2012 DOE HYDROGEN and FUEL CELLS PROGRAM and VEHICLE TECHNOLOGIES PROGRAM ANNUAL MERIT REVIEW and PEER EVALUATION MEETING OVERALL SCHEDULE

	Monday May 14 - Gateway Hotel
1:00	Guest Speakers and Overviews of the Hydrogen and Fuel Cells Program and Vehicle Technologies Program (Salons III and IV)
3:00	Break
3:30	Hydrogen 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-12

Crystal Gateway Marriott Hotel

Salon	Tuesday May 15 I	II	III	IV	V	VI	Alex.*	Wednesday May 16 I	II	III	IV	V	VI	Alex.*	Thursday May 17 I	II	III	IV	V	VI	Friday May 18 I	II	III	IV	V	VI
7:15 AM	Continental Breakfast							Continental Breakfast							Continental Breakfast						Continental Breakfast					
8:15 AM	APE	AN		FC	ST	VSS			PD					LM		PD										
8:30 AM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM			FC		VSS
9:00 AM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM			FC		VSS
9:30 AM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM			FC		VSS
10:00 AM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM			FC		VSS
10:30 AM	Break							Break							Break						Break					
11:00 AM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM			FC		VSS
11:30 AM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM			FC		
12:00 PM	APE	AN	ES	FC	ST	VSS	PM	APE	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS	LM					
12:30 PM	**Lunch** 1:00 PM - N. Whitcombe, Advanced Technology Vehicles Manufacturing Incentive Program 1:15 PM - Pat Davis, Vehicle Technologies Program Awards							**Lunch** 12:55 PM - Presentation by Carl Maronde from NETL 1:10 PM - Sunita Satyapal, Hydrogen and Fuels Cells Program Awards							**Lunch** 1:15 PM - Presentation by Mark Johnson from ARPA-E												
1:45 PM 2:00 PM	APE	AN	ES	FC	ST	VSS	PM	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS						
2:15 PM	APE	AN	ES	FC	ST	VSS	PM	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS						
2:45 PM	APE	AN	ES	FC	ST	VSS	PM	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS						
3:15 PM	APE	AN	ES	FC	ST	VSS	PM	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC	ST	VSS						
3:45 PM	Break							Break							Break											
4:15 PM	APE	AN	ES	FC	ST	VSS	PM	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
4:45 PM	APE		ES	FC	ST	VSS	PM	MN	PD	ES	FC	ST	VSS	LM	LM	PD	ES	FC		VSS						
5:15 PM	APE		ES		ST	VSS	PM		PD	ES	FC	ST	VSS	LM	LM		ES	FC		VSS						
5:45 PM			ES			VSS	PM		PD	ES		ST	VSS				ES			VSS						
	*Alexandria - second floor							*Alexandria - second floor																		
6:30 PM	**POSTER SESSION II:** Electrochemical Storage, Advanced Power Electronics, Technology Integration, Fuel Cells, and Hydrogen Production and Delivery							**POSTER SESSION III:** Electrochemical Storage, Hydrogen Storage, Basic Energy Sciences (hydrogen storage), Hydrogen Production and Delivery, and H2 Recovery Act							**POSTER SESSION IV:** Technology Validation, Advanced Combustion, and Solid State Energy Conversion												
8:30 PM																										

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

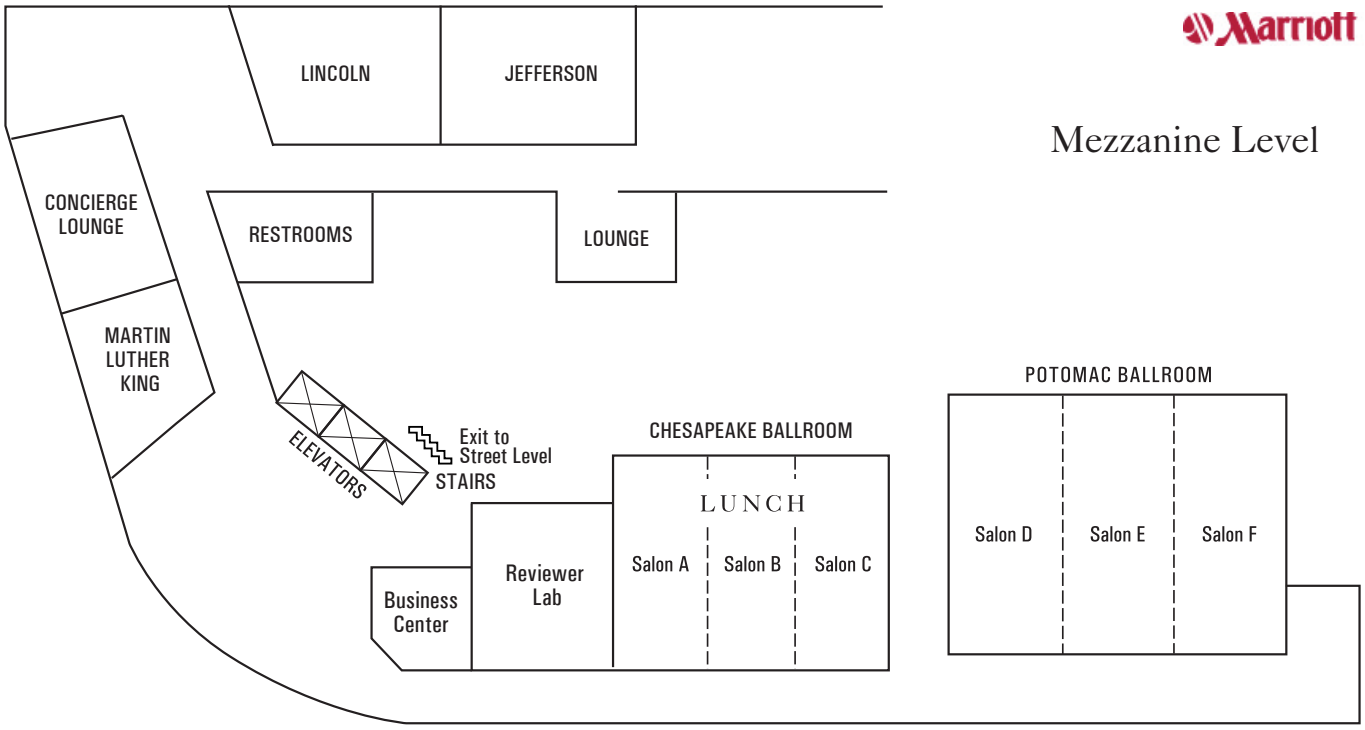
VT Program
- AC: Advanced Combustion
- ES: Energy Storage
- APE: Adv. Pwr. Electronics
- FT: Fuels Technologies
- PM: Propulsion Materials
- LM: Light-Weight Materials
- TI: Technology Integration
- VSS: Veh.& Sys.Simulation

Crystal City Marriott Hotel

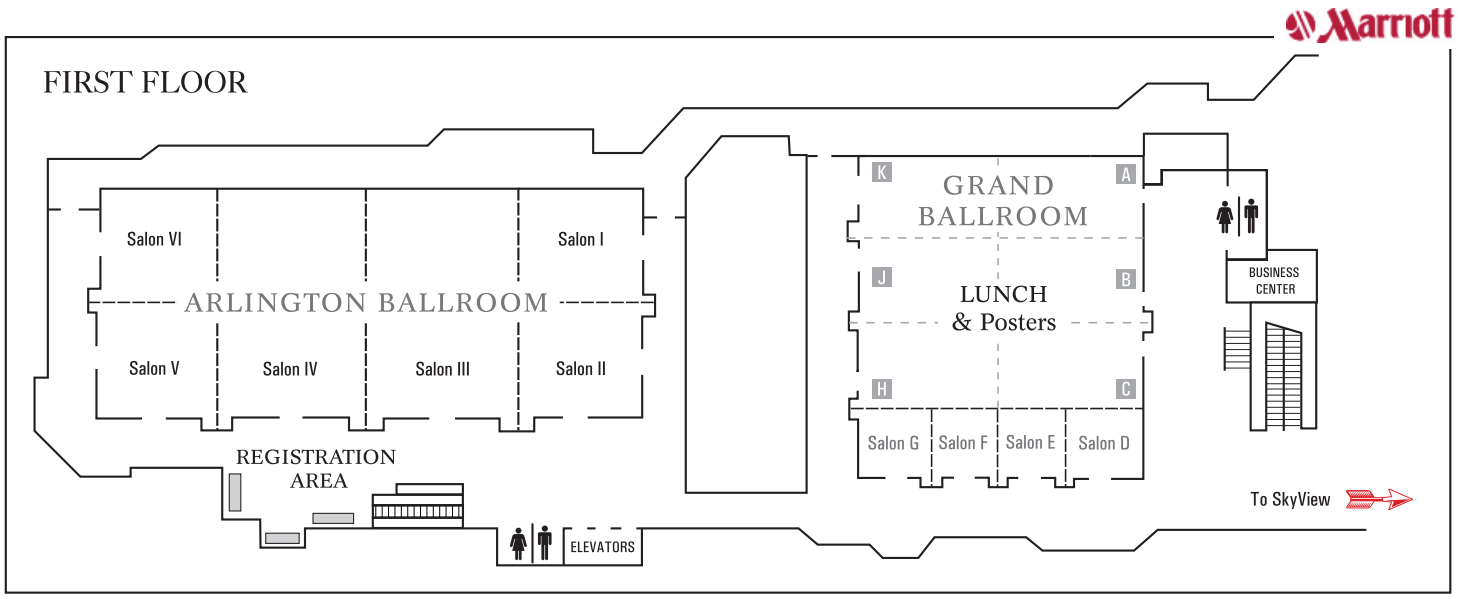
Salon	Tuesday May 15 D	E	F	Wednesday May 16 D	E	F	Thursday May 17 D	E	F	Friday May 18 D	E	F
7:15 AM	Continental Breakfast			Continental Breakfast			Continental Breakfast			Continental Breakfast		
8:15 AM	FT	AC	SCS			MT			ED			AC
8:30 AM	FT	AC	SCS	TI	AC	MT	TI	AC	ED	TI	AC	AC
9:00 AM	FT	AC	SCS	TI	AC	MT	TI	AC	ED	TI	AC	AC
9:30 AM	FT	AC	SCS	TI	AC	MT	TI	AC	ED	TI	AC	AC
10:00 AM	FT	AC	SCS	TI	AC	MT	TI	AC	ED		AC	AC
10:30 AM	Break			Break			Break			Break		
11:00 AM	FT	AC	SCS	TI	AC		TI	AC	ED		AC	AC
11:30 AM	FT	AC	SCS	TI	AC		TI	AC			AC	AC
12:00 PM	FT	AC	SCS		AC		TI	AC			AC	AC
12:30 PM	Lunch*			Lunch*			Lunch*					
1:30 PM					AC	H2RA			TV			
1:45 PM	FT	AC	SCS	TI	AC	H2RA	TI	AC	TV			
2:15 PM	TI	AC	SCS	TI	AC	H2RA	TI	AC	TV			
2:45 PM	TI	AC	SCS	TI	AC	H2RA	TI		TV			
3:15 PM	TI	AC	SCS	TI	AC	H2RA	TI		TV			
3:45 PM 4:00 PM	Break			Break			Break					
4:15 PM	TI	AC		TI	AC	H2RA		AC				
4:45 PM	TI	AC		TI	AC	H2RA	TI	AC	TV			
5:15 PM	TI	AC		TI	AC	H2RA	TI	AC				
5:45 PM	TI	AC		TI	AC	H2RA	TI	AC				

