy Novel Cathode / Alloy Automotive Cell
ES132; Gary Voelker, Miltec UV International: Utilization of UV or EB Curing Technology to Significantly Reduce Costs and VOCs in the Manufacture of Lithium-Ion Battery Electrodes
ES133; Bernhard Metz, Johnson Controls: Significant Cost Improvement of Li-Ion Cells Through Non-NMP Electrode Coating, Direct Separator Coating, and Fast Formation Technologies
ES134; Mike Wixom, A123 Systems: Dry Process Electrode Fabrication
ES135; Erik Huyghe, DENSO International America: Stand-Alone Battery Thermal Management System
ES136; Steve Carlson, Optodot Corporation: Innovative Manufacturing and Materials for Low-Cost Lithium-Ion Batteries
ES002; Mohamed Alamgir, LG Chem, Michigan: A High-Performance PHEV Battery Pack
ES005; Avie Judes, Johnson Controls-Saft : JCS PHEV System Development-USABC
ES139; Kimberly McGrath, Maxwell: Development of Advanced Energy Storage Systems for High Power, Lower Energy – Energy Storage System (LEESS) for Power Assist Hybrid Electric Vehicle (PAHEV) Applications
ES140; Keith Kepler, Farasis: Lithium Source For High Performance Li-ion Cells
ES142; Suresh Sriramulu, TIAX: The Relationship of the Nail Penetration Test to Safety of Li-Ion Cells
ARRAVT001; Beomgi Lee, LG Chem, Michigan: Advanced Li-Ion Polymer Battery Cell Manufacturing Plant in USA
ARRAVT003; Robert Kamischke, Enerdel : Expanding U.S.-based Lithium-ion Battery Manufacturing
ARRAVT005; Linda Trumm, General Motors: GM Li-Ion Battery Pack Manufacturing
ARRAVT007; Chris Kaniut, Saft America, Inc.: Saft Factory of the Future
ARRAVT010; John Groves, Chemetall Foote Corp: Expansion of Domestic Production of Lithium Carbonate and Lithium Hydroxide to Supply US Battery Industry
ARRAVT013; Jeff Lauinger , HTTM LLC: Manufacture of Advanced Battery Metal Containers & Components
ARRAVT015; Joseph DiCarlo, BASF: Expansion of Novolyte Capacity for Lithium Ion Electrolyte Production
ARRAVT017; David Han, Toda America, Inc.: Toda Cathode Materials Production Facility
ARRAVT018; Jesus Alvarez, A123Systems : Vertically Integrated Mass Production of Automotive Class Lithium Ion Batteries
ARRAVT019; Eric Ellerman, Johnson Controls, Inc: Johnson Controls Inc. Domestic Advanced Battery Industry Creation Project
ARRAVT020; Todd Coy, TOXCO Inc.: Lithium-Ion Battery Recycling Facilities
Vehicle and Systems Simulation
VSS118; Fred Wagner, Energetics: ANSI Electric Vehicle Standards Roadmap v2.0
VSS119; Adam Duran, NREL: Fleet DNA
VSS120; Jason Lustbader, NREL: A/C Model Development and Validation
VSS121; Paul Chambon, ORNL: APEEM Components Analysis and Evaluation
VSS122; Richard Pratt, PNNL: Vehicle to Grid Communications Field Testing



POSTER MAP

Monday, May 13

Crystal Gateway Marriott

2013 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Tuesday, May 14 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**I**	**II**	**III**
8:15 AM	APE00A; Susan Rogers, DOE: Advanced Power Electronics and Electric Motors R&D	AN000; Fred Joseck, DOE: Systems Analysis Session Introduction	
8:30 AM	APE006; Tim Burress, ORNL: Benchmarking State-of-the-Art Technologies	AN030; David Greene, ORNL: Worldwide Status of Hydrogen Fuel Cell Vehicle Technology and Prospects for	ES000; David Howell, DOE: U.S. Battery R&D Progress and Plans
9:00 AM	APE048; Burak Ozpineci, ORNL: Traction Drive System Modeling	AN031; Michael Nicholas, UCDavis: Siting Strategies for Early H2 Refueling Infrastructure in California: Learning from the Gasoline	ES172; Linda Horton, DOE Office of Science: Overview of Office of Science Energy Storage Research
9:30 AM	APE012; Ralph Taylor, Delphi Automotive Systems, LLC: High Temperature Inverter	AN032; Joan Ogden, UCDavis: Design and Economics of an Early Hydrogen Refueling Network for California	ES173; Ping Liu, DOE ARPA E: Overview of ARPA-E Energy Storage R&D
10:00 AM	APE040; Greg Smith, General Motors: Next Generation Inverter	AN033; Zhenhong Lin, ORNL: Analysis of Optimal On-Board Storage Pressure for Hydrogen Fuel Cell Vehicles	ES116; Brian Cunningham, DOE: Overview and Progress of the Battery Testing, Analysis, and Design Activity
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	APE049; Zhenxian Liang, ORNL: WBG Inverter Packaging	AN034; Amgad Elgowainy, ANL: Life Cycle Analysis of Hydrogen On-Board Storage	ES001; Brian Barnett, TIAX LLC : PHEV Battery Cost Assessment
11:30 AM	APE050; Leon Tolbert, ORNL: WBG Gate Drivers for Power Modules	AN035; Marianne Mintz, ANL: Employment Impacts of Infrastructure Development for Hydrogen and Fuel Cell Technologies	ES117; Ahmad Pesaran, NREL: Progress of Computer-Aided Engineering of Batteries (CAEBAT)
12:00 PM	APE027; Philip Neudeck, NASA: Development of SiC Large Tapered Crystal Growth	AN036; Todd Ramsden, NREL: Pathway Analysis: Projected Cost, Well-to-Wheels Energy Use and Emissions of Current Hydrogen Technologies	ES174; Jeremy Neubauer, NREL: Analysis of Electric Vehicle Battery Performance Targets
LUNCH	**12:30 PM - VT and H2 Educational Slideshow**		
	1:00 PM - Sunita Satyapal: Hydrogen and Fuel Cell Technologies Program Awards Presentations		
1:45 PM	APE008; Uthamalingam Balachandran, ANL: High Dialectric Constant Capacitors for Power Electronic Systems	AN037; Genevieve Saur, NREL: Hydrogen from Biogas: Resource Assessment	ES014; Peter Faguy, DOE: Overview and Progress of Applied Battery Research (ABR) Activities
2:15 PM	APE009; Cy Fujimoto, SNL: High Temperature Polymer Capacitor Dielectric Films	AN038; Tom Drennen, SNL: Global Hydrogen Resource Analysis (Hydrogen Implementing Agreement, Task 30A)	ES030; Andrew Jansen, ANL : Cell Fabrication Facility Team Production and Research Activities
2:45 PM	APE032; Christopher Whaling, Synthesis Partners: Technology Roadmap Analysis 2013: Assessing Automotive Technology R&D Relevant to DOE Power Electronics Cost	AN039; Michael Wang, ANL: Life-Cycle Analysis of Water Use for Hydrogen Production Pathways	ES167; Young Ho Shin, ANL: Process Development and Scale-up of Advanced Cathode Materials
3:15 PM	APE026; Allen Hefner, NIST: Electro-thermal-mechanical Simulation and Reliability for Plug-in Vehicle Converters and Inverters	AN040; Mark Ruth, NREL: Analysis of Fuel Cell Integration with Biofuels Production	ES175; Kang Xu, Army Research Laboratory: Progress in Electrolyte Component R&D within the ABR Program, 2009 thru 2013
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	APE028; Doug DeVoto, NREL: Reliability of Bonded Interfaces		ES176; Robert Kostecki, LBNL: The Development of Structure Activity Relationships for Advance Cell Chemistries within the ABR Program, 2009 thru 2012
4:45 PM	APE047; Kevin Bennion, NREL: Integrated Power Module Cooling		ES177; Kevin Gallagher, ANL: Promises and Challenges of Lithium- and Manganese-Rich Transition-Metal Layered-Oxide Cathodes
5:15 PM	APE019; Jason Lustbader, NREL: Air Cooling R&D		ES161; Anthony Burrell, ANL: Addressing the Voltage Fade Issue with Lithium-Manganese-Rich Oxide Cathode Materials
5:45 PM			