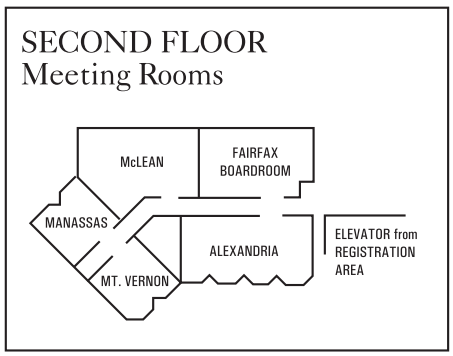
Save the date: the 2013 AMR will be May 13-17

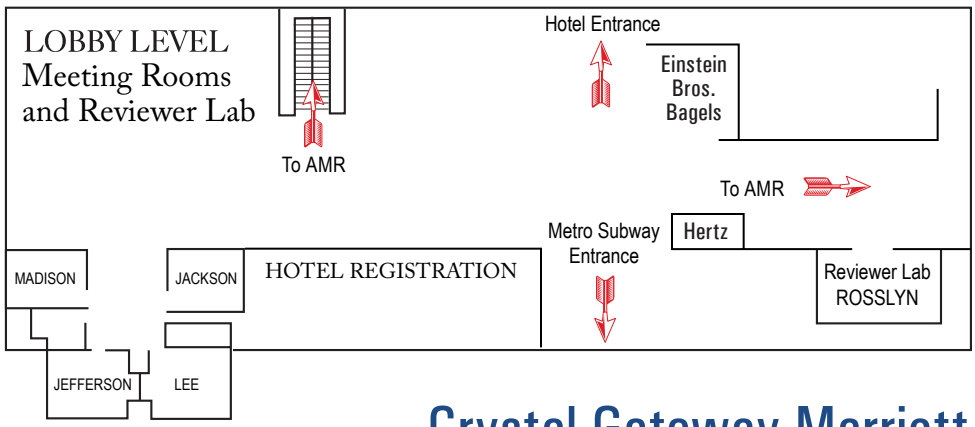
*Awards Ceremonies and Speakers will be in the Crystal Gateway hotel



Crystal City Marriott





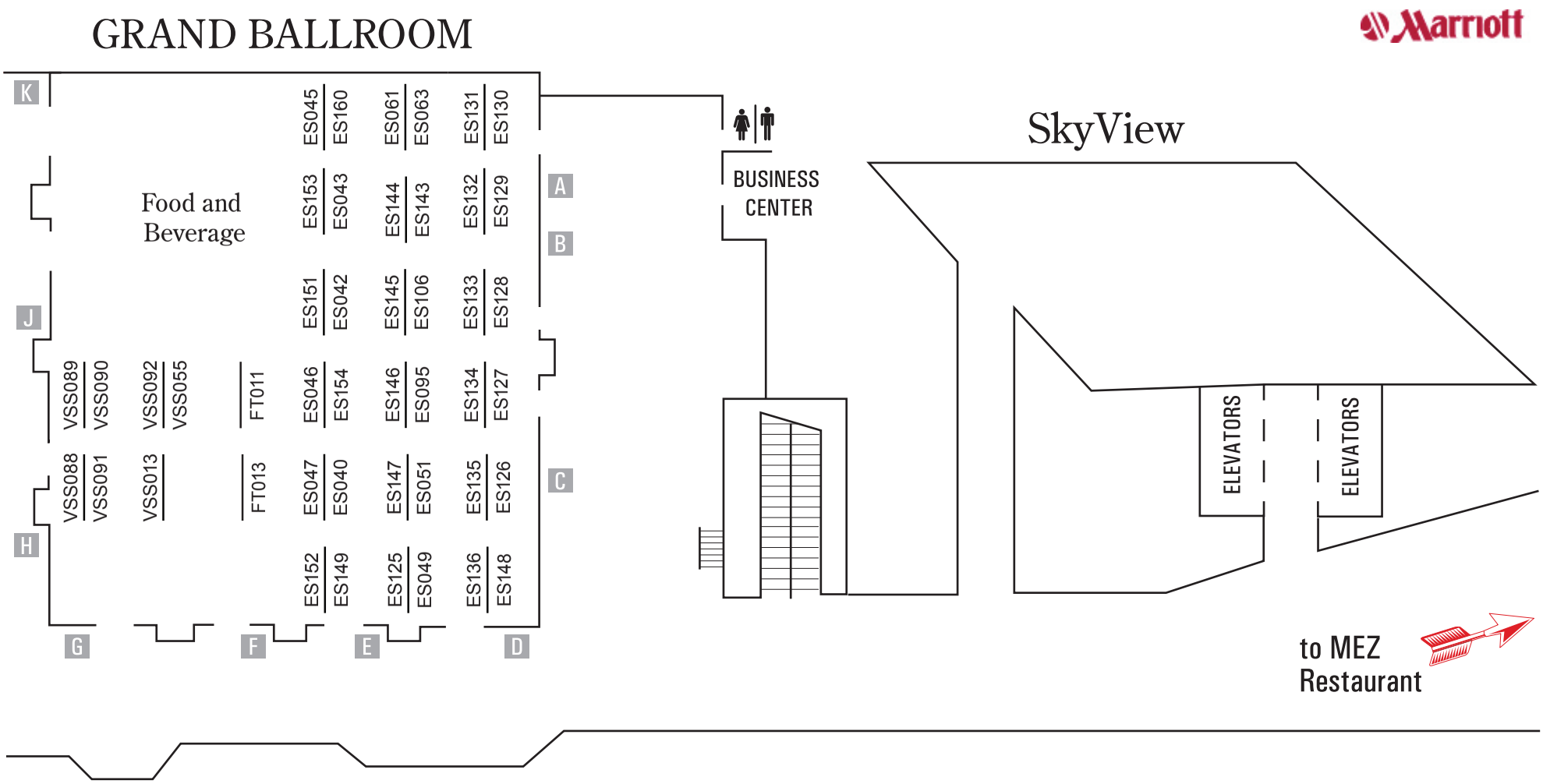


Crystal Gateway Marriott

Monday, May 14 - 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; Dr. J Kim, Dow Kokam: Development of Large Format Lithium Ion Cells with Higher Energy Density Exceeding 500Wh/L
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; Jehwon Choi, 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
ES133; Bernhard Metz, Johnson Controls: Significant Cost Improvement of Li-Ion Cells Through Non-NMP Electrode Coating, Direct Separator Coating, and Fast
ES134; Mike Wixom, A123 Systems: Dry Process Electrode Fabrication
ES135; Brad Brodie, DENSO International America: Stand-Alone Battery Thermal Management System
ES136; Steve Carlson, Optodot Corporation: Innovative Manufacturing and Materials for Low-Cost Lithium-Ion Batteries
ES049; Michael Thackeray, ANL : Design and Evaluation of Novel High Capacity Cathode Materials
ES051; Arumugam Manthiram, U of Texas at Austin : HIGH-VOLTAGE SPINEL AND POLYANION CATHODES
ES095; Ray Unocic, ORNL: In-Situ Electron Microscopy of Electrical Energy Storage Materials
ES106; Jagjit Nanda, ORNL: Studies on High Voltage Lithium Rich MNC Composite Cathodes
ES143; Jack Vaughey, ANL: Three Dimensional Anodes and Architectures
ES063; Stanley Whittingham, Binghampton University-SUNY: Metal-Based, High-Capacity Lithium-Ion Anodes
ES061; Prashant Kumta, University of Pittsburgh: Nanoscale Heterostructures and Thermoplastic Resin Binders: Novel Lithium-Ion Anodes
ES144; Ji-Guang (Jason) Zhang, PNNL: Development of Si-based High Capacity Anodes
ES145; Anne Dillon, NREL: Atomic Layer Deposition for Stabilization of Amorphous Silicon Anodes
ES146; Michael Naguib, Drexel University: New Layered Nanolaminates for Use in Lithium Battery Anodes
ES147; Donghai Wang, Pennsylvania State University: Synthesis and Characterization of Structured Si-Carbon Nanocomposite Anodes and Functional Polymer
ES148; Yi Cui, Stanford University: Designing Silicon Nanostructures for High Energy Lithium Ion Battery Anodes
ES149; Kwai Chan, SwRI: Synthesis and Characterization of Silicon Clathrates for Anode Applications in Lithium-Ion Batteries
ES040; Esther Takeuchi, U at Buffalo: Bimetallic Electrochemical Displacement MaterialsYielding High Energy, High Power, and Improved Reversibility
ES042; Chengdu Liang, ORNL: In situ Studies of Solid Electrolyte Interphase on Nanostructured Materials
ES043; Wesley Henderson, North Carolina State U: Linking Ion Solvation and Lithium Battery Electrolyte Properties
ES160; Federico Rabuffetti, University of Southern California: Mitigating Breakdown in High Energy Density Perovskite Polymer Nanocomposite Capacitors
ES045; Dmitry Bedrov, U of Utah: The Influence of Electrolyte Structure and Electrode Morphology on the Performance of Ionic-Liquid Based Supercapacitors: A
ES151; Harry Tuller, MIT: Chemomechanics of Far-From-Equilibrium Interfaces (COFFEI)
ES046; Janna Maranas, Pennsylvania State University: Conduction Mechanisms and Structure of Ionomeric Single-Ion Conductors
ES047; Nick Whelan, UC Santa Barbara/LifeCel Technology: Biological and Biomimetic Low-Temperature Routes to Materials for Energy Applications
ES152; Shen Dillon, UIUC: In-Situ TEM Observations of Degradation Mechanisms in Next-Generation High Energy Density Lithium-Ion Battery Systems
ES153; Nina Balke, ORNL: Spatially Resolved Ionic Diffusion and Electrochemical Reactions in Solids:
ES154; Delia Milliron, LBNL: Inorganic Nanocomposite Electrodes for Electrochemical Energy Storage and Energy Conservation
Vehicle and Systems Simulation
VSS088; Forrest Jehlik, ANL: Data Collection for Improved Cold Temperature Thermal Modeling
VSS089; Stuart Daw, ORNL: Advanced HD Engine Systems and Emissions Control Modeling and Analysis
VSS090; John Rugh, NREL: Electric Drive Vehicle Climate Control Load Reduction
VSS091; Eric Rask, ANL: Defining Real World Drive Cycles to Support APRF Technology Evaluations
VSS013; Paul Chambon, ORNL: PHEV Engine Control and Energy Management Strategy
VSS092; Andreas Malikopoulos, ORNL: Autonomous Intelligent Plug-In Hybrid Electric Vehicles (PHEVs)
VSS055; Krishnan Gowri, PNNL: Vehicle to Grid Communication Standards Development Support
Fuel & Lubricant Technologies
FT013; Teresa Alleman, NREL: Biofuels Quality Surveys
FT011; Aaron Williams, NREL: Impact of Biodiesel Metals on Aftertreatment System Durability