Tuesday, May 14 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**IV**	**V**	**VI**
8:15 AM	FC000; Dimitrios Papageorgopoulos, DOE: Fuel Cells Session Introduction	ST000; Ned Stetson, DOE: Hydrogen Storage Session Introduction	VSS000; Lee Slezak, DOE: Overview of Vehicle and Systems Simulation and Testing
8:30 AM	FC097; Vince Contini, Battelle: Stationery and Emerging Market Fuel Cell System Cost Analysis – Material Handling Equipment	ST001; Rajesh Ahluwalia, ANL: System Level Analysis of Hydrogen Storage Options	VSS094; Mike Duoba, ANL: HEV, PHEV, EV Test Standard Development and Validation
9:00 AM	FC098; Max Wei, LBNL: A Total Cost of Ownership Model for Design and Manufacturing Optimization of Fuel Cells in	ST100; Brian James, Strategic Analysis, Inc.: Hydrogen Storage Cost Analysis	VSS095; Ted Bohn, ANL: Grid Connectivity Research, Development & Demonstration Projects
9:30 AM	FC083; Chris Ainscough, NREL: Enlarging Potential National Penetration for Stationary Fuel Cells Through System Design Optimization	ST004; Don Anton, SRNL: Hydrogen Storage Engineering Center of Excellence	VSS096; Jim Francfort, INL: INL Efficiency and Security Testing of EVSE, DC Fast Chargers, and Wireless Charging Systems
10:00 AM	FC096; Patricia Irving, InnovaTek: Power Generation from an Integrated Biomass Reformer and Solid Oxide Fuel Cell (SBIR Phase III Xlerator Program)		VSS053; Ted Bohn, ANL: Codes and Standards to Support Vehicle Electrification
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC017; Rajesh Ahluwalia, ANL: Fuel Cells Systems Analysis	ST044; David Tamburello, SRNL: SRNL Technical Work Scope for the Hydrogen Storage Engineering Center of Excellence:	VSS029; Tom Garetson, ecoTality North America: Advanced Vehicle Testing & Evaluation
11:30 AM	FC018; Brian James, Strategic Analysis, Inc.: Fuel Cell Transportation Cost Analysis	ST010; Mike Veenstra, Ford Motor: Ford/BASF-SE/UM Activities in Support of the Hydrogen Storage Engineering Center of Excellence	VSS030; Henning Lohse-Busch, ANL: Advanced Technology Vehicle Lab Benchmarking - Level 1
12:00 PM	FC077; Satish Mohapatra, Dynalene: Large Scale Testing, Demonstration, and Commercialization of Fuel Cell Coolant (SBIR Phase III)	ST009; Mei Cai, General Motors: Thermal Management of On-Board Cryogenic Hydrogen Storage Systems	VSS031; Eric Rask, ANL: Advanced Technology Vehicle Lab Benchmarking - Level 2 (in-depth)
LUNCH	**12:30 PM - VT and H2 Educational Slideshow**		
	1:00 PM - Sunita Satyapal: Hydrogen and Fuel Cell Technologies Program Awards Presentations		
1:45 PM	FC102; Earl Wagener, Tetramer Technologies, LLC: New High Performance Water Vapor Membranes To Improve Fuel Cell Balance of Plant Efficiency and Lower Costs	ST046; Kevin Drost, Oregon State U: Microscale Enhancement of Heat and Mass Transfer for Hydrogen Energy Storage	VSS021; John Smart, INL: Idaho National Laboratory Testing of Advanced Technology Vehicles
2:15 PM	FC103; Dale Stretch, Eaton Corp.: Roots Air Management System with Integrated Expander	ST047; Norman Newhouse, Hexagon Lincoln: Development of Improved Composite Pressure Vessels for Hydrogen Storage	VSS033; Barney Carlson, INL: Electric Drive and Advanced Battery and Components Testbed (EDAB)
2:45 PM	FC020; Karren More, ORNL: Characterization of Fuel Cell Materials	ST007; Troy Semelsberger, LANL: Chemical Hydrogen Rate Modeling, Validation, and System Demonstration	VSS074; Barney Carlson, INL: Vehicle Mass and Fuel Efficiency Impact Testing
3:15 PM	FC021; David Jacobson, NIST: Neutron Imaging Study of the Water Transport in Operating Fuel Cells	ST005; Jamie Holladay, PNNL: Systems Engineering of Chemical Hydrogen, Pressure Vessel, and Balance of Plant for On-Board Hydrogen Storage	VSS001; Kevin Walkowicz, NREL: Medium and Heavy-Duty Vehicle Field Evaluations
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	FC048; Huyen Dinh, NREL: Effect of System Contaminants on PEMFC Performance and Durability	ST006; Bart van Hassel, UTRC: Advancement of Systems Designs and Key Engineering Technologies for Materials Based Hydrogen Storage	VSS097; John Rugh, NREL: Electric Drive Vehicle Climate Control Load Reduction
4:45 PM	FC065; Michael Angelo, Hawaii Natural Energy Institute: The Effect of Airborne Contaminants on Fuel Cell Performance and Durability	ST008; Matthew Thornton, NREL: System Design, Analysis, Modeling, and Media Engineering Properties for Hydrogen Energy	VSS098; Aymeric Rousseau, ANL: Advanced Transmission Impact on Fuel Displacement
5:15 PM	FC014; Olga Polevaya, Nuvera Fuel Cells: Durability of Low Pt Fuel Cells Operating at High Power Density		VSS099; Jake Ward, DOE: Support for Government Performance and Results Act (GPRA) Analysis
5:45 PM	FC081; Jennifer Kurtz, NREL: Fuel Cell Technology Status - Voltage Degradation		VSS100; Ram Vijayagopal, ANL: Establishing Thermo-Electric Generator (TEG) Design Targets for Hybrid Vehicles

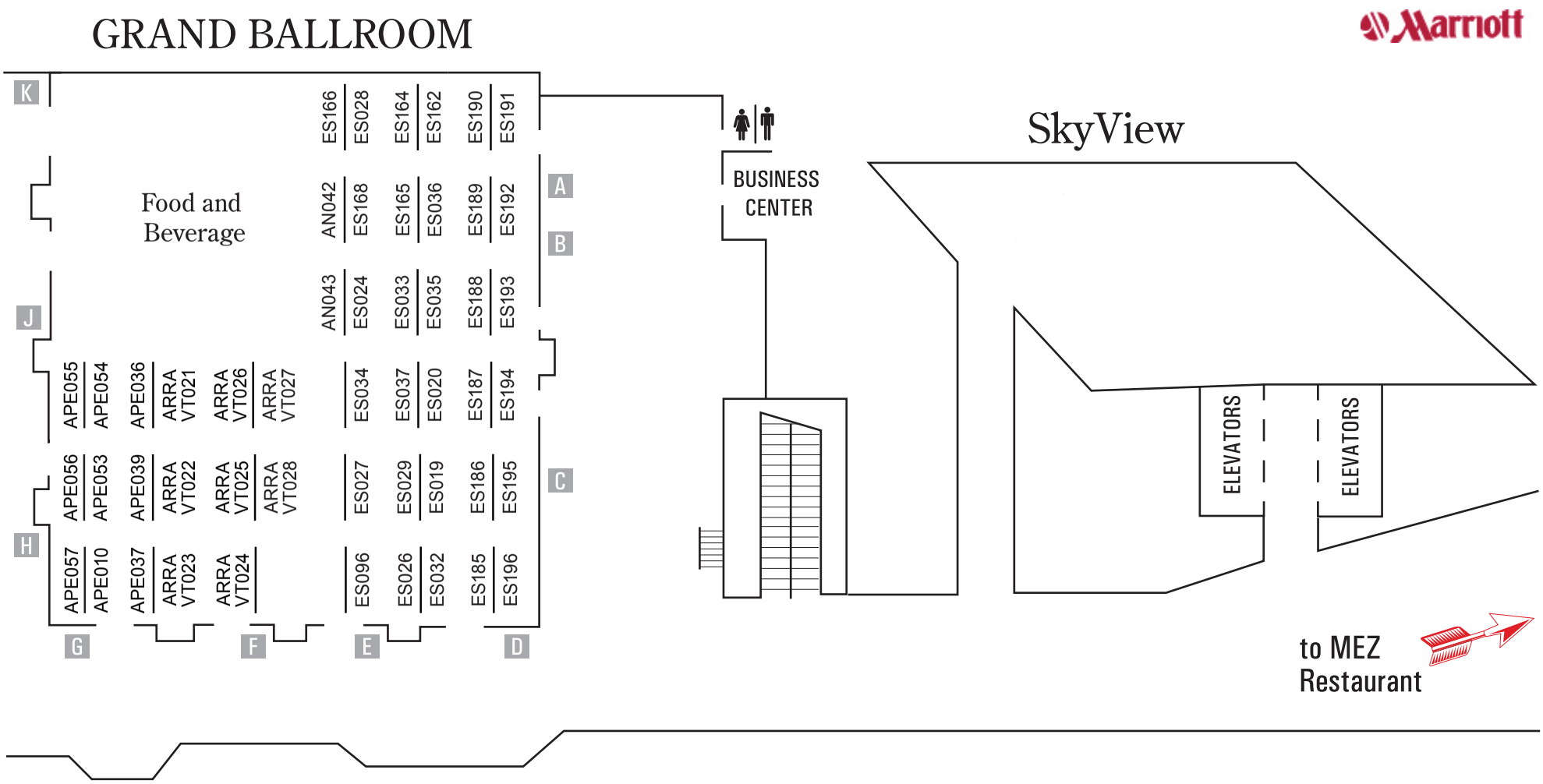
Tuesday, May 14 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:15 AM	PM000; Jerry Gibbs, DOE: Overview of Propulsion Materials	ACE00A; Gurpreet Singh, DOE: Overview of the DOE Advanced Combustion Engine	SCS000; Nha Nguyen, DOE: Safety, Codes and Standards Session Introduction
8:30 AM	PM045; Michael McGuire, ORNL: Non-Rare Earth magnetic materials (Agreement ID:19201)	ACE001; Mark Musculus, SNL: Heavy-Duty Low-Temperature and Diesel Combustion & Heavy-Duty Combustion Modeling	SCS011; Aaron Harris, SNL: R&D for Safety Codes and Standards: SCS Project Overview - Risk
9:00 AM	PM036; Hua-Tay Lin, ORNL: Low-Cost Direct Bonded Aluminum (DBA) Substrates (Agreement ID:23278)	ACE002; Paul Miles, SNL: Light-Duty Diesel Combustion	SCS010; Aaron Harris, SNL: R&D for Safety Codes and Standards: SCS Project Overview - Hydrogen Behavior
9:30 AM	PM037; Andy Wereszczak, ORNL: Thermally Conductive Organic Dielectrics for Power Electronics and Electric Motors	ACE004; John Dec, SNL: HCCI and Stratified-Charge CI Engine Combustion Research	SCS002; Robert Burgess, NREL: Component Standard Research & Development
10:00 AM	PM004; Glenn Grant, PNNL : Novel Manufacturing Technologies for High Power Induction and Permanent Magnet Electric Motors (Agreement ID:23726)	ACE005; Lyle Pickett, SNL: Spray Combustion Cross-Cut Engine Research	SCS005; Brian Somerday, SNL: R&D for Safety, Codes and Standards: Materials and Components Compatibility
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	PM046; Hua-Tay Lin, ORNL: Design Optimization of Piezoceramic Multilayer Actuators for Heavy Duty Diesel Engine Fuel Injectors	ACE006; Richard Steeper, SNL: Automotive HCCI Engine Research	SCS007; Tommy Rockward, LANL: Hydrogen Fuel Quality
11:30 AM	PM009; Michael Lance, ORNL: Materials Issues Associated with EGR Systems (Agreement ID:18571)	ACE007; Joe Oefelein, SNL: Large Eddy Simulation (LES) Applied to Advanced Engine Combustion Research	SCS021; Bill Buttner, NREL: NREL Hydrogen Sensor Testing Laboratory
12:00 PM	PM047; Murali Muralidharan, ORNL: Exhaust Valve Materials for High Efficiency Engines	ACE008; Terry Johnson, SNL: Free-Piston Engine	SCS019; Nick Barilo, PNNL: Hydrogen Safety Panel and Hydrogen Safety Knowledge Tools
12:30 PM	**LUNCH - VT and H2 Educational Slideshow**		
1:45 PM	PM048; Glenn Grant, PNNL: Tailored Materials for Improved Internal Combustion Engine Efficiency (Agreement ID:23725)	ACE075; Sibendu Som, ANL: Advancement in Fuel Spray and Combustion Modeling for Compression Ignition Engine Applications	SCS004; Eric Brosha, LANL: Hydrogen Safety, Codes and Standards: Sensors
2:15 PM	PM044; Mark Smith, PNNL: High-Temperature Aluminum Alloys	ACE010; Christopher Powell, ANL: Fuel Injection and Spray Research Using X-Ray Diagnostics	SCS001; Carl Rivkin, NREL: National Codes and Standards Deployment and Outreach
2:45 PM	PM013; David Parker, ORNL: Thermoelectrics Theory and Structure	ACE011; Steve Ciatti, ANL: Use of Low Cetane Fuel to Enable Low Temperature Combustion	SCS015; Monte Elmore, PNNL: Hydrogen Emergency Response Training for First Responders
3:15 PM	PM012; Andrew Wereszczak, ORNL: Transport Properties, Thermal Response, and Mechanical Reliability of Thermoelectric Materials and Devices for Automotive Waste	ACE012; Dan Flowers, LLNL: Computationally Efficient Modeling of High-Efficiency Clean Combustion Engines	SCS020; Jay Keller, US DOE Consultant: International Program for Hydrogen & Fuel Cells in the Economy - Regulations Codes and Standards Working Group
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	PM049; Thomas Watkins, ORNL: Catalyst Characterization and Deactivation Mechanisms (Agreements 9130 and 9105)	ACE013; Bill Pitz, LLNL: Chemical Kinetic Research on HCCI & Diesel Fuels	
4:45 PM	PM050; C.K. Narula, ORNL: Catalysts via First Principles (Agreement ID:10635)	ACE076; Matthew McNenly, LLNL: Improved Solvers for Advanced Engine Combustion Simulation	
5:15 PM	PM010; Thomas Watkins, ORNL: Durability of Diesel Engine Particulate Filters (Agreement ID:10461)	ACE014; David Carrington, LANL: 2013 KIVA Development	
5:45 PM		ACE016; Scott Curran, ORNL: High Efficiency Clean Combustion in Multi-Cylinder Light-Duty Engines	

Tuesday, May 14 - Poster Presentations

Crystal Gateway Hotel - Grand Ballroom and SkyView, 6:30-8:30 PM

Electrochemical Storage
ES166; Ira Bloom, ANL: Post-Test Analysis of Lithium-Ion Battery Materials at Argonne National Laboratory
ES028; Wenquan Lu, ANL : Validation of Electrode Materials and Cell Chemistries
ES168; Chris Pupek, ANL: Process Development and Scale up of Advanced Electrolyte Materials
ES024; Richard Jow, Army Research Laboratory: High Voltage Electrolytes for Li-ion Batteries
ES034; Xiao-Qing Yang, BNL : Diagnostic Studies to Improve Abuse Tolerance and Life of Li-ion Batteries
ES027; Kevin Gering, INL: Novel Phosphazene Compounds for Enhancing Electrolyte Stability and Safety of Lithium-ion Cells
ES096; Kevin Gering, INL : Diagnostic Testing and Analysis Toward Understanding Aging Mechanisms and Related Path Dependence
ES026; Marshall Smart, JPL: Electrolytes for Use in High Energy Lithium-Ion Batteries with Wide Operating Temperature Range
ES029; Vince Battaglia, LBNL: Scale-up and Testing of Advanced Materials from the BATT Program
ES037; Guoying Chen, LBNL: Overcharge Protection for PHEV Batteries
ES033; Robert Kostecki, LBNL : Electrochemistry Diagnostics of Baseline and New Materials
ES162; Robert Tenent, NREL: Development of Industrially Viable Battery Electrode Coatings
ES164; David Wood, ORNL: Overcoming Processing Cost Barriers of High-Performance Lithium-Ion Battery Electrodes
ES165; David Wood, ORNL: Roll-to-Roll Electrode Processing and Materials NDE for Advanced Lithium Secondary Batteries
ES036; Chris Orendorff, SNL: Abuse Tolerance Improvements
ES035; Zonghai Chen, ANL: Develop & Evaluate Materials & Additives that Enhance Thermal & Overcharge Abuse
ES020; Ali Abouimrane, ANL: Developing High Capacity, Long Life Anodes
ES019; Vilas Pol, ANL: High Capacity Composite Carbon Anodes Fabricated by Autogenic Reactions
ES032; Dan Abraham, ANL: Mitigating Performance Degradation of High-Energy Lithium-Ion Cells
ES185; Bryant Polzin, ANL: Current Research Activities in Electrode and Cell Prototyping
ES186; Dean Miller, ANL: Linking Electrochemical Performance with Microstructural Evolution in High Performance Cathode Materials
ES187; John Vaughey, ANL: Solid State NMR Studies and Local Structure of Voltage Fade Materials
ES188; Daniel Abraham, ANL: Electrochemical Characterization of Voltage Fade in LMR-NMC cells
ES189; Kevin Gallagher, ANL: Examining Hysteresis in Lithium- and Manganese-Rich Composite Cathode Materials
ES190; Christopher Johnson, ANL: Cathode Synthesis and Voltage Fade: Designed Solutions Based on Theory
ES191; Ali Abouimrane, ANL: Impact of Surface Coatings on LMR-NMC Materials: Evaluation and Downselect
ES192; Wenquan Lu, ANL: Thermodynamic Investigations of Lithium- and Manganese-Rich Transition Metal Oxides
ES193; Roy Benedek, ANL: First-Principles Models of Properties of LMR-NMC Materials
ES194; Michael Thackeray, ANL: Development of High-Capacity Cathode Materials with Integrated Structures
ES195; Ira Bloom, ANL: Phase Relations and Voltage Fade Response in LMR-NMC Materials
ES196; Shriram Santhanagopalan, NREL: Impact of ALD Coating on Li/Mn-rich Cathode Materials
Advanced Power Electronics
APE036; Doug DeVoto, NREL: Reliability of Electrical Interconnects
APE039; Sreekant Narumanchi, NREL: Advanced Liquid Cooling R&D
APE037; Gilbert Moreno, NREL: Two-Phase Cooling of Power Electronics
APE010; Michael Lanagan, Penn State U: Glass Ceramic Dielectrics for DC Bus Capacitors
APE053; Madhu Chinthavali, ORNL: Inverter R&D
APE054; Gui-Jia Su, ORNL: WBG Converters and Chargers
APE055; Tim Burress, ORNL: System Integration and Validation
APE056; Omer Onar, ORNL: Power Electronics Architecture R&D
APE057; Curt Ayers, ORNL: Electric Motor Architecture R&D
ARRAVT021; Judith Gieseking, General Motors: US Electric Drive □Manufacturing Center
ARRAVT022; Greg Grant, Delphi Automotive Systems, LLC: Low-Cost U.S. Manufacturing of Power Electronics for Electric Drive Vehicles
ARRAVT023; Richard Thies, Allison Transmission, Inc.: Electric Drive Component Manufacturing Facilities
ARRAVT024; Michael Veenstra, Ford Motor: U.S. Based HEV and PHEV Transaxle Program
ARRAVT025; David Fulton, Remy, Inc.: Providing Vehicle OEMs Flexible Scale to Accelerate Adoption of Electric Drive Vehicles
ARRAVT026; Luke Bokas, UQM Technologies, Inc.: Electric Drive Component Manufacturing Facilities
ARRAVT027; Brian Peaslee, Magna E-Car Systems of America, Inc.: Electric Drive Component Manufacturing: Magna E-Car Systems of America, Inc.
ARRAVT028; Peter Blais, KEMET Corporation: DC Bus Capacitor Manufacturing Facility for Electric Drive Vehicles
Hydrogen Systems Analysis
AN042; Michael Penev, NREL: Hawaii Hydrogen Initiative (H2I) Financial Scenario Analysis
AN043; Darlene Steward, NREL: Analysis of Community Energy



POSTER MAP

Tuesday, May 14

Crystal Gateway Marriott

2013 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Wednesday, May 15 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**I**	**II**	**III**
8:15 AM		PD00A; Erika Sutherland, DOE: Hydrogen Delivery Session Introduction	ES108; Tien Duong, DOE: Overview and Progress of the Batteries for Advanced Transportation Technologies
8:30 AM	APE045; Ayman El-Refaie, General Electric Global: Alternative High-Performance Motors	PD014; Amgad Elgowainy, ANL: Hydrogen Delivery Infrastructure Analysis	ES143; Jack Vaughey, ANL: Novel Anode Materials
9:00 AM	APE044; Jon Lutz, UQM Technologies, Inc.: Unique Lanthide-Free Motor Construction	PD088; Zhili Feng, ORNL: Vessel Design and Fabrication Technology for Stationary High-Pressure Hydrogen Storage	ES063; Stanley Whittingham, Binghampton University-SUNY: Metal-Based, High-Capacity Lithium-Ion Anodes
9:30 AM	APE051; John Miller, ORNL: Electric Motor R&D	PD022; George Rawls, SRNL: Fiber Reinforced Composite Pipelines	ES061; Prashant Kumta, University of Pittsburgh: Nanoscale Heterostructures and Thermoplastic Resin Binders: Novel Lithium-Ion Anodes
10:00 AM	APE015; Iver Anderson, Ames: Permanent Magnet Development for Automotive Traction Motors	PD025; Brian Somerday, SNL: Hydrogen Embrittlement of Structural Steels	ES144; Jun Liu, PNNL: Development of Si-based High Capacity Anodes
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	APE030; Kevin Bennion, NREL: Electric Motor Thermal Management	PD092; Salvador Aceves, LLNL: Rapid High Pressure LH2 Refueling for Maximum Range and Dormancy	ES145; Chunmei Ban, NREL: Atomic Layer Deposition for Stabilization of Silicon Anodes
11:30 AM	APE052; John Rugh, NREL: Integrated Vehicle Thermal Management – Combining Fluid Loops in Electric Drive Vehicles	PD093; Chris Moen, SNL: Polymer and Composite Material Performance in Hydrogen	ES146; Michael Barsoum, Drexel University: New Layered Nanolaminates for Use in Lithium Battery Anodes
12:00 PM		PD021; Norm Newhouse, Hexagon Lincoln: Development of High Pressure Hydrogen Storage Tank for Storage and Gaseous Truck Delivery	ES147; Donghai Wang, Pennsylvania State University: Synthesis and Characterization of Structured Si-Carbon Nanocomposite Anodes and Functional Polymer Binders
12:30 PM LUNCH	**1:00 PM - Presentation by Jim Alkire, DOE-GFO**		
	1:15 PM - Patrick Davis: Vehicle Technologies Program Awards Presentations		
1:45 PM		PD016; Hooshang Heshmat, Mohawk Innovative Technology: Oil-Free Centrifugal Hydrogen Compression Technology Demonstration	ES148; Yi Cui, Stanford University: Wiring up Silicon Nanoparticles for High Performance Lithium-ion Battery Anodes
2:00 PM	MN000; Nancy Garland, DOE: Manufacturing R&D Session Introduction		
2:15 PM	MN001; Michael Ulsh, NREL: Fuel Cell MEA Manufacturing R&D	PD048; Ludwig Lipp, FuelCell Energy, Inc.: Electrochemical Hydrogen Compressor	ES149; Kwai Chan, SwRI: Synthesis and Characterization of Silicon Clathrates for Anode Applications in Lithium-Ion Batteries
2:45 PM	MN007; Emory De Castro, BASF: High Speed, Low Cost Fabrication of Gas Diffusion Electrodes for Membrane Electrode Assemblies	PD071; Katherine Ayers, Proton OnSite: High Performance, Low Cost Hydrogen Generation from Renewable Energy	ES088; Nitash Balsara, LBNL : Development of Polymer Electrolytes for Advanced Lithium Batteries
3:15 PM	MN004; Colin Busby, W.L. Gore: Manufacturing of Low-Cost, Durable Membrane Electrode Assemblies Engineered	PD030; Monjid Hamdan, Giner Electrochemical Systems, LLC: PEM Electrolyzer Incorporating an Advanced Low Cost Membrane	ES089; John Kerr, LBNL : Electrolytes - Interfacial and Bulk Properties and Stability
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	MN006; Michael Stocker, NIST: Metrology for Fuel Cell Manufacturing	PD031; Kevin Harrison, NREL: Renewable Electrolysis Integrated System Development and Testing	ES066; Khalil Amine, ANL: Electrolytes - Advanced Electrolyte and Electrolyte Additives
4:45 PM	MN005; Dan Walczyk, Rensselaer Polytechnic Institute : Adaptive Process Controls and Ultrasonics for High Temperature PEM MEA Manufacture	PD090; Katherine Ayers, Proton OnSite: Low Cost Large Scale PEM Electrolysis for Renewable Energy Storage	ES067; Brett Lucht, U of Rhode Island: Development of Electrolytes for Lithium-ion Batteries
5:15 PM		PD094; Katherine Ayers, Proton OnSite: Economical Production of Hydrogen Through Development of Novel, High Efficiency Electrocatalysts for Alkaline Membrane Electrolysis	ES068; Daniel Scherson, Case Western Reserve U: Bifunctional Electrolytes for Lithium-ion Batteries
5:45 PM			