POSTER MAP

Monday, May 14

Crystal Gateway Marriott

2012 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Tuesday, May 15 - 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 (APEEM)	AN000; Fred Joseck, DOE: Systems Analysis Session Introduction	
8:30 AM	APE004; Gui-Jia Su, ORNL: A Segmented Drive Inverter Topology with a Small DC Bus Capacitor	AN020; Marc Melaina, NREL: Hydrogen Refueling Infrastructure Cost Analysis	ES000; David Howell, DOE: Overview of Battery R&D Activities
9:00 AM	APE007; Madhu Chinthavali, ORNL: Wide Bandgap Materials	AN021; Marc Melaina, NREL: Comparing Infrastructure Costs for Hydrogen and Electricity	ES098; Chris Johnson, NETL: Progress of DOE Materials, Manufacturing Process R&D, and ARRA Battery Manufacturing Grants
9:30 AM	APE023; Zhenxian Liang, ORNL: Power Device Packaging	AN001; Brian Bush, NREL: Infrastructure Analysis of Early Market Transition of Fuel Cell Vehicles	ES097; Kent Snyder, Ford Motor Company: Overview and Progress of United States Advanced Battery Research (USABC) Activity
10:00 AM	APE040; Greg Smith, General Motors: Next Generation Inverter	AN022; Darlene Steward, NREL: Infrastructure Costs Associated with Central Hydrogen Production from Biomass and Coal	ES111; Kevin Gallagher, ANL: PHEV Battery Cost Assessment
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	APE042; Madhu Chinthavali, ORNL: Air-Cooled Traction Drive Inverter	AN023; David Greene, ORNL: Sensitivity Analysis of H2-Vehicles Market Prospects, Costs and Benefits	ES108; Tien Duong, DOE: Overview and Progress of the Batteries for Advanced Transportation Technologies (BATT) Activity
11:30 AM	APE033; Gui-Jia Su, ORNL: Converter Topologies for Wired and Wireless Battery Chargers	AN024; Mark Ruth, NREL: Effects of Technology Cost Parameters on Hydrogen Pathway Succession	ES014; Peter Faguy, DOE: Overview and Progress of the Applied Battery Research (ABR) Activity
12:00 PM	APE032; Christopher Whaling, Synthesis Partners: Interim Update: Global Automotive Power Electronics R&D Relevant To DOE 2015 and 2020 Cost Targets	AN025; Zhenhong Lin, ORNL: Impact of Program Goals on Hydrogen Vehicles: Market Prospect, Costs, and Benefits	ES116; Brian Cunningham, DOE: Overview and Progress of the Battery Testing, Analysis, and Design Activity
12:30 PM	**LUNCH** 1:00 PM - N. Whitcombe, Advanced Technology Vehicles Manufacturing Incentive Program 1:15 PM - Pat Davis, Vehicle Technologies Program Awards		
1:45 PM	APE008; Uthamalingam Balachandran, ANL: High Dialectric Constant Capacitors for Power Electronic Systems	AN026; Marc Melaina, NREL: Resource Analysis for Hydrogen Production	ES117; Ahmad Pesaran, NREL: Overview of Computer-Aided Engineering of Batteries (CAEBAT) and Introduction to Multi-Scale, Multi-Dimensional (MSMD) Modeling of Lithium-Ion Batteries
2:15 PM	APE009; Leah Appelhans, SNL: High Temperature Polymer Capacitor Dielectric Films	AN012; Michael Wang, ANL: Life-Cycle Analysis of Vehicle and Fuel Systems with the GREET Model	ES118; Steven Hartridge, CD-Adapco: Development of Computer-Aided Design Tools for Automotive Batteries
2:45 PM	APE027; Philip Neudeck, NASA: Development of SiC Large Tapered Crystal Growth	AN027; Mark Ruth, NREL: Cost, Energy Use, and Emissions of Tri-Generation Systems	ES119; Taeyoung Han, General Motors: Development of Computer-Aided Design Tools for Automotive Batteries
3:15 PM	APE039; Sreekant Narumanchi, NREL: Compact, Light-Weight, Single-Phase, Liquid-Cooled Cold Plate	AN029; Marianne Mintz, ANL: Employment Impacts of Early Markets for Hydrogen and Fuel Cell Technologies	ES120; Christian Shaffer, EC-Power: Development of Cell/Pack Level Models for Automotive Li-Ion Batteries with Experimental Validation
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	APE028; Doug DeVoto, NREL: Thermal Performance and Reliability of Bonded Interfaces	AN028; William Ernst, Strategic Analysis, Inc.: Evaluation of U.S. DOE Energy Recovery Act Fuel Cell (Technologies Program) Initiative	ES121; Sreekanth Pannala, ORNL: Open Architecture Software for CAEBAT
4:45 PM	APE026; Allen Hefner, NIST: Electro-thermal-mechanical Simulation and Reliability for Plug-in Vehicle Converters and Inverters		ES122; Jon Christophersen, INL: Energy Storage Monitoring System and In-Situ Impedance Measurement Modeling
5:15 PM	APE019; Jason Lustbader, NREL: Air Cooling Technology for Power Electronic Thermal Control		ES123; Jeremy Neubauer, NREL: Applying the Battery Ownership Model in Pursuit of Optimal Battery Use Strategies
5:45 PM			ES124; Kevin Gering, INL: Diagnostic and Prognostic Analysis of Battery Performance & Aging based on Kinetic and Thermodynamic Principles

Tuesday, May 15 - 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 Overview	VSS000; Lee Slezak, DOE: Overview of Vehicle and Systems Simulation and Testing
8:30 AM	FC006; Radoslav Atanasoski, 3M: Durable Catalysts for Fuel Cell Protection During Transient Conditions	ST001; Rajesh Ahluwalia, ANL: System Level Analysis of Hydrogen Storage Options	VSS065; Henning Lohse-Busch, ANL: Evaluation and Adaptation of 5-Cycle Fuel Economy Testing and Calculations for HEVs
9:00 AM	FC007; Bryan Pivovar, NREL: Extended, Continuous Pt Nanostructures in Thick, Dispersed Electrodes	ST100; Brian James, Strategic Analysis, Inc.: Hydrogen Storage Cost Analysis, Preliminary Results	VSS073; PT Jones, ORNL: NYC Taxi Drive Cycle Development and Simulation Study
9:30 AM	FC008; Nenad Markovic, ANL: Nanosegregated Cathode Catalysts with Ultra-Low Platinum Loading	ST004; Don Anton, SRNL: Hydrogen Storage Engineering Center of Excellence	VSS053; Ted Bohn, ANL: Codes and Standards to Support Vehicle Electrification
10:00 AM	FC009; Radoslav Adzic, BNL: Contiguous Platinum Monolayer Oxygen Reduction Electrocatalysts on High-Stability-Low-Cost Supports		VSS067; Keith Hardy, ANL: Grid Interaction Tech Team, and International Smart Grid Collaboration
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC010; Fernando Garzon, LANL: The Science and Engineering of Durable Ultralow PGM Catalysts	ST044; David Tamburello, SRNL: SRNL Technical Work Scope for the Hydrogen Storage Engineering Center of Excellence:	VSS029; Don Karner, ecoTality North America: Advanced Vehicle Testing & Evaluation
11:30 AM	FC044; Eric Brosha, LANL: Engineered Nano-scale Ceramic Supports for PEM Fuel Cells	ST010; Mike Veenstra, Ford Motor: Ford/BASF-SE/UM Activities in Support of the Hydrogen Storage Engineering Center of Excellence	VSS030; Mike Duoba, ANL: Advanced Technology Vehicle Lab Benchmarking - Level 1
12:00 PM	FC085; Vijay Ramani, IIT: Synthesis and Characterization of Mixed-Conducting Corrosion Resistant Oxide Supports	ST009; Darsh Kumar, General Motors: Thermal Management of On-Board Cryogenic Hydrogen Storage Systems	VSS031; Eric Rask, ANL: Advanced Technology Vehicle Lab Benchmarking - Level 2 (in-depth)
12:30 PM	**LUNCH** 1:00 PM - N. Whitcombe, Advanced Technology Vehicles Manufacturing Incentive Program 1:15 PM - Pat Davis, Vehicle Technologies Program Awards		
1:45 PM	FC086; Sanjeev Mukerjee, Northeastern Univ: Development of Novel Non Pt Group Metal Electrocatalysts for Proton Exchange Membrane Fuel Cell Applications	ST045; Joseph Reiter, NASA JPL: Key Technologies, Thermal Management, and Prototype Testing for Advanced Solid-State Hydrogen Storage Systems	VSS068; Dominik Karbowski, ANL: Optimal Energy Management of a PHEV Using Trip Information
2:15 PM	FC087; Fred Wagner, GM: High-Activity Dealloyed Catalysts	ST046; Kevin Drost, Oregon State U: Microscale Enhancement of Heat and Mass Transfer for Hydrogen Energy Storage	VSS069; Eric Rask, ANL: Impact of Battery Management on Fuel Efficiency Validity
2:45 PM	FC088; Branko Popov, U of South Carolina: Development of Ultra-Low Platinum Alloy Cathode Catalyst for PEM Fuel Cells	ST047; Norman Newhouse, Lincoln Composites: Development of Improved Composite Pressure Vessels for Hydrogen Storage	VSS070; Namdoo Kim, ANL: Electric Drive Vehicle Level Control Development Under Various Thermal Conditions
3:15 PM	FC084; John Turner, NREL: WO3 and HPA Based Systems for Durable Pt Catalysts in PEMFC Cathodes	ST007; Troy Semelsberger, LANL: Chemical Hydride Rate Modeling, Validation, and System Demonstration	VSS046; John Rugh, NREL: Integrated Vehicle Thermal Management – Combining Fluid Loops in Electric Drive Vehicles
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	FC012; Deborah Myers, ANL: Polymer Electrolyte Fuel Cell Lifetime Limitations: The Role of Electrocatalyst Degradation	ST005; Jamie Holladay, PNNL: Systems Engineering of Chemical Hydrogen, Pressure Vessel, and Balance of Plant for On-Board Hydrogen Storage	VSS043; Jeffrey Gonder, NREL: Medium- and Heavy-Duty Electric Drive Vehicle Simulation and Analysis
4:45 PM	FC001; Mark Debe, 3M: Advanced Cathode Catalysts and Supports for PEM Fuel Cells	ST006; Bart van Hassel, UTRC: Advancement of Systems Designs and Key Engineering Technologies for Materials Based Hydrogen	VSS071; Aymeric Rousseau, ANL: Hydraulic HEV Fuel Consumption Potential
5:15 PM		ST008; Matthew Thornton, NREL: System Design, Analysis, Modeling, and Media Engineering Properties for Hydrogen Energy Storage	VSS072; Andreas Malikopoulos, ORNL: The Meritor Dual Mode Hybrid Powertrain CRADA
5:45 PM			VSS061; John Miller, ORNL: Wireless Plug-in Electric Vehicle (PEV) Charging