Wednesday, May 15 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**IV**	**V**	**VI**
8:15 AM			VSS101; Lee Slezak, DOE: Feet on the ground' case for Wireless Charging R&D (Oral Only)
8:30 AM	FC013; Rod Borup, LANL: Durability Improvements Through Degradation Mechanism Studies	ST103; Craig Brown, NIST: Hydrogen Storage in Metal-Organic Frameworks	VSS103; John Miller, ORNL: Wireless Charging
9:00 AM	FC016; Rangachary Mukundan, LANL: Accelerated Testing Validation	ST019; Peter Pfeifer, U of Missouri: Multiply Surface-Functionalized Nanoporous Carbon for Vehicular Hydrogen Storage	VSS102; Allan Lewis, Hyundai: High Efficiency, Low EMI and Positioning Tolerant Wireless Charging of EVs
9:30 AM	FC026; Adam Weber, LBNL: Fuel-Cell Fundamentals at Low and Subzero Temperatures	ST018; Joe Zhou, Texas A&M U: Biomimetic Approach to Metal-Organic Frameworks with High H2 Uptake	VSS104; Perry Jones, ORNL: Dynamic Wireless Power Transfer Feasibility
10:00 AM	FC054; Cortney Mittelsteadt, Giner Electrochemical Systems, LLC: Transport in PEMFCs	ST102; John Vajo, HRL Laboratories, LLC: Room Temperature Hydrogen Storage in Nano-Confined Liquids	VSS105; Jeff Gonder, NREL: Analysis of In-Motion Power Transfer for Multiple Vehicle Applications
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC092; Jon Owejan, GM: Investigation of Micro- and Macro-Scale Transport Processes for Improved Fuel Cell Performance	ST014; Phil Parilla, NREL: Hydrogen Sorbent Measurement Qualification and Characterization	VSS075; Jason Lustbader, NREL: CoolCab Test and Evaluation and CoolCalc HVAC Tool Development
11:30 AM	FC091; Piotr Zelenay, LANL: Advanced Materials and Concepts for Portable Power Fuel Cells	ST107; Raina Olsen, ORNL: The Quantum Effects of Pore Structure on Hydrogen Adsorption	VSS089; Zhiming Gao, ORNL: Advanced HD Engine Systems and Emissions Control Modeling and Analysis
12:00 PM	FC063; David Mountz, Arkema: Novel Materials for High Efficiency Direct Methanol Fuel Cells	ST108; Joseph Mondloch, Northwestern Univ.: Metallation of Metal-Organic Frameworks: En Route to Ambient Temperature Storage of Molecular H2	VSS107; Andreas Malikopoulos, ORNL: Autonomous Intelligent Hybrid Propulsion Systems
12:30 PM LUNCH	**1:00 PM - Presentation by Jim Alkire, DOE-GFO**		
	1:15 PM - Patrick Davis: Vehicle Technologies Program Awards Presentations		
1:45 PM	FC104; Andrew Steinbach, 3M: High Performance, Durable, Low Cost Membrane Electrode Assemblies for Transportation	ST104; Shih-Yuan Liu, U of Oregon: Novel Carbon(C)-Boron(B)-Nitrogen(N)-Containing H2 Storage Materials	VSS108; Paul Chambon, ORNL: Heavy Duty Powertrain System Optimization and Emissions Test Procedure Development
2:15 PM	FC090; Stephen Grot, Ion Power: Corrugated Membrane Fuel Cell Structures	ST040; Benjamin Davis, LANL: Fluid Phase H2 Storage Material Development	VSS109; Paul Chambon, ORNL: PHEV Advanced Series Genset Development/Demonstration Activity
2:45 PM	FC036; Cortney Mittelsteadt, Giner Electrochemical Systems, LLC: Dimensionally Stable High Performance Membranes	ST098; Craig Jensen, Hawaii Hydrogen Carriers, LLC: Development of a Practical Hydrogen Storage System based on Liquid Organic Hydrogen Carriers and a Homogeneous Catalyst	VSS110; Eric Rask, ANL: Battery Energy Availability and Consumption during Vehicle Charging across Ambient Temperatures and Battery Temperature (conditioning)
3:15 PM	FC040; Ludwig Lipp, FuelCell Energy, Inc.: High Temperature Membrane with Humidification-Independent Cluster Structure	ST028; Christopher Wolverton, Northwestern U: Design of Novel Multi-Component Metal Hydride-Based Mixtures for Hydrogen Storage	VSS111; Neeraj Shidore, ANL: Evaluation of the Fuel Economy Impacts of Low Temperature Combustion (LTC) using Engine-in-the-Loop
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	BES003; Steven Regen, Lehigh University: GAS TRANSPORT ACROSS HYPERTHIN MEMBRANES	ST053; Barton Smith, ORNL: Lifecycle Verification of Polymer Liners in Storage Tanks	VSS112; Dileep Singh, ANL: Development of Nanofluids for Cooling Power Electronics for Hybrid Electric Vehicles
4:45 PM	BES002; Stephen Creager, Clemson University: FLUOROPOLYMERS, ELECTROLYTES, COMPOSITES AND	ST093; Felix Paulauskas, ORNL: Melt Processable PAN Precursor for High Strength, Low-Cost Carbon Fibers	VSS006; Kambiz Salari, LLNL: DOE's Effort to Reduce Truck Aerodynamic Drag through Joint Experiments and Computations
5:15 PM	BES001; Gregory Voth, University of Chicago: Computer Simulation of Proton Transport in Fuel Cell Membranes	ST099; Dave Warren, ORNL: Development of Low-Cost, High Strength Commercial Textile Precursor (PAN-MA)	VSS113; Matthew Shirk, INL: DC Fast Charge Impacts on Battery Life and Vehicle Performance
5:45 PM		ST101; Kevin Simmons, PNNL: Enhanced Materials and Design Parameters for Reducing the Cost of Hydrogen Storage Tanks	VSS114; Anthony Markel, NREL: Mitigation of Vehicle Fast Charge Grid Impacts with Renewables and Energy Storage

Wednesday, May 15 - Oral Presentations

Hotel	Crystal Gateway
Salon	**Alexandria**
8:15 AM	LM000; Will Joost, DOE: 2013 Lightweight Materials Annual Merit Review
8:30 AM	LM048; George Husman, Zoltek: Development and Commercialization of a Novel Low-Cost
9:00 AM	LM047; Jim Stike, Materials Innovation Tech: Low Cost Carbon Fiber Composites for Lightweight Vehicle Parts
9:30 AM	LM003; Lee McGetrick, ORNL: Carbon Fiber Technology Facility
10:00 AM	LM006; Felix Paulauskas, ORNL: Advanced Oxidation & Stabilization of PAN-Based Carbon Precursor Fibers
10:30 AM	**BREAK**
11:00 AM	LM069; Felix Paulauskas, ORNL: Development and Commercialization of Alternative Carbon Fiber Precursors and Conversion Technologies - Advanced Conversion
11:30 AM	LM070; Barney Carlson, INNL: Vehicle Mass Impact on Vehicle Losses and Fuel Economy
12:00 PM	LM071; Tom Wenzel, LBNL: Relationships between Vehicle Mass, Footprint, and Societal Risk
12:30 PM LUNCH	**1:00 PM - Presentation by Jim Alkire, DOE-GFO**
	1:15 PM - Patrick Davis: Vehicle Technologies Program Awards Presentations
1:45 PM	LM072; Tim Skszek, VEHMA: Multi-Material Lightweight Prototype Vehicle
2:15 PM	LM062; Zhili Feng, ORNL: Improving Fatigue Performance of AHSS Welds
2:45 PM	LM054; Dave Warren, ORNL: On-Line Weld NDE with IR Thermography
3:15 PM	LM073; Thomas Watkins, ORNL: Residual Stress of Bimetallic Joints and Characterization
3:45 PM	**BREAK**
4:15 PM	LM074; Elizabeth Stephens, PNNL: SPR Process Simulation, Analyses, & Development
4:45 PM	LM075; Yuri Hovanski, PNNL: High Speed Joining of Dissimilar Alloy Aluminum Tailor Welded Blanks
5:15 PM	
5:45 PM	