Tuesday, May 15 - Oral Presentations

Hotel **Crystal Gateway**

Salon	Alexandria
8:15 AM	
8:30 AM	PM000; Jerry Gibbs, DOE: Overview of Propulsion Materials
9:00 AM	PM005; Leta Woo, LLNL: NOx Sensor Development
9:30 AM	PM043; Dileep Singh, ANL: Compact Potentiometric O2/NOx Sensor
10:00 AM	PM010; Thomas Watkins, ORNL: Durability of Diesel Engine Particulate Filters
10:30 AM	**BREAK**
11:00 AM	PM041; Michael Lance, ORNL: Electrically-Assisted Diesel Particulate Filter Regeneration
11:30 AM	PM040; Michael Lance, ORNL: Biofuels Impact on DPF Durability
12:00 PM	PM009; Michael Lance, ORNL: Materials Issues Associated with EGR Systems
12:30 PM	**LUNCH** 1:00 PM - N. Whitcombe, Advanced Technology Vehicles Manufacturing Incentive Program 1:15 PM - Pat Davis, Vehicle Technologies Program Awards
1:45 PM	PM012; Andrew Wereszczak, ORNL: Thermoelectric Mechanical Reliability
2:15 PM	PM013; David J. Singh, ORNL: Thermoelectrics Theory and Structure
2:45 PM	PM036; Hua-Tay Lin, ORNL: Low-Cost Direct Bonded Aluminum (DBA) Substrates
3:15 PM	PM037; Andy Wereszczak, ORNL: Improved Organics for Power Electronics and Electric Motors
3:45 PM	**BREAK**
4:15 PM	PM038; Phil Maziasz, ORNL: Materials for Advanced Turbocharger Design
4:45 PM	PM039; Jeff Thomson, ORNL: Engine Materials Compatibility with Alternate Fuels
5:15 PM	PM004; Glenn Grant, PNNL : Novel Manufacturing Technologies for High Power Induction and Permanent Magnet Electric Motors
5:45 PM	PM044; Mark Smith, PNNL: High-Temperature Aluminum Alloys

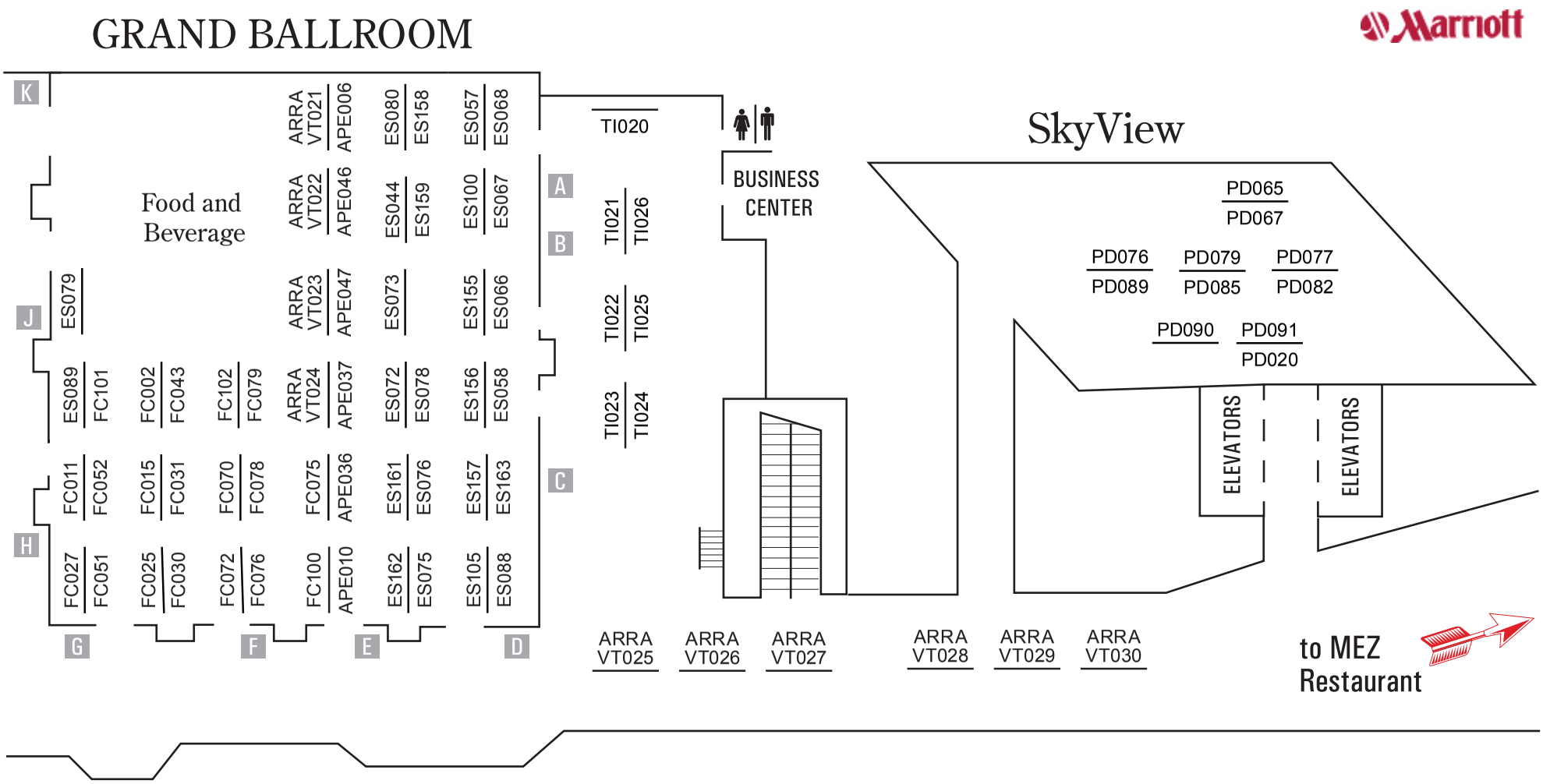
Tuesday, May 15 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:15 AM	FT000; Kevin Stork, DOE: Fuel & Lubricant Technologies	ACE00A; Gurpreet Singh, DOE: Overview of DOE Advanced Combustion Engine R&D	SCS000; Antonio Ruiz, DOE: Safety, Codes and Standards Session Introduction
8:30 AM	FT012; George Fenske, ANL: Lubricants Activities	ACE001; Mark Musculus, SNL: Heavy-Duty Low-Temperature and Diesel Combustion & Heavy-Duty Combustion Modeling	SCS010; Isaac Ekoto, SNL: R&D for Safety Codes and Standards: Hydrogen Behavior
9:00 AM	FT002; Brad Zigler, NREL: Fuels for Advanced Combustion Engines	ACE002; Paul Miles, SNL: Low-Temperature Automotive Diesel Combustion	SCS005; Brian Somerday, SNL: R&D for Safety Codes and Standards: Materials and Components Compatibility
9:30 AM	FT003; Bob McCormick, NREL: Performance of Biofuels and Biofuel Blends	ACE004; John Dec, SNL: HCCI and Stratified-Charge CI Engine Combustion Research	SCS002; Robert Burgess, NREL: Component Standard Research & Development
10:00 AM	FT004; Chuck Mueller, SNL: Fuels and Combustion Strategies for High-Efficiency Clean-Combustion Engines	ACE005; Lyle Pickett, SNL: Spray Combustion Cross-Cut Engine Research	SCS011; Aaron Harris, SNL: R&D for Safety Codes and Standards: Risk Assessments
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FT006; Magnus Sjoberg, SNL: Advanced Lean-Burn DI Spark Ignition Fuels Research	ACE006; Richard Steeper, SNL: Automotive HCCI Engine Research	SCS007; Tommy Rockward, LANL: Hydrogen Fuel Quality
11:30 AM	FT007; Scott Sluder, ORNL: Fuel Effects on Emissions Control Technologies	ACE007; Joe Oefelein, SNL: Large Eddy Simulation (LES) Applied to Advanced Engine Combustion Research	SCS008; Steven Weiner, PNNL: Hydrogen Safety Panel
12:00 PM	FT008; James Szybist, ORNL: Gasoline-Like Fuel Effects on Advanced Combustion Regimes	ACE008; Terry Johnson, SNL: Free-Piston Engine	SCS013; William Hoagland, PNNL: International Energy Agency Hydrogen Implementing Agreement Task 31 Hydrogen Safety
12:30 PM	**LUNCH - (Awards Ceremonies and Speakers will be in the Crystal Gateway hotel)**		
1:45 PM	FT010; Bill Pitz, LLNL: Chemical Kinetic Modeling of Non-Petroleum Based Fuels	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	TI000; Dennis Smith, DOE: Technology Integration Overview	ACE010; Christopher Powell, ANL: Fuel Injection and Spray Research Using X-Ray Diagnostics	SCS001; Carl Rivkin, NREL: National Codes and Standards Coordination
2:45 PM	TI014; Ted Sears, NREL: 2012 Merit Review: EPAct State and Alternative Fuel Provider Fleets	ACE011; Steve Ciatti, ANL: Use of Low Cetane Fuel to Enable Low Temperature Combustion	SCS006; Linda Fassbender, PNNL: Hydrogen Safety Knowledge Tools
3:15 PM	ARRAVT032; Steve Dunlop, Purdue U: Indiana Advanced Electric Vehicle Training and Education Consortium (I-AEVtec)	ACE012; Dan Flowers, LLNL: Computationally Efficient Modeling of High-Efficiency Clean Combustion Engines	SCS015; Monte Elmore, PNNL: Hydrogen Emergency Response Training for First Responders
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	ARRAVT033; Gary Caille, Colorado State U: Advanced Electric Drive Vehicle Education Program: CSU Ventures	ACE013; Bill Pitz, LLNL: Chemical Kinetic Research on HCCI & Diesel Fuels	
4:45 PM	ARRAVT034; Mehdi Ferdowsi, Missouri U of Science and Technology: Advanced Electric Drive Vehicles – A Comprehensive Education, Training, and Outreach Program	ACE076; Matthew McNenly, LLNL: Improving Combustion Software to Solve Detailed Chemical Kinetics for HECC	
5:15 PM	ARRAVT037; Carl Anderson, Michigan Technological U: Recovery Act – An Interdisciplinary Program for Education and Outreach in Transportation Electrification	ACE014; David Carrington, LANL: 2012 KIVA-Development	
5:45 PM	ARRAVT039; Lawrence Schwendeman, J. Sargeant Reynolds Community College: Advanced Electric Drive Vehicles	ACE016; Scott Curran, ORNL: High Efficiency Clean Combustion in Multi-Cylinder Light-Duty Engines	

Tuesday, May 15 - Poster Presentations

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

Electrochemical Storage
ES088; Nitash Balsara, LBNL : Polymers For Advanced Lithium Batteries
ES089; John Kerr, LBNL : Electrolytes - R&D for Advanced Lithium Batteries. Interfacial Behavior of Electrolytes
ES058; Dmitry Bedrov, U of Utah : Molecular dynamics simulation and ab intio studies of electrolytes and electrolyte/electrode interfaces
ES066; Khalil Amine, ANL: Electrolytes - Advanced Electrolyte and Electrolyte Additives
ES067; Brett Lucht, U of Rhode Island: Development of Electrolytes for Lithium-ion Batteries
ES068; Daniel Scherson, Case Western Reserve U: Bifunctional Electrolytes for Lithium-ion Batteries
ES057; Wesley Henderson, North Carolina State U: Inexpensive, Nonfluorinated (or Partially Fluorinated) Anions for Lithium Salts and Ionic Liquids for Lithium
ES100; Austen Angell, Arizona State University: Electrolytes and Separators for High Voltage Li Ion Cells
ES155; Jack Vaughey, ANL : Integrated Laboratory Industry Research Project
ES156; Gao Liu, LBNL: Integrated Laboratory and Industry Research Project
ES157; Nancy Dudney, ORNL: Composite Electrolyte to Stabilize Metallic Lithium Anodes
ES105; Chengdu Liang, ORNL: Carbon/Sulfur Nanocomposites and Additives for High-Energy Lithium Sulfur Batteries
ES075; Paul Mutolo, Cornell: Energy Materials Center at Cornell (emc^2): Advanced Materials for Fuel Cells and Batteries
ES076; Stanley Whittingham, Binghampton University-SUNY: Northeastern Center for Chemical Energy Storage (NECCES)
ES078; Gary Rubloff, U of Maryland: Science of Precision Multifunctional Nanostructures for Electrical Energy Storage
ES079; Grigorii Soloveichik, General Electric: Center for Electrocatalysis, Transport Phenomena and Materials for Innovative Energy Storage
ES080; Michael Thackeray, ANL: Center for Electrical Energy Storage: Tailored Interfaces
ES158; Arumugam Manthiram, U of Texas: SOLID ELECTROLYTES FOR NEXT GENERATION BATTERIES
ES159; Arumugam Manthiram, U of Texas: Materials and Interfacial Chemistry for Next-Generation Electrical Energy Storage (partner with UT-Austin)
ES044; Shirley Meng, U of California at San Diego: New In Situ Analytical Electron Microscopy for Understanding Structure Evolution and Composition Change
ES073; Yuri Gogotsi, Drexel U: Silicon Carbide Derived Carbons: Experiments and Modeling
ES072; Jun Liu, PNNL: Molecularly Organized Nanostructured Materials
ES169; Yet-Ming Chiang, MIT: Electrochemically-Driven Phase Transitions in Battery Storage Compounds
ES170; Paul Sideris , CUNY-Hunter College: Spectroscopic Studies of Materials for Electrochemical Energy Storage
ES171; Pradeep Guduru, Brown University: Fundamental Investigations of Mechanical and Chemical Degradation Mechanisms in Lithium Ion Battery Materials
Advanced Power Electronics
APE006; Tim Burress, ORNL: Benchmarking of Competitive Technologies
APE046; Leon Tolbert, ORNL: Smart Integrated Power Module
APE047; Kevin Bennion, NREL: Integrated Module Heat Exchanger
APE037; Gilbert Moreno, NREL: Two-Phase Cooling Technology for Power Electronics
APE036; Doug DeVoto, NREL: Physics of Failure of Electrical Interconnects
APE010; Michael Lanagan, Penn State U: Glass Ceramic Dielectrics for DC Bus Capacitors
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; Kevin Poet, Ford Motor: U.S. Based HEV and PHEV Transaxle Program
ARRAVT025; Dane Carter, Remy, Inc.: Providing Vehicle OEMs Flexible Scale to Accelerate Adoption of Electric Drive Vehicles
ARRAVT026; Jon Lutz, UQM Technologies, Inc.: Electric Drive Component Manufacturing Facilities
ARRAVT027; Beth Sommers, Magna E-Car Systems of America, Inc.: Electric Drive Component Manufacturing: Magna E-Car Systems of America, Inc.
ARRAVT028; Johnny Boan, KEMET Corporation: DC Bus Capacitor Manufacturing Facility for Electric Drive Vehicles
ARRAVT029; Hugh Kirbie, SBE, Inc.: Construction, Qualification, and Low Rate Production Start‐up of a DC Bus Capacitor High Volume Manufacturing
ARRAVT030; Duane Prusia, Powerex, Inc.: Electric Drive Semiconductor Manufacturing (EDSM) Center
Technology Integration
TI020; Chris Mi, Regents University of Michigan: Center for Electric Drive Transportation at the University of Michigan - Dearborn
TI021; Scott Trimboli, University of Colorado: Innovative Drivetrains in Electric Automotive Technology Education (IDEATE)
TI022; Gerogio Rizzoni, Ohio State University: GATE: Energy Efficient Vehicles for Sustainable Mobility
TI023; Gregory Shaver, Purdue University: Hoosier Heavy Hybrid Center of Excellence
TI024; Imtiaz Haque, Clemson University: GATE Center of Excellence in Sustainable Vehicle Systems
TI025; Joel Anstrom, Pennsylvania State University: IN-VEHICLE, HIGH-POWER ENERGY STORAGE SYSTEMS
TI026; Uday Vaidya, University of Alabama: GATE Center of Excellence in Lightweight Materials and Manufacturing Technologies
Fuel Cells
FC100; Brian Larsen, NREL: High Aspect Ratio Nano-Structured Pt-based PEM Fuel Cell Catalysts
FC011; John Kerr, LBNL: Molecular-scale, Three-dimensional Non-Platinum Group Metal Electrodes for Catalysis of Fuel Cell Reactions
FC027; Brian Carnes, SNL: Development and Validation of a Two-phase, Three-dimensional Model for PEM Fuel Cells
FC051; Ira Bloom, ANL: The Fuel Cell Testing at the Argonne Fuel Cell Test Facility
FC052; Tommy Rockward, LANL: Technical Assistance to Developers
FC101; Shriram Ramanathan, UTC Power: PEM Stationary Power Plant
FC002; Lesia Protsailo, UTC Power: Highly Dispersed Alloy Catalyst for Durability
FC015; Timothy Patterson, UTC Power: Improved Accelerated Stress Tests Based on FCV Data
FC025; Dave Hancock, Plug Power, Inc.: Air Cooled Stack Freeze Tolerance
FC030; Vernon Cole, CFD Research Corp.: Water Transport in PEM Fuel Cells: Advanced Modeling, Material Selection, Testing, and Design Optimization
FC031; Durai Swamy, Intelligent Energy: Development and Demonstration of a New Generation High Efficiency 10kW Stationary PEM Fuel Cell System
FC043; Yu Seung Kim, LANL: Resonance-Stabilized Anion Exchange Polymer Electrolytes
FC102; Earl Wagener, Tetramer Technologies, LLC: New High Performance Water Vapor Membranes To Improve Fuel Cell Balance of Plant Efficiency and Low
FC070; Steven Chuang, U of Akron: Development of Kilowatt-Scale Coal Fuel Cell Technology
FC072; Anant Upadhyayula, Rolls-Royce Fuel Cell Systems (US) Inc.: Extended Durability Testing of an External Fuel Processor for SOFC
FC076; Neal Sullivan, Colorado School of Mines: Biomass Fuel Cell Systems
FC078; Joel Berry, Kettering U: 21st Century Renewable Fuels, Energy, and Materials Initiative
FC079; Prabhakar Singh, University of Connecticut Global Fuel Cell Center: Improving Fuel Cell Durability and Reliability
FC075; Vern Sproat, Stark State College: Fuel Cell Balance of Plant Reliability Testbed
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; Mano Misra, U of Nevada Reno: Photoelectrochemical Generation of Hydrogen from Water Using Nanotube-Based Semiconductor Systems for
PD079; Wai-Ning Mei, U of Nebraska - Omaha: Novel Photocatalytic Metal Oxides
PD077; Ravi Subramanian, U of Nevada Reno: Solar Energy Utilization
PD082; Glenn Eisman, H2 Pump LLC: Process Intensification of Hydrogen Unit Operations Using an Electrochemical Device
PD085; Chris Ainscough, NREL: Hour-by-Hour Cost Modeling of Optimized Central Wind-Based Water Electrolysis Production
PD089; Darlene Steward, NREL: H2A Hydrogen Production Analysis Model Version 3
PD090; Christopher Capuano, Proton OnSite: Low Cost Large Scale PEM Electrolysis for Renewable Energy Storage
PD020; Andrew Weisberg, LLNL: Inexpensive Delivery of Cold Hydrogen in Glass Fiber Composite Pressure Vessels
PD091; Gokhan Alptekin, TDA Research: Bio-Fueled Solid Oxide Fuel Cells