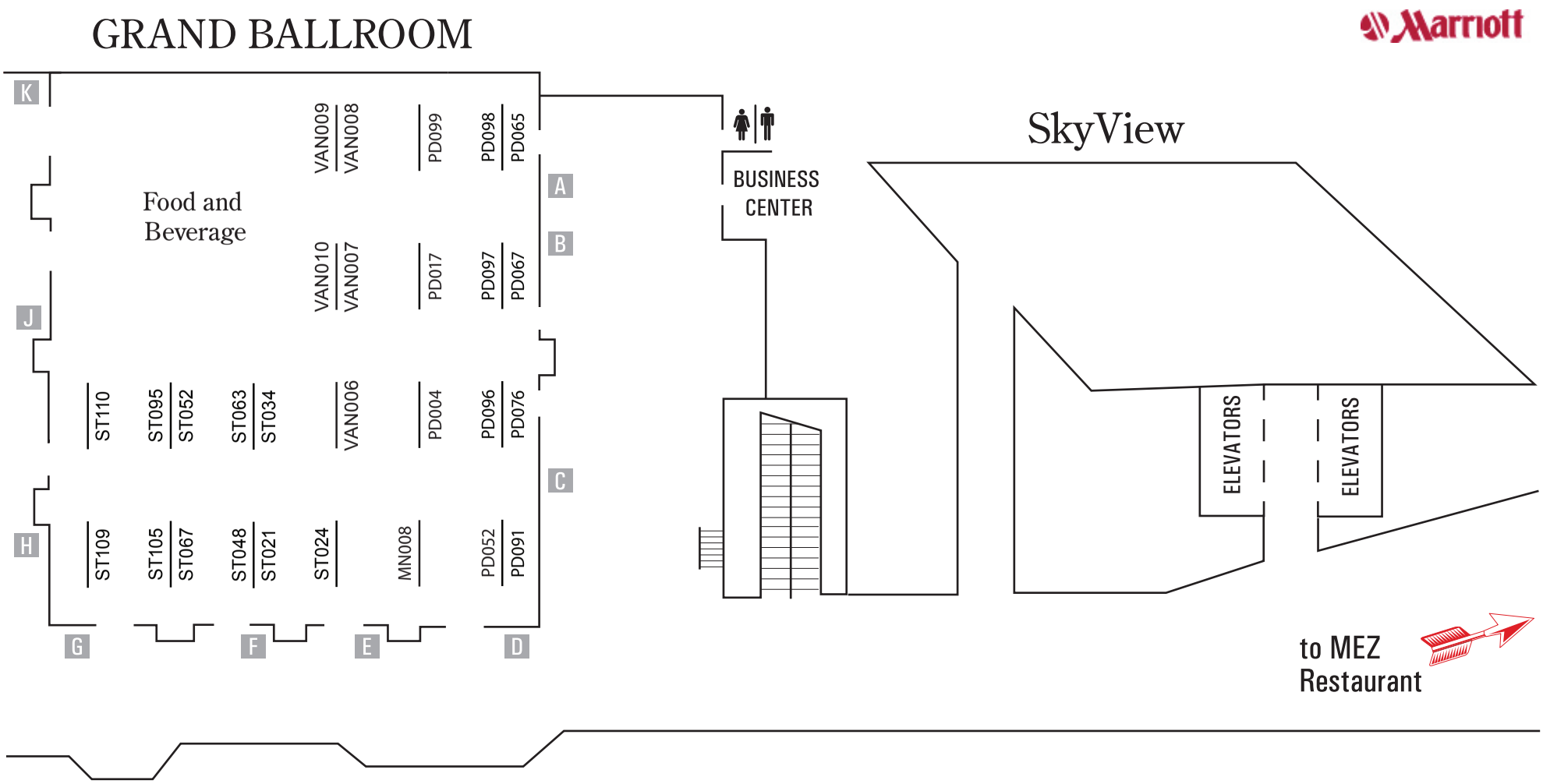
Wednesday, May 15 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:15 AM			MT000; Pete Devlin, DOE: Market Transformation Session Introduction
8:30 AM	TI000; Dennis Smith, DOE: Technology Integration Overview	ACE017; Dean Edwards, ORNL: Accelerating Predictive Simulation of IC Engines with High Performance Computing	MT004; Todd Ramsden, NREL: Direct Methanol Fuel Cell Material Handling Equipment Deployment
9:00 AM	TI013; Larry Johnson, ANL: EcoCAR 2 Plugging into the Future	ACE019; Margaret Wooldridge, U of Michigan: A University Consortium on Efficient and Clean High-Pressure, Lean Burn (HPLB) Engines	MT007; Russ Keller, South Carolina Hydrogen and Fuel Cell Alliance: Landfill Gas–to–Hydrogen
9:30 AM	TI020; Chris Mi, Regents University of Michigan: Center for Electric Drive Transportation at the University of Michigan - Dearborn	ACE021; Gouming Zhu, Michigan State U: Flex Fuel Optimized SI and HCCI Engine	MT006; Kriston Brooks, PNNL: Fuel Cell Combined Heat and Power Commercial Demonstration
10:00 AM	TI021; Gregory Plett, University of Colorado: Innovative Drivetrains in Electric Automotive Technology Education (IDEATE)	ACE015; Jim Szybist, ORNL: Stretch Efficiency for Combustion Engines: Exploiting New Combustion Regimes	MT008; Richard Rocheleau, Hawaii Natural Energy Institute: Hydrogen Energy Systems as a Grid Management Tool
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	TI022; Giorgio Rizzoni, Ohio State University: GATE: Energy Efficient Vehicles for Sustainable Mobility	ACE052; Todd Toops, ORNL: Neutron Imaging of Advanced Engine Technologies	MT012; Aymeric Rousseau, ANL: Fuel Cells as Range Extenders for Battery Electric Vehicles
11:30 AM	TI023; Gregory Shaver, Purdue University: Hoosier Heavy Hybrid Center of Excellence	ACE054; Scott Goldsborough, ANL: Collaborative Combustion Research with BES	MT011; Jim Petrecky, Plug Power: Ground Support Equipment Demonstration
12:00 PM	TI024; Imtiaz Haque, Clemson University: GATE Center of Excellence in Sustainable Vehicle Systems	ACE084; Thomas Wallner, ANL: High Efficiency GDI Engine Research, with Emphasis on Ignition Systems	
12:30 PM	**LUNCH - VT and H2 Educational Slideshow**		
1:30 PM		ACE00B; Ken Howden, DOE: Overview of DOE Emission Control R&D	
1:45 PM	TI025; Joel Anstrom, Pennsylvania State University: IN-VEHICLE, HIGH-POWER ENERGY STORAGE SYSTEMS	ACE044; Dan Greenbaum, Health Effects Institute: Advanced Collaborative Emissions Study (ACES)	H2RA007; Jim Petrecky, Plug Power: Accelerating Acceptance of Fuel Cell Backup Power Systems
2:15 PM	TI026; Uday Vaidya, University of Alabama: GATE Center of Excellence in Lightweight Materials and Manufacturing Technologies	ACE022; Josh Pihl, ORNL: CLEERS Coordination & Joint Development of Benchmark Kinetics for LNT & SCR	H2RA003; Jim Petrecky, Plug Power: Highly Efficient, 5kW CHP Fuel Cells Demonstrating Durability and Economic Value in Residential
2:45 PM	TI027; Kay Kelly, DOE GFO: EV Community Readiness projects: American Lung Association of the Southwest (CO); Oregon Business Development Department (OR, WA)	ACE023; George Muntean, PNNL: CLEERS Aftertreatment Modeling and Analysis	H2RA002; Dan Hennessy, Delphi Automotive: Solid Oxide Fuel Cell Diesel Auxiliary Power Unit Demonstration
3:15 PM	TI028; Mike Scarpino, DOE NETL: EV Community Readiness projects: New York City and Lower Hudson Valley Clean Communities, Inc. (NY, MA, PA); NYSERDA (ME, NH, VT, MA, RI, CT, NY, NJ, PA, DE, MD, DC)	ACE024; Kyeong Lee, ANL: Particulate Emissions Control by Advanced Filtration Systems or GDI Engines	H2RA012; Kevin Kenny, Sprint: Use of 72-Hour Hydrogen PEM Fuel Cell Systems to Support Emergency Communications
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	TI029; Brett Aristigui, DOE NETL: EV Community Readiness projects: SCAQMD (CA); University of Hawaii	ACE026; Chuck Peden, PNNL: Enhanced High and Low Temperature Performance of NOx Reduction Materials	
4:45 PM	TI030; David Kirschner, DOE NETL: EV Community Readiness projects: Delaware Valley Regional Planning Commission (PA); Metropolitan Energy Information Center, Inc. (KS, MO)	ACE029; Michael Harold, U of Houston: Development of Optimal Catalyst Designs and Operating Strategies for Lean NOx Reduction in Coupled LNT-SCR Systems	
5:15 PM	TI031; Neil Kirschner, DOE NETL: EV Community Readiness projects: Center for the Commercialization of Electric Technologies (TX); City of Austin, Austin Energy (TX)	ACE079; Rangachary Mukundan, LANL: Robust Nitrogen Oxide/Ammonia Sensors for Vehicle On-board Emissions Control	
5:45 PM			