POSTER MAP

Tuesday, May 15

Crystal Gateway Marriott

2012 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Wednesday, May 16 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**I**	**II**	**III**
8:15 AM		PD000; Eric Miller, DOE: Hydrogen Production Session Introduction	
8:30 AM	APE030; Kevin Bennion, NREL: Electric Motor Thermal Management	PD037; Maria Ghirardi, NREL: Biological Systems for Hydrogen Photoproduction	ES015; Khalil Amine, ANL: Engineering of High Energy Cathode Materials
9:00 AM	APE015; Iver Anderson, Ames: Permanent Magnet Development for Automotive Traction Motors	PD038; Pin-Ching Maness, NREL: Fermentation and Electrohydrogenic Approaches to Hydrogen Production	ES019; Michael Thackeray, ANL: Development of High-Capacity Cathode Materials with Integrated Structures
9:30 AM	APE043; John Miller, ORNL: Alnico and Ferrite Hybrid Excitation Electric Machines	PD039; Phil Weyman, J Craig Venter Inst.: Hydrogen from Water in a Novel Recombinant Oxygen-Tolerant Cyanobacterial System	ES115; Christopher Johnson, ANL: Novel Composite Cathode Structures
10:00 AM	APE044; Jon Lutz, UQM Technologies, Inc.: Unique Lanthide-Free Motor Construction	PD036; Tasios Melis, UC Berkeley: Maximizing Light Utilization Efficiency and Hydrogen Production in Microalgal Cultures	ES016; Khalil Amine, ANL: New High Energy Gradient Concentration Cathode Material
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	APE045; Ayman El-Refaie, General Electric Global: Alternative High-Performance Motors with Non-Rare Earth Materials	PD033; Thomas Jaramillo, Stanford U/NREL: Directed Nano-scale and Macro-scale Architectures for Semiconductor Absorbers and Transparent Conducting Substrates for Photoelectrochemical Water Splitting	ES028; Wenquan Lu, ANL: Screening of Electrode Materials & Cell Chemistries and Streamlining Optimization of Electrodes
11:30 AM	APE035; John Miller, ORNL: Motor Packaging with Consideration of Electromagnetic and Material Characteristics	PD035; Todd Deutsch, NREL: Semiconductor Materials for Photoelectrolysis	ES029; Vince Battaglia, LBNL: Scale-up and Testing of Advanced Materials from the BATT Program
12:00 PM	APE034; Burak Ozpineci, ORNL: Integration of Novel Flux Coupling Motor and Current Source Inverter	PD053; Jian Hu, MVSystems/HNEI: Photoelectrochemical Hydrogen Production	ES161; Anthony Burrell, ANL: Addressing the Voltage Fade Issue with Lithium-Manganese-Rich Oxide Cathode Materials
12:30 PM	**LUNCH** 12:55 PM - Presentation by Carl Maronde from NETL 1:10 PM - Sunita Satyapal, Hydrogen and Fuel Cells Program Awards		
1:45 PM		PD013; Serguei Lvov, PSU: Electrolyzer Development for the Cu-Cl Thermochemical Cycle	ES032; Dan Abraham, ANL: Diagnostic Studies on Lithium Battery Cells and Cell Components
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	PD027; Roger Davenport, SAIC: Solar High-Temperature Water Splitting Cycle with Quantum Boost	ES033; Robert Kostecki, LBNL : Electrochemistry Diagnostics of Baseline and New Materials
2:45 PM	MN004; Colin Busby, W.L. Gore: Manufacturing of Low-Cost, Durable Membrane Electrode Assemblies Engineered for Rapid Conditioning	PD081; Ivan Ermanoski, SNL: Solar Hydrogen Production with a Metal Oxide Based Thermochemical Cycle	ES034; Xiao-Qing Yang, BNL : Diagnostic Studies to Improve Abuse Tolerance and Life of Li-ion Batteries
3:15 PM	MN005; Dan Walczyk, Rensselaer Polytechnic Institute : Adaptive Process Controls and Ultrasonics for High Temperature PEM MEA	PD028; Al Weimer, U of Colorado: Solar-Thermal ALD Ferrite-Based Water Splitting Cycles	ES031; Kevin Gallagher, ANL: Electrochemistry Cell Model
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	MN006; Eric Stanfield, NIST: Metrology for Fuel Cell Manufacturing	PD030; Monjid Hamdan, Giner Electrochemical Systems, LLC: PEM Electrolyzer Incorporating an Advanced Low Cost Membrane	ES096; Kevin Gering, INL : Diagnostic Testing and Analysis Toward Understanding Aging Mechanisms and Related Path Dependence
4:45 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	ES114; Vilas Pol, ANL: High Capacity Composite Carbon Anodes
5:15 PM		PD029; Paul Dunn, Avalence LLC: High-Capacity, High Pressure Electrolysis System with Renewable Power Sources	ES020; Ali Abouimrane, ANL: Developing A New High Capacity Anode With Long Cycle Life
5:45 PM		PD031; Kevin Harrison, NREL: Renewable Electrolysis Integrated System Development and Testing	ES163; Ilias Belharouak, ANL: Design of Safer High-Energy Density Materials for Lithium-Ion Cells

Wednesday, May 16 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**IV**	**V**	**VI**
8:15 AM			
8:30 AM	FC013; Rod Borup, LANL: Durability Improvements Through Degradation Mechanism Studies	ST023; Randy Snurr, Northwestern U: New Carbon-Based Porous Materials with Increased Heats of Adsorption for Hydrogen Storage	VSS021; Matt Shirk, INL: Idaho National Laboratory Testing of Advanced Technology Vehicles
9:00 AM	FC049; David Harvey, Ballard: Development of Micro-Structural Mitigation Strategies for PEM Fuel Cells: Morphological Simulations and Experimental Approaches	ST022; William Goddard, Caltech: A Joint Theory and Experimental Project in the Synthesis and Testing of Porous COFs for On-Board Vehicular Hydrogen Storage	VSS001; Kevin Walkowicz, NREL: Medium and Heavy-Duty Vehicle Field Evaluations
9:30 AM	FC014; Olga Polevaya, Nuvera Fuel Cells: Durability of Low Pt Fuel Cells Operating at High Power Density	ST018; Trevor Makal, Texas A&M U: Improving Porosity and H2-Affinity of Porous Framework Materials	VSS033; Barney Carlson, INL: Electric Drive and Advanced Battery and Components Testbed (EDAB)
10:00 AM	FC089; Randy Perry, Dupont: Analysis of Durability of MEAs in Automotive PEMFC Applications	ST019; Peter Pfeifer, U of Missouri: Multiply Surface-Functionalized Nanoporous Carbon for Vehicular Hydrogen Storage	VSS074; Barney Carlson, INL: Vehicle Mass Impact on Vehicle Losses and Fuel Economy
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC016; Rangachary Mukundan, LANL: Accelerated Testing Validation	ST024; Angela Lueking, Penn State U: Hydrogen Trapping through Designer Hydrogen Spillover Molecules with Reversible	VSS075; Jason Lustbader, NREL: CoolCab Test and Evaluation and CoolCalc HVAC Tool Development
11:30 AM	FC048; Huyen Dinh, NREL: Effect of System Contaminants on PEMFC Performance and Durability	ST014; Phil Parilla, NREL: Hydrogen Sorbent Measurement Qualification and Characterization	VSS045; Jason Lustbader, NREL: A/C Model Development and Validation
12:00 PM	FC065; Jean St-Pierre, Hawaii Natural Energy Institute: The Effect of Airborne Contaminants on Fuel Cell Performance and Durability	ST021; Thomas Gennett, NREL: Weak Chemisorption Validation	VSS076; Tony Markel, NREL: Mitigation of Vehicle Fast Charge Grid Impacts with Renewables and Energy Storage
12:30 PM	**LUNCH** 12:55 PM - Presentation by Carl Maronde from NETL 1:10 PM - Sunita Satyapal, Hydrogen and Fuel Cells Program Awards		
1:45 PM	FC096; Patricia Irving, InnovaTek: Power Generation from an Integrated Biomass Reformer and Solid Oxide Fuel Cell (SBIR Phase III)		VSS041; Stuart Daw, ORNL: Advanced LD Engine Systems and Emissions Control Modeling and Analysis
2:00 PM		BES001; John Vetrano, BES: Overview of the BES Hydrogen Storage Activities	
2:15 PM	FC032; Norman Bessette, Acumentrics Corporation: Development of a Low Cost 3-10kW Tubular SOFC Power System	BES002; Taner Yildrim, NIST: From Fundamental Understanding to Predicting New Nanomaterials for High-Capacity Hydrogen Storage	VSS077; Neeraj Shidore, ANL: Fuel Consumption and Cost Benefits of DOE Vehicle Technologies Program
2:45 PM	FC042; Randy Petri, Versa Power: Advanced Materials for RSOFC Dual Operation with Low Degradation	BES003; Timo Thonhauser, Wake Forest University: Novel theoretical and experimental approaches for understanding and optimizing hydrogen-sorbent interactions in metal organic framework materials	VSS078; Aymeric Rousseau, ANL: Fuel Displacement & Cost Potential of CNG, LNG, and LPG Vehicles
3:15 PM	FC041; Huyen Dinh, NREL: Novel Approach to Advanced Direct Methanol Fuel Cell Anode Catalysts	BES004; Hani El-Kaderi, VCU: Design and Synthesis of Chemically and Electronically Tunable Nanoporous Organic Polymers for Use in Hydrogen Storage Applications	VSS005; George Fenske, ANL: DOE/DOD Parasitic Energy Loss Collaboration
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	FC063; David Mountz, Arkema: Novel Materials for High Efficiency Direct Methanol Fuel Cells	BES005; Nidia Gallego, ORNL: Atomistic Mechanisms of Metal-Assisted Hydrogen Storage in Nanostructured Carbons	VSS079; Wen Yu, ANL: PACCAR CRADA: Experimental Investigation in Coolant Boiling in a Half-Heated Circular Tube
4:45 PM	FC064; Jim Fletcher, U of North Florida: New MEA Materials for Improved DMFC Performance, Durability, and Cost	BES006; Ragaiy Zidan, SRNL: Elucidation of Hydrogen Interaction Mechanisms with Metal-Doped Carbon Nanostructures	VSS058; Oyelayo Ajayi, ANL: Development of High Power Density Driveline for Vehicles
5:15 PM	FC091; Piotr Zelenay, LANL: Advanced Materials and Concepts for Portable Power Fuel Cells	BES007; Pingyun Feng, UCR: Synthetic Design of New Metal-Organic Framework Materials for Hydrogen Storage	VSS006; Kambiz Salari, LLNL: DOE's Effort to Reduce Truck Aerodynamic Drag through Joint Experiments and Computations
5:45 PM		BES008; Peter Pfeifer, UMC: Networks of Boron-Doped Carbon Nanopores for Low-Pressure Reversible Hydrogen Storage	VSS080; Tanju Sofu, ANL: Integrated External Aerodynamic and Underhood Thermal Analysis for Heavy Vehicles

Wednesday, May 16 - Oral Presentations

Hotel	Crystal Gateway
Salon	**Alexandria**
8:15 AM	
8:30 AM	LM000; Carol Schutte, DOE: Summary of the Output from the VTP Advanced Materials
9:00 AM	LM001; Dave Warren, ORNL: Technical Cost Modeling - Life Cycle Analysis Basis for Program Focus
9:30 AM	LM048; George Husman, Zoltek: Development and Commercialization of a Novel Low-Cost Carbon Fiber
10:00 AM	LM047; Jim Stike, Materials Innovation Tech: Low Cost Carbon Fiber Composites for Lightweight Vehicle Parts
10:30 AM	**BREAK**
11:00 AM	LM003; Cliff Eberle, ORNL: Carbon Fiber Technology Facility
11:30 AM	LM004; Amit Naskar, ORNL: Lower Cost Carbon Fiber Precursors
12:00 PM	LM006; Felix Paulauskas, ORNL: Advanced Oxidation & Stabilization of PAN-Based Carbon Precursor Fibers
12:30 PM	**LUNCH** 12:55 PM - Presentation by Carl Maronde from NETL 1:10 PM - Sunita Satyapal, Hydrogen and Fuel Cells Program Awards
1:45 PM	LM049; Hamid Kia, USAMP/ACC: Structural Automotive Components from Composite Materials
2:15 PM	LM046; David Wagner, USAMP/ACC: Advanced Materials and Processing of Composites for High Volume Applications (ACC932)
2:45 PM	LM050; Martin Jones, USAMP/NDE: Reliability Tools for Resonance Inspection of Light Metal Castings
3:15 PM	LM051; Martin Jones, USAMP/NDE: Hybrid NDE Method for Spot Weld Quality Evaluation
3:45 PM	**BREAK**
4:15 PM	LM052; Yar-Ming Wang, USAMP/AMD: Development of Steel Fastener Nano-Ceramic
4:45 PM	LM053; Yar-Ming Wang, USAMP/AMD: Development of Corrosion Inhibiting E-Coat System for Body-in-White Assemblies
5:15 PM	LM054; Zhili Feng, ORNL: On-Line Weld NDE with IR Thermography
5:45 PM	

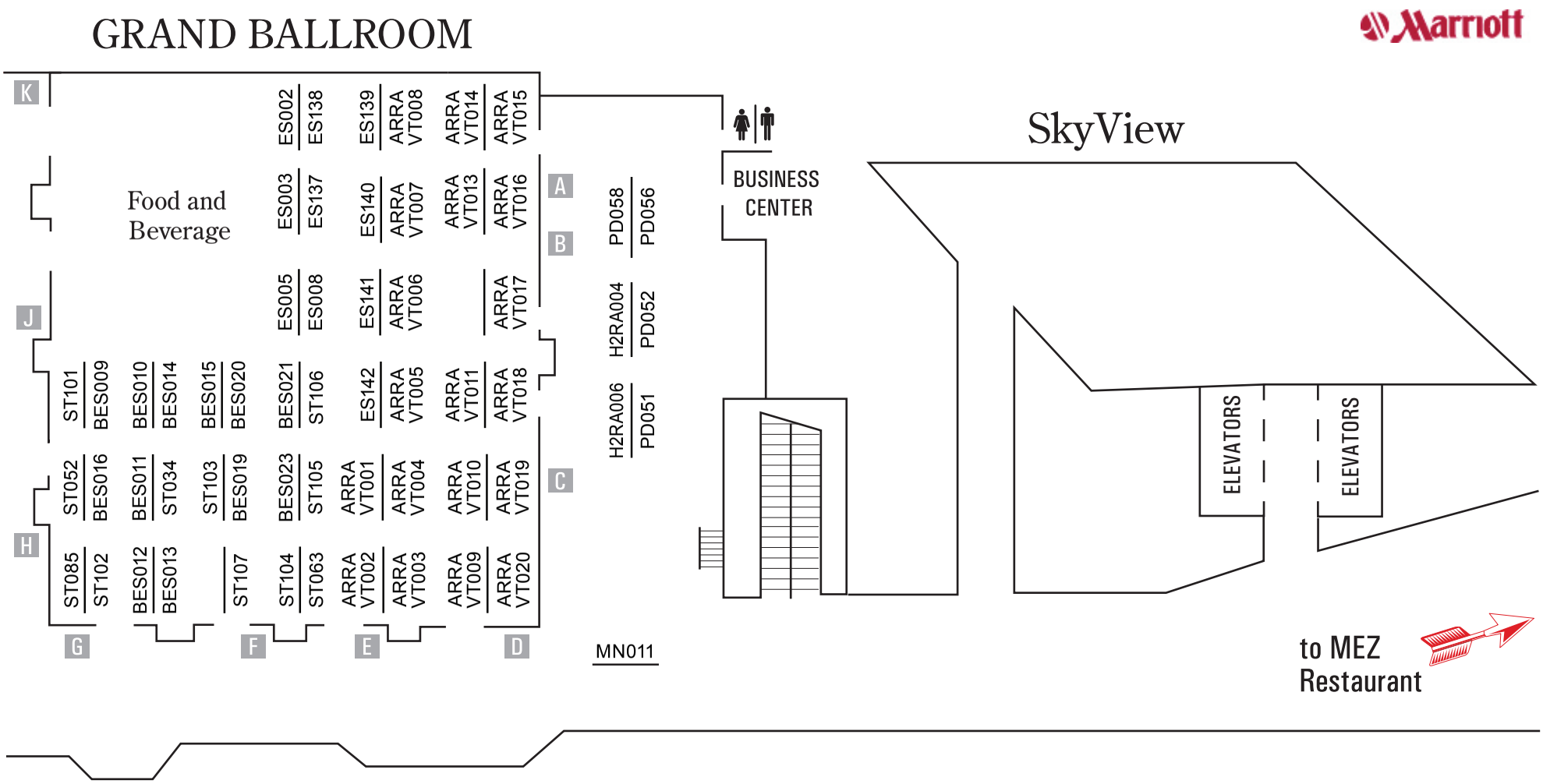
Wednesday, May 16 - Oral Presentations

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	ARRAVT035; Ka Yuen Simon Ng, Wayne State U: Development and Implementation of Degree Programs in Electric Drive Vehicle Technology	ACE017; Dean Edwards, ORNL: High Efficiency Engine Systems Development and Evaluation	MT004; Todd Ramsden, NREL: Direct Methanol Fuel Cell Material Handling Equipment Deployment
9:00 AM	ARRAVT036; Andrew Klock, National Fire Protection Association: Electric Vehicle Safety Training for Emergency Responders	ACE019; Margaret Wooldridge, U of Michigan: A University Consortium on Efficient and Clean High-Pressure, Lean Burn (HPLB) Engines	MT006; Dale King, PNNL: Fuel Cell Combined Heat and Power Commercial Demonstration
9:30 AM	ARRAVT038; Huei Peng, U of Michigan : Recovery Act—Transportation Electrification Education Partnership for Green Jobs and Sustainable Mobility	ACE020; Rolf Reitz, U of Wisconsin: Optimization of Advanced Diesel Engine Combustion Strategies	MT008; Richard Rocheleau, Hawaii Natural Energy Institute: Hydrogen Energy Systems as a Grid Management Tool
10:00 AM	ARRAVT040; Gerald Bernstein, City College of San Francisco: Electric Vehicle Service Personnel Training Program	ACE021; Gouming Zhu, Michigan State U: Flex Fuel Optimized SI and HCCI Engine	MT007; Russ Keller, South Carolina Hydrogen and Fuel Cell Alliance: Landfill Gas–to–Hydrogen
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	ARRAVT031; Al Ebron, West Virginia U: Advanced Electric Drive Vehicle Education Program	ACE015; Stuart Daw, ORNL: Stretch Efficiency for Combustion Engines: Exploiting New Combustion Regimes	
11:30 AM	TI017; Al Ebron, West Virginia U: National Alternative Fuels Training Consortium (NAFTC)	ACE052; Todd Toops, ORNL: Neutron Imaging of Advanced Engine Technologies	
12:00 PM		ACE054; Steve Ciatti, ANL: Collaborative Combustion Research with BES	
12:30 PM	**LUNCH - (Awards Ceremonies and Speakers will be in the Crystal Gateway hotel)**		
1:30 PM		ACE00B; Ken Howden, DOE: Overview of DOE Emission Control R&D	H2RA000; Jim Alkire, DOE: Fuel Cell Technologies ARRA Projects Session
1:45 PM	ARRAVT044; Kelly Lynn, San Bernardino Associated Governments: SANBAG - Ryder Natural Gas Vehicle Project	ACE022; Jae-Soon Choi, ORNL: CLEERS Coordination & Joint Development of Benchmark Kinetics for LNT & SCR	H2RA013; Jennifer Kurtz, NREL: Analysis Results for ARRA Projects: Enabling Fuel Cell Market Transformation
2:15 PM	ARRAVT045; Vicki White, South Coast Air Quality Management District: Heavy-Duty Natural Gas Drayage Truck Replacement Program	ACE023; George Muntean, PNNL: CLEERS Aftertreatment Modeling and Analysis	H2RA012; Kevin Kenny, Sprint: Use of 72-Hour Hydrogen PEM Fuel Cell Systems to Support Emergency Communications
2:45 PM	ARRAVT047; Larry Watkins, South Coast Air Quality Management District: UPS Ontario - Las Vegas LNG Corridor Extension Project: Bridging the Gap	ACE024; Kyeong Lee, ANL: Development of Advanced Particulate Filters	H2RA007; Donald Rohr, Plug Power Inc.: Accelerating Acceptance of Fuel Cell Backup Power Systems
3:15 PM	ARRAVT082; Robert Bowen, California Department of General Services: California Low Carbon Fuels Infrastructure Investment Initiative	ACE025; Ken Rappe, PNNL: Combination and Integration of DPF-SCR Aftertreatment Technologies	H2RA003; Donald Rohr, Plug Power Inc.: Highly Efficient, 5kW CHP Fuel Cells Demonstrating Durability and Economic Value in Residential and Light Commercial Applications
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	ARRAVT060; Don Francis, DeKalb County: DeKalb County/Metropolitan Atlanta Alternative Fuel and Advanced Technology Vehicle Project	ACE026; Chuck Peden, PNNL: Enhanced High Temperature Performance of NOx Storage/Reduction (NSR) Materials	H2RA002; Dan Hennessy, Delphi Automotive: Solid Oxide Fuel Cell Diesel Auxiliary Power Unit Demonstration
4:45 PM	ARRAVT062; Tom Stratton, Kentucky Department of Education: Kentucky Hybrid Electric School Bus Program	ACE027; Chuck Peden, PNNL: Degradation Mechanisms of Urea Selective Catalytic Reduction Technology	H2RA011; Bob Simon, GENCO: GENCO Fuel Cell Powered Lift Truck Fleet Deployment
5:15 PM	ARRAVT064; Kathy Boyer, Triangle J Council of Government: Carolina Blue Skies & Green Jobs Initiative	ACE028; Gordon Parker, Michigan Technological U: Experimental Studies for DPF and SCR Model, Control System, and OBD Development for Engines Using Diesel and Biodiesel Fuels	H2RA009; John King, FedEx Freight: Fuel Cell-Powered Lift Truck FedEx Freight Fleet Deployment
5:45 PM	ARRAVT065; Peter Denbigh, Virginia Department of Mines, Minerals and Energy: Southeast Propane AutoGas Development Program	ACE029; Michael Harold, U of Houston: Development of Optimal Catalyst Designs and Operating Strategies for Lean NOx Reduction in Coupled LNT-SCR Systems	H2RA010; Scott Kliever, Sysco of Houston: Fuel Cell-Powered Lift Truck Sysco Houston Fleet Deployment