Wednesday, May 15 - Poster Presentations

Crystal Gateway Hotel - Grand Ballroom, 6:30-8:30 PM

Hydrogen Production and Delivery
PD065; Timothy Norman, Giner Electrochemical Systems, LLC: Unitized Design for Home Refueling Appliance for Hydrogen Generation to 5,000 psi
PD067; Luke Dalton, Proton OnSite: Hydrogen by Wire - Home Fueling System
PD076; Dev Chidambaram, U of Nevada Reno: Metal Oxide Semiconductor Nanotubular Arrays for Photoelectrochemical Hydrogen Generation
PD091; Gokhan Alptekin, TDA Research: Bio-Fueled Solid Oxide Fuel Cells
PD052; Muhammad Huda, University of Texas at Arlington: PEC Materials: Theory and Modeling
PD096; William Summers, SRNL: Electrolyzer Component Development for the HyS Thermochemical Cycle
PD097; Todd Williamson, LANL: Photoelectrochemical Material Synthesis at LANL
PD098; Christopher Capuano, Proton OnSite: Low-Noble-Metal-Content Catalysts/Electrodes for Hydrogen Production by Water Electrolysis
PD099; Shane Ardo, Caltech: Next-Generation Si Microwire Array Devices for Unassisted Photoelectrosynthesis
PD017; Frank Di Bella, Concepts NREC: Development of a Centrifugal Hydrogen Pipeline Gas Compressor
PD004; Stefan Czernik, NREL: Distributed Bio-Oil Reforming
Hydrogen Storage
ST024; Cheng-Yu Wang, Penn State: Hydrogen Trapping through Designer Hydrogen Spillover Molecules with Reversible Temperature and Pressure-Induced
ST021; Thomas Gennett, NREL: Weak Chemisorption Validation
ST034; Jim Wegrzyn, BNL: Aluminum Hydride: the Organometallic Approach
ST063; Ragaiy Zidan, SRNL: Electrochemical Reversible Formation of Alane
ST048; Andrew Goudy, Delaware State U: Hydrogen Storage Materials for Fuel Cell Powered Vehicles
ST067; Terry Udovic, NIST: Neutron Characterization in Support of the DOE Hydrogen Storage Sub-Program
ST052; Karl Gross, H2 Technology Consulting LLC: Best Practices for Characterizing Engineering Properties of Hydrogen Storage Materials
ST095; Daniel Brayton, Hawaii Hydrogen Carriers: Low Cost, Metal Hydride Based Hydrogen Storage System for Forklift Applications (Phase II)
ST105; Dongsheng Mao, Applied Nanotech, Inc.: Ultra Lightweight High Pressure Hydrogen Fuel Tanks Reinforced with Carbon Nanotubes
ST109; Terrisa Duenas, NextGen Aeronautics: Low-cost Integrated Nanoreinforcement for Composite Tanks--"LINCT" (SBIR Phase I)
ST110; Andrea Haight, Composite Technologies Development: Optimizing the Cost and Performance of Composite Cylinders for H2 Storage using a Graded Construction
Vehicle Technologies Analysis
VAN006; Anant Vyas, ANL: Development and Update of Models for Long-Term Energy and GHG Impact Evaluation
VAN007; Tom Stephens, ANL: Support for Government Performance and Results Act (GPRA)
VAN008; Aymeric Rousseau, ANL: Support for Government Performance and Results Act (GPRA)
VAN009; Stacy Davis, ORNL: Transportation Data Programs:Transportation Energy Data Book,Vehicle Technologies Market Report, and VT Fact of the Week
VAN010; David Greene, ORNL: Measuring the Costs of U.S. Oil Dependence and the Benefits of Reducing It
Hydrogen Manufacturing
MN008; Patrick Lam, Quantum Fuel Systems Technologies Worldwide, Inc.: Development of Advanced Manufacturing Technologies for Low Cost Hydrogen Storage Vessels



POSTER MAP

Wednesday, May 15

Crystal Gateway Marriott

2013 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Thursday, May 16 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**I**	**II**	**III**
8:15 AM		PD000; Katie Randolph, DOE: Hydrogen Production Session Introduction	
8:30 AM	LM076; Kinga Unocic, ORNL: Understanding Protective Film Formation by Magnesium Alloys in Automotive Applications	PD013; Michele Lewis, ANL: Electrolyzer Development for the Cu-Cl Thermochemical Cycle	ES057; Wesley Henderson, North Carolina State U: Inexpensive, Nonfluorinated (or Partially Fluorinated) Anions for Lithium Salts and Ionic Liquids for Lithium Battery Electrolytes
9:00 AM	LM056; Curt Lavender, PNNL: Non-Rare Earth High-Performance Wrought Magnesium Alloys	PD027; Lloyd Brown, SAIC: Solar High-Temperature Water Splitting Cycle with Quantum Boost	ES100; Austen Angell, Arizona State University: Electrolytes and Separators for High Voltage Li Ion Cells
9:30 AM	LM077; Alan Luo, USAMP: Magnesium-Intensive Front End Sub-Structure Development	PD081; Tony McDaniel, SNL: Solar Hydrogen Production with a Metal Oxide Based Thermochemical Cycle	ES182; Nancy Dudney, ORNL: Composite Electrolytes to Stabilize Metallic Linium Anodes
10:00 AM	LM035; Steve Derezinski, MOxST: Scale-Up of Magnesium Production by Fully Stabilized Zirconia Electrolysis	PD028; Al Weimer, U of Colorado: Solarthermal Redox-based Water Splitting Cycles	ES049; Michael Thackeray, ANL : Design and Evaluation of High Capacity Cathodes
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	LM060; Mark Smith, PNNL: Aerodynamic Lightweight Cab Structure Components	PD033; Thomas Jaramillo, Stanford U/NREL: Solar Hydrogen Production by Photoelectrochemical (PEC) Water-Splitting: Advancing Technology Through the Synergistic Activities of the PEC Working Group (PEC WG)	ES052; Marca Doeff, LBNL : Design of High Performance, High Energy Cathode Materials
11:30 AM	LM078; Xin Sun, PNNL: Aluminum Formability Extension through Superior Blank Processing	PD035; Todd Deutsch, NREL: Semiconductor Materials for Photoelectrolysis	ES051; Arumugam Manthiram, U of Texas at Austin : Stabilized Spinel and Polyanion Cathodes
12:00 PM	LM079; Rich Davies, PNNL: Enhanced Room-Temperature Formability in High-Strength Aluminum Alloys through Pulse-Pressure Forming	PD058; Tadashi Ogitsu, LLNL/NREL: Characterization and Optimization of Photoelectrode Surfaces for Solar-to-Chemical Fuel Conversion	ES056; Jason Zhang, PNNL: Development of High Energy Cathode Materials
12:30 PM LUNCH	**1:00 PM - Presentation by Mark Johnson, ARPA-E**		
	1:15 PM - Sunita Satyapal: Special Recognition Awards Presentations		
1:45 PM	LM080; Lou Hector, USAMP: Integrated Computational Materials Engineering Approach to Development of Lightweight 3GAHSS Vehicle Assembly	PD053; Nicolas Gaillard, MVSystems/HNEI: Photoelectrochemical Hydrogen Production	ES070; Jordi Cabana, LBNL: Novel and Optimized Materials Phases for High Energy Density Batteries
2:15 PM	LM081; Uday Vaidya, Univ Alabama Birmingham: GATE Center of Excellence at UAB for Lightweight Materials and Manufacturing for Automotive, Truck and Mass Transit	PD056; Xunming Deng, Midwest Optoelectronics, LLC: Critical Research for Cost-Effective Photoelectrochemical Production of Hydrogen	ES183; Feng Wang, HRL/BNL: In situ Solvothermal Synthesis of Novel High Capacity Cathodes
2:45 PM	LM057; Xin Sun, PNNL: Mechanistic-Based Ductility Prediction for Complex Mg Castings	PD039; Phil Weyman, J Craig Venter Inst.: Hydrogen from Water in a Novel Recombinant Oxygen-Tolerant Cyanobacterial System	ES184; Andrew Kercher, ORNL: Lithium-Bearing Mixed Polyanion (LBMP) Glasses as Cathode Materials
3:15 PM	LM058; Murali Muralidharan, ORNL: Low-Cost Magnesium Sheet Production using the Twin Roll Casting Process and Asymmetric Rolling	PD095; Pin-Ching Maness, NREL: Probing O2-tolerant CBS Hydrogenase for Hydrogen Production	ES106; Jagjit Nanda, ORNL: Studies on Lithium Manganese Rich MNC Composite Cathodes
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	LM082; Xin Sun, PNNL: Development of 3rd Generation Advanced High Strength Steels (AHSS) with an Integrated Experimental and Simulation Approach	PD037; Maria Ghirardi, NREL: Biological Systems for Hydrogen Photoproduction	ES105; Chengdu Liang, ORNL: Additives and Cathode Materials for High-Energy Lithium Sulfur Batteries
4:45 PM		PD036; Tasios Melis, UC Berkeley: Maximizing Light Utilization Efficiency and Hydrogen Production in Microalgal Cultures	ES095; Ray Unocic, ORNL: In-Situ Electron Microscopy of Electrical Energy Storage Materials
5:15 PM		PD038; Pin-Ching Maness, NREL: Fermentation and Electrohydrogenic Approaches to Hydrogen Production	ES085; Robert Kostecki, LBNL : Interfacial Processes in EES Systems Advanced Diagnostics
5:45 PM			

Thursday, May 16 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**IV**	**V**	**VI**
8:00 AM			VSS064; Dale Oehlerking, Navistar: SuperTruck – Development and Demonstration of a Fuel-Efficient Class 8 Tractor & Trailer
8:30 AM	FC006; Radoslav Atanasoski, 3M: Durable Catalysts for Fuel Cell Protection During Transient Conditions		ARRAVT081; Ken Damon, Peterbilt: Technology and System Level Demonstration of Highly Efficient and Clean, Diesel Powered Class 8 Trucks
9:00 AM	FC007; Bryan Pivovar, NREL: Extended, Continuous Pt Nanostructures in Thick, Dispersed Electrodes		ARRAVT070; Jon Gustafson, Cascade Sierra Solutions: Interstate Grid Electrification Improvement Project
9:30 AM	FC008; Nenad Markovic, ANL: Nanosegregated Cathode Catalysts with Ultra-Low Platinum Loading		VSS081; Pascal Amar, Volvo Trucks: Development and Demonstration of a Fuel-Efficient Class 8 Highway Vehicle
10:00 AM	FC009; Radoslav Adzic, BNL: Contiguous Platinum Monolayer Oxygen Reduction Electrocatalysts on High-Stability-Low-Cost Supports		ARRAVT080; Derek Rotz, DTNA: Class 8 Truck Freight Efficiency Improvement Project
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC010; Mahlon Wilson, LANL: The Science and Engineering of Durable Ultralow PGM Catalysts		VSS018; Sandra Monterosso, General Motors : Plug-in Hybrid (PHEV) Vehicle Technology Advancement and Demonstration Activity
11:30 AM	FC044; Eric Brosha, LANL: Engineered Nano-scale Ceramic Supports for PEM Fuel Cells		ARRAVT067; Abdullah Bazzi, Chrysler LLC: Advancing Transportation Through Vehicle Electrification - PHEV
12:00 PM	FC085; Vijay Ramani, IIT: Synthesis and Characterization of Mixed-Conducting Corrosion Resistant Oxide Supports		VSS019; Ryan McGee, Ford: Ford Plug-In Project: Bringing PHEVs to Market
12:30 PM LUNCH	**1:00 PM - Presentation by Mark Johnson, ARPA-E**		
	1:15 PM - Sunita Satyapal: Special Recognition Awards Presentations		
1:45 PM	FC086; Sanjeev Mukerjee, Northeastern Univ: Development of Novel Non Pt Group Metal Electrocatalysts for Proton Exchange Membrane Fuel Cell Applications		ARRAVT066; Thomas Garetson, Electric Transportation Engineering Corp.: Electric Drive Vehicle Demonstration and Vehicle Infrastructure Evaluation
2:00 PM		VSS082; Yury Kalish, DOE: Legacy Fleet Improvements	
2:15 PM	FC087; Anusorn Kongkanand, GM: High-Activity Dealloyed Catalysts	VSS085; Robert Benedict, Goodyear: System for Automatically Maintaining Pressure in a Commercial Truck Tire	ARRAVT073; Kumar Gogineni, ChargePoint: ChargePoint America
2:45 PM	FC088; Branko Popov, U of South Carolina: Development of Ultra-Low Platinum Alloy Cathode Catalyst for PEM Fuel Cells	VSS084; Peter Votruba-Drzal, PPG: A Materials Approach to Fuel-Efficient Tires	ARRAVT071; Greg Cesiel, General Motors : Advanced Vehicle Electrification and Transportation Sector Electrification
3:15 PM	FC084; John Turner, NREL: WO3 and HPA Based Systems for Durable Pt Catalysts in PEMFC Cathodes	VSS083; Timothy Donley, Cooper Tire: Improving Vehicle Fuel Efficiency Through Tire Design, Materials, and Reduced Weight	ARRAVT072; Robin Mackie, Smith Electric Vehicles: Smith Electric Vehicles: Advanced Vehicle Electrification + Transportation Sector Electrification
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	BES004; Perla Balbuena, University of Texas: Theory-Guided Design of Nanoscale Multi-Metallic Catalysts For Fuel Cells	VSS087; Zwick Tang, Eaton: Look-Ahead Driver Feedback and Powertrain Management	ARRAVT083; Jeff Cox, SCAQMD: SCAQMD:Plug-In Hybrid Electric Medium-Duty Commercial Fleet Demonstration and Evaluation
4:45 PM	BES005; Jingguang Chen, Columbia University: Structure-Property Relationship in Metal Carbides and Bimetallic Alloys	VSS086; Matthew Barth, University of California at Riverside: Next Generation Environmentally Friendly Driving Feedback	VSS115; Brian Choe, SCAQMD: Zero Emission Heavy Duty Drayage Truck Demonstration
5:15 PM	BES006; Abhaya Datye, University of New Mexico: Nanostructured Catalysts for Hydrogen Production from Renewable Feedstocks		VSS116; Nicholas Williams, Houston-Galvelston Area Council: Houston Zero Emission Delivery Vehicle Deployment Project
5:45 PM			VSS117; Nicholas Williams, Houston-Galvelston Area Council: Hydrogen Fuel-Cell Electric Hybrid Truck Demonstration

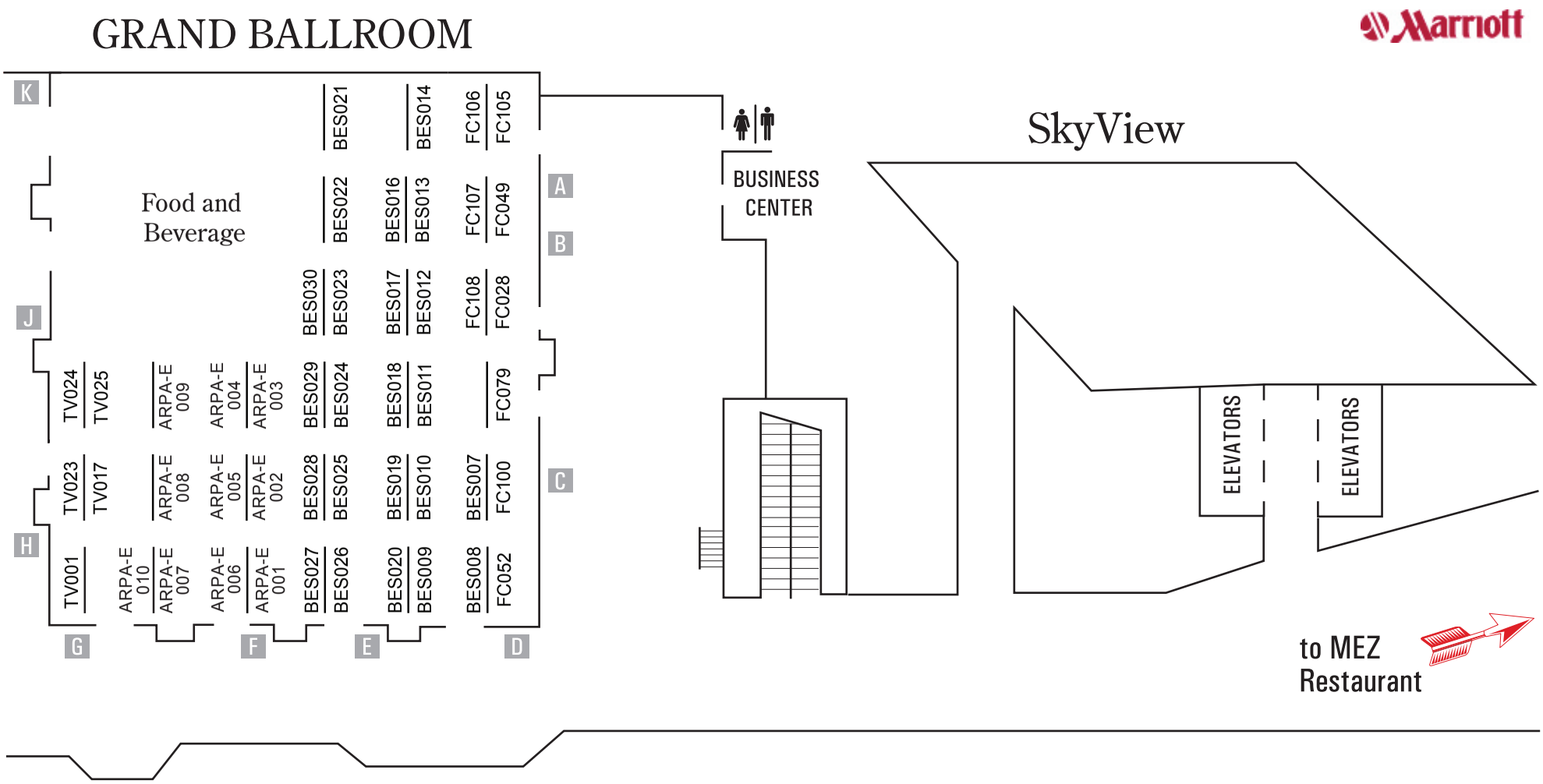
Thursday, May 16 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:15 AM			
8:30 AM	TI032; Erin Russell-Story, DOE NETL: EV Community Readiness projects: Clean Energy Coalition (MI); Clean Fuels Ohio	ACE077; Bill Partridge, ORNL: Cummins-ORNL\FEERC Combustion CRADA: Characterization & Reduction of Combustion	
9:00 AM	TI033; Darren Stevenson, DOE NETL: EV Community Readiness projects: South Florida Regional Planning Council; Virginia Department of Mines, Minerals and Energy	ACE032; Bill Partridge, ORNL: Cummins/ORNL-FEERC CRADA: NOx Control & Measurement Technology for Heavy-Duty Diesel Engines	
9:15 AM			VAN000; Jake Ward, COE: VTO Analysis Portfolio
9:30 AM	TI034; Trev Hall, DOE NETL: EV Community Readiness projects: Center for Transportation and the Environment (GA, AL, SC); Centralina Council of Governments (NC)	ACE033; Jim Parks, ORNL: Emissions Control for Lean Gasoline Engines	VAN001; Tom Stephens, ANL: Making Vehicle Technology Deployment Scenarios More Robust
10:00 AM	TI014; Ted Sears, NREL: EPAct State and Alternative Fuel Provider Fleets	ACE085; Todd Toops, ORNL: Low Temperature Emission Control	VAN002; Michael Wang, ANL: GREET Development and Applications for Life-Cycle Analysis of Vehicle/Fuel Systems
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM		ACE078; George Muntean, PNNL: Investigation of Mixed Oxide Catalysts for NO Oxidation	VAN003; Mark Singer, NREL: Consumer Vehicle Technology Data
11:10 AM	FT000; Kevin Stork, DOE: Fuel & Lubricant Technologies R&D		
11:30 AM	FT003; Bob McCormick, NREL: Performance of Biofuels and Biofuel Blends	ACE055; Chuck Peden, PNNL: Deactivation Mechanisms of Base Metal/Zeolite Urea Selective Catalytic Reduction Materials, and Development of Zeolite-Based Hydrocarbon Adsorber Materials	VAN004; Aaron Brooker, NREL: Analytical Modeling Linking the FASTSim and ADOPT Software Tools
12:00 PM	FT008; James Szybist, ORNL: Gasoline-Like Fuel Effects on Advanced Combustion Regimes	ACE056; Mark Stewart, PNNL: Fuel-Neutral Studies of Particulate Matter Transport Emissions	VAN005; Zhenhong Lin, ORNL: Updating and Enhancing the MA3T Vehicle Choice Model
12:30 PM	**LUNCH - VT and H2 Educational Slideshow**		
1:30 PM		ACE00C; Roland Gravel, DOE: Overview of the DOE High Efficiency Engine Technologies R&D	TV000; Jason Marcinkoski, DOE: Technology Validation Session Introduction
1:45 PM	FT002; Brad Zigler, NREL: Advanced Combustion and Fuels	ACE057; David Koeberlein, Cummins: Cummins SuperTruck Program - Technology and System Level Demonstration of Highly Efficient and Clean, Diesel Powered Class 8 Trucks	TV018; Rhonda Staudt, H2Pump: Hydrogen Recycling System Evaluation and Data Collection
2:15 PM	FT004; Chuck Mueller, SNL: Fuel Effects on Mixing-Controlled Combustion Strategies for High-Efficiency Clean-Combustion Engines	ACE058; Kevin Sisken, Detroit Diesel: SuperTruck Program: Engine Project Review	TV019; Kevin Harrison, NREL: Hydrogen Component Validation
2:45 PM	FT006; Magnus Sjoberg, SNL: Advanced Lean-Burn DI Spark Ignition Fuels Research	ACE059; William De Ojeda, Navistar International Corp.: Supertruck - Development and Demonstration of a Fuel-Efficient Class 8 Tractor & Trailer	TV020; Larry Moulthrop, Proton: Validation of an Advanced High Pressure PEM Electrolyzer and Composite Hydrogen Storage, with Data Reporting, for SunHydro Stations
3:15 PM	FT007; Scott Sluder, ORNL: Fuel Effects on Emissions Control Technologies	ACE060; Pascal Amar, Volvo: Volvo SuperTruck - Powertrain Technologies for Efficiency Improvement	TV008; Leslie Eudy, NREL: Technology Validation: Fuel Cell Bus Evaluations
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	FT014; Jun Qu, ORNL: Ionic Liquids as Multi-Functional Lubricant Additives to Enhance Engine Efficiency	ACE088; Swami Nathan Subramanian, Eaton Corporation : Heavy Duty Roots Expander for Waste Heat Energy Recovery	TV021; Jennifer Kurtz, NREL: Forklift and Backup Power Data Collection and Analysis
4:45 PM		ACE089; Alexander Sappok, Filter Sensing Technologies, Inc.: Development of Radio Frequency Diesel Particulate Filter Sensor and Controls for Advanced Low-Pressure Drop Systems to Reduce Engine Fuel Consumption	TV016; Chris Ainscough, NREL: Stationary Fuel Cell Evaluation
5:15 PM		ACE087; Mike Bunce, MAHLE Powertrain LLC : Next-generation Ultra-Lean Burn Powertrain	
5:45 PM			

Thursday, May 16 - Poster Presentations

Crystal Gateway Hotel - SkyView, 6:30-8:30 PM

Technology Validation
TV001; Jennifer Kurtz, NREL: Fuel Cell Electric Vehicle Evaluation
TV023; Michael Kashuba, CARB: Data Collection and Validation of Newport Beach Hydrogen Station Performance
TV024; Michael Dray, CSULA: CSULA Hydrogen Refueling Facility Performance Evaluation and Optimization
TV025; Michael Tieu, GTI: Performance Evaluation of Delivered Hydrogen Fueling Stations
TV017; Sam Sprik, NREL: Next Generation Hydrogen Infrastructure Evaluation
Fuel Cells
FC052; Tommy Rockward, LANL: Technical Assistance to Developers
FC100; Shyam Kocha, NREL: High Aspect Ratio Fuel Cell Catalysts
FC079; Prabhakar Singh, University of Connecticut Global Fuel Cell Center: Improving Fuel Cell Durability and Reliability
FC028; Robert Dross, Nuvera Fuel Cells: Transport Studies Enabling Efficiency Optimization of Cost-Competitive Fuel Cell Stacks
FC049; Silvia Wessel, Ballard: Development of Micro-Structural Mitigation Strategies for PEM Fuel Cells: Morphological Simulations and Experimental
FC105; C.H. Wang, TreadStone Technologies, Inc.: Low Cost PEM Fuel Cell Metal Bipolar Plates
FC106; Deborah Myers, ANL: Rationally Designed Catalyst Layers for PEMFC Performance Optimization
FC107; Piotr Zelenay, LANL: Non-Precious Metal Fuel Cell Cathodes: Catalyst Development & Electrode Structure Design
FC108; Bryan Pivovar, NREL: Advanced Ionomers & MEAs for Alkaline Membrane Fuel Cells
BES007; Benny Freeman, University of Texas-Austin: Fundamental Structure/Property Studies of Gas Separation Membrane Polymers
BES008; William Koros, Georgia Tech: Precisely Tunable High Performance Carbon Molecular Sieve Membranes for Energy Intensive Separations
BES009; Muhammad Sahimi, University of Southern California: Nanoporous Membranes for Hydrogen Production: Experimental Studies and Molecular
BES010; Peter Stair, ANL: Structure/Composition/Function Relationships in Supported Nanoscale Catalysts for Hydrogen
BES011; Radoslav Adzic, BNL: Metal and Metal Oxide-Supported Platinum Monolayer Electrocatalysts for Oxygen Reduction
BES012; Jose Rodriguez, BNL: ACTIVE SITES AND MECHANISM FOR THE WATER-GAS SHIFT REACTION ON METAL AND METAL/OXIDE CATALYSTS
BES013; Steve Overbury, ORNL: Fundamentals of Catalysis and Chemical Transformations
BES014; Thomas Autrey, PNNL: ACTIVATION OF SMALL MOLECULES WITH BI-FUNCTIONAL AMBIPHILIC CATALYST COMPLEXES
BES016; Morris Bullock, PNNL: Bio-Inspired Molecular Catalysts for Oxidation of Hydrogen and Production of Hydrogen: Cheap Metals for Noble Tasks
BES017; Ram Seshadri, University of California-Santa Barbara: Platinum-Group Metal (PGM) Substituted Complex Oxide Catalysts
BES018; Steven Suib, University of Connecticut: POROUS TRANSITION METAL OXIDES: SYNTHESIS, CHARACTERIZATION, AND CATALYTIC ACTIVITY
BES019; William Mustain, University of Connecticut: Understanding the Effects of Surface Chemistry and Microstructure on the Activity and Stability of Pt
BES020; YuYe Tong, Georgetown University: In Situ NMR/IR/Raman and ab initio DFT Investigations of Pt-Based Mono- and Bi-metallic Nanoscale
BES021; Umit Ozkan, Ohio State University: Investigation of the Nature of Active Sites on Heteroatom-Containing Carbon Nano-Structures for Oxygen
BES022; Raymond Gorte, University of Pennsylvania: OXIDE-METAL INTERACTIONS STUDIED ON M@OXIDE, CORE-SHELL CATALYSTS
BES023; John Vohs, University of Pennsylvania: Fundamental Studies of the Steam Reforming of Alcohols on PdZnO and Co/ZnO Catalysts
BES024; Guofeng Wang, University of Pittsburgh: Theoretically Relating the Surface Composition of the Pt Alloys to Their Performance as the Electrocatalysts
BES025; Robert Bartynski, Rutgers University: Nanoscale Surface Chemistry and Electrochemistry of Clean and Metal-Covered Faceted Substrates: Structure,
BES026; Richard Crooks, University of Texas: Correlation of Theory and Function in Well-Defined Bimetallic Electrocatalysts
BES027; Maria Flytzani-Stephanopoulos, Tufts University: Metal Ion Sites on Oxide Supports as Catalysts for the Water-Gas Shift and Methanol Steam
BES028; David Cox, Virginia Tech: Hydrocarbon Oxidation, Dehydrogenation and Coupling over Model Metal Oxide Surfaces
BES029; S. Ted Oyama, Virginia Tech: Atomic Level Studies of Advanced Catalysts for Hydrodeoxygenation
BES030; Manos Mavrikakis, University of Wisconsin: ATOMIC-SCALE DESIGN OF METAL AND ALLOY CATALYSTS: A COMBINED THEORETICAL AND
ARPA-E Hydrogen and Fuel Cells
ARPA-E001; Katherine Ayers, Proton Onsite: H2 Production via Anion Exchange Membrane Electrolysis
ARPA-E002; Yushan Yan, U of Delaware: Polymer Anion Exchange Membrane Based Electrochemical Energy Systems: Fuel cells, electrolyzers and flow batteries
ARPA-E003; Mike Hickner, Penn State U: Anion Exchange Membrane Stability
ARPA-E004; Conghua Wang, Treadstone: Component Development for Regenerative Fuel Cells
ARPA-E005; Yu Seung Kim, LANL: Alkaline Fuel Cell Membrane/Catalyst
ARPA-E006; Venkat Srinivasan, LBL: Hydrogen-Bromine Flow Battery
ARPA-E007; Singaravelu Elangovan, Ceramatec: Intermediate Temperature Proton Conducting Fuel Cells for Transportation Applications
ARPA-E008; Chinbay Fan, GTI: Methane to Methanol Fuel: A Low Temperature Process
ARPA-E009; Michael Perry, UTRC: Breakthrough Flow Battery Cell Stack
ARPA-E010; Sanjeev Mukerjee , Northeastern University: Anion Exchange Membrane Electrolyzer Catalyst



POSTER MAP

Thursday, May 16

Crystal Gateway Marriott

2013 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Friday, May 17 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:00 AM			ACE00E; John Fairbanks, DOE: Automotive Thermoelectric Generators and HVAC
8:30 AM		ACE062; Ron Reese, Chrysler: A MultiAir / MultiFuel Approach to Enhancing Engine System Efficiency	ACE047; Clay Maranville, Ford Motor Company: Thermoelectric HVAC and Thermal Comfort Enablers for Light-Duty Vehicle Applications
9:00 AM		ACE063; Halim Santoso, General Motors: Lean Gasoline System Development for Fuel Efficient Small Car	ACE048; Jeffrey Bozeman, General Motors: Energy Efficient HVAC System for Distributed Cooling/Heating with Thermoelectric Devices
9:30 AM		ACE064; Keith Confer, Delphi Automotive Systems: Gasoline Ultra Fuel Efficient Vehicle	ACE080; Doug Crane, GenTherm: Thermoelectric Waste Heat Recovery Program for Passenger Vehicles
10:00 AM		ACE065; Corey Weaver, Ford Motor Company: Advanced Gasoline Turbocharged Direct Injection (GTDI) Engine Development	ACE081; Jim Salvador, General Motors: Cost-Competitive Advanced Thermoelectric Generators for Direct Conversion of Vehicle Waste Heat into Useful Electrical Power
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM		ACE066; Hakan Yilmaz, Robert Bosch: Advanced Combustion Concepts - Enabling Systems and Solutions (ACCESS) for High Efficiency Light Duty Vehicles	ACE082; Jonathan D'Angelo, GMZ Energy Inc.: Nanostructured High-Temperature Bulk Thermoelectric Energy Conversion for Efficient Automotive Waste Heat Recovery
11:30 AM		ACE061; Michael Ruth, Cummins: ATP-LD; Cummins Next Generation Tier 2 Bin 2 Diesel Engine	ACE067; Kenneth Goodson, Stanford Univ: Thermoelectrics Partnership: Automotive Thermoelectric Modules with Scalable Thermo- and Electro-Mechanical Interfaces
12:00 PM		ACE086; Edward Keating, General Motors LLC: The Application of High Energy Ignition and Boosting/Mixing Technology to Increase Fuel Economy in Spark Ignition Gasoline Engines by Increasing EGR Dilution Capability	ACE068; Joseph Heremans, Ohio State Univ: DOE/NSF Thermoelectric Partnership Project SEEBECK Saving Energy Effectively By Engaging in Collaborative Research and Sharing Knowledge