Wednesday, May 16 - Poster Presentations

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

Electrochemical Storage
ES002; Mohamed Alamgir, LG Chem, Michigan: A High-Performance PHEV Battery Pack
ES003; Anne Testoni, A123Systems : USABC LEESS and PHEV Programs
ES005; Avie Judes, Johnson Controls-Saft : JCS PHEV System Development-USABC
ES008; Richard Pekala, Entek: Multifunctional, Inorganic-Filled Separators for Large Format, Li-ion Batteries
ES137; Herman Lopez, Envia: Development of High Energy Lithium Batteries for Electric Vehicles
ES138; Nick Karditsas, Cobasys: USABC Development of Advanced High-Performance Batteries for EV Applications
ES139; Kimberly McGrath, Maxwell: LEESS Battery Development
ES140; Keith Kepler, Farasis: Lithium Source For High Performance Li-ion Cells
ES141; Fraser Seymour, Ionova: 3-D Nanofilm Asymmetric Ultracapacitor
ES142; Suresh Sriramulu, TIAX: Implantation, Activation, Characterization and Prevention/Mitigation of Internal Short Circuits in Lithium-Ion Cells
ARRAVT001; Randy Koo, LG Chem, Michigan: Advanced Li-Ion Polymer Battery Cell Manufacturing Plant in USA
ARRAVT002; Rick Greenly, East Penn Manufacturing Co.: Advanced Battery Manufacturing Facilities and Equipment Program
ARRAVT003; Robert Kamischke, Enerdel : Expanding U.S.-based Lithium-ion Battery Manufacturing
ARRAVT004; Larry Atkins, Exide Technologies: Accelerating the Electrification of U.S. Drive Trains: Ready and Affordable Technology Solutions for Domestically
ARRAVT005; Linda Trumm, General Motors: GM Li-Ion Battery Pack Manufacturing
ARRAVT006; John Pham, KD ABG MI, LLC (Dow Kokam): Dow Kokam Lithium Ion Battery Production Facilities
ARRAVT007; Karen Conner, Saft America, Inc.: Saft Factory of the Future
ARRAVT008; Joseph Dicarlo, BASF Catalysts LLC: Construction of a Li Ion Battery (LIB) Cathode Production Plant in Elyria, Ohio
ARRAVT009; Gerry Rumierz, Celgard: Celgard US Manufacturing Facilities Initiative for Lithium-ion Battery Separator
ARRAVT010; John Groves, Chemetall Foote Corp: Expansion of Domestic Production of Lithium Carbonate and Lithium Hydroxide to Supply US Battery Industry
ARRAVT011; Chris Wheaton, EnerG2 Inc.: Recovery Act:Nanoengineered Ultracapacitor Material Surpasses the $/kW Threshold for Use in EDVs
ARRAVT013; Jeff Lauinger , HTTM LLC: Manufacture of Advanced Battery Metal Containers & Components
ARRAVT014; Brian O'Leary, Honeywell: High-Volume Manufacturing of LiPF6, A Critical Lithium-ion Battery Material
ARRAVT015; Ralph Wise, Novolyte Technologies Inc: Expansion of Novolyte Capacity for Lithium Ion Electrolyte Production
ARRAVT016; Michael Sekedat, Pyrotek Inc.: Pyrotek Graphitization Facility Expansion Project
ARRAVT017; David Han, Toda America, Inc.: Toda Material/Component Production Facilities
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
Hydrogen Storage
ST101; Kevin Simmons, PNNL: Enhanced Materials and Design Parameters for Reducing the Cost of Hydrogen Storage Tanks
ST052; Karl Gross, H2 Technology Consulting LLC: Best Practices for Characterizing Engineering Properties of Hydrogen Storage Materials
ST085; Kristina Lipinska-Kalita, U of Nevada Las Vegas: Glasses and Nanocomposites for Hydrogen Storage
ST102; John Vajo, HRL Laboratories, LLC: Room Temperature Hydrogen Storage in Nano-Confined Liquids
ST103; Jeffrey Long, LBNL: Hydrogen Storage in Metal-Organic Frameworks
BES009; Maddury Somayazulu, Carnegie Institute of Washington: Novel Molecular Materials for Hydrogen Storage Applications
BES010; Carolyn Koh, CSM: Energy Storage in Clathrate Hydrogen Material
BES011; Angela Lueking, PSU: Hydrogen Caged in Carbon—Exploration of Novel Carbon-Hydrogen Interactions
BES012; Marek Pruski, Ames Laboratory: Complex Hydrides - A New Frontier for Future Energy Applications
BES013; Jason Graetz, BNL: Atomistic Transport Mechanisms in Aluminum-Based Hydrides
ST034; Jim Wegrzyn, BNL: Aluminum Hydride
BES014; Chris Wolverton, NWU: Kinetics and Thermodynamics of Metal and Complex Hydride Nanoparticles
BES015; Chris Van de Walle, UCSB: Computational studies of hydrogen interactions with storage materials
BES016; Mark Conradi, WUSL: In Situ NMR Studies of Hydrogen Storage Systems
BES019; Tom Autrey, PNNL: Control of Hydrogen Release and Uptake in Condensed Phases
BES020; Christine Caputo, UCD: Activation of Hydrogen Under Ambient Conditions by Main Group Molecules
BES021; Tom Baker, University of Ottawa: Chemical Hydrogen Storage in Ionic Liquid Media
BES023; Jiuhua Chen, FIU: Influence of Pressure on Physical Property of Ammonia Borane and its Re-hydrogenation
ST104; Shih-Yuan Liu, U of Oregon: Novel Carbon(C)-Boron(B)-Nitrogen(N)-Containing H2 Storage Materials
ST063; Ragaiy Zidan, SRNL: Electrochemical Reversible Formation of Alane
ST105; Dongsheng Mao, Applied Nanotech, Inc.: Ultra Lightweight High Pressure Hydrogen Fuel Tanks Reinforced with Carbon Nanotubes
ST106; Mark Leavitt, Quantum Fuel Systems Technologies Worldwide: Alternative Fiber Evaluation and Optimization of Filament Winding
ST107; Raina Olsen, ORNL: The Quantum Effects of Pore Structure on Hydrogen Adsorption
Hydrogen Production and Delivery
PD058; Tadashi Ogitsu, LLNL/NREL: Characterization and Optimization of Photoelectrode Surfaces for Solar-to-Chemical Fuel Conversion
PD056; Liwei Xu, Midwest Optoelectronics, LLC: Critical Research for Cost-Effective Photoelectrochemical Production of Hydrogen
PD052; Muhammad Huda, University of Texas at Arlington: PEC Materials: Theory and Modeling
PD051; Clemens Heske, U of Nevada Las Vegas: Surface Validation: Physical and Electronic Characterization of Materials for Photoelectrochemical Hydrogen Produ
Hydrogen and Fuel Cells Program ARRA
H2RA006; Darin Painter, ReliOn Inc.: PEM Fuel Cell Systems Providing Backup Power to Commercial Cellular Towers and an Electric Utility Communications
H2RA004; Jim Fletcher, U of North Florida: Advanced Direct Methanol Fuel Cell for Mobile Computing
Manufacturing R&D
MN011; Eric Stanfield, NIST: Cause and Effect: Flow Field Plate Manufacturing Variability and its Impact on Performance



POSTER MAP

Wednesday, May 16

Crystal Gateway Marriott

2012 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Thursday, May 17 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**I**	**II**	**III**
8:15 AM		PD00A; Scott Weil, DOE: Hydrogen Delivery Session Introduction	
8:30 AM	LM008; Alan Luo, USAMP/AMD: Magnesium Front End Development (AMD 603/604/904)	PD014; Amgad Elgowainy, ANL: Hydrogen Delivery Infrastructure Analysis	ES162; Robert Tenent, NREL: Development of Industrially Viable Battery Electrode Coatings
9:00 AM	LM012; Mei Li, USAMP/AMD: Integrated Computational Materials Engineering (ICME) for Mg: International Pilot Project	PD017; Frank Di Bella, Concepts NREC: Development of a Centrifugal Hydrogen Pipeline Gas Compressor	ES164; David Wood, ORNL: Overcoming Processing Cost Barriers of High-Performance Lithium-Ion Battery Electrodes
9:30 AM	LM055; Jake Zindel, USAMP/AMD: Ablation Casting Evaluation for High Volume Structural Castings	PD016; Hooshang Heshmat, Mohawk Innovative Technology: Oil-Free Centrifugal Hydrogen Compression Technology Demonstration	ES030; Andrew Jansen, ANL : Fabricate PHEV Cells for Testing & Diagnostics
10:00 AM	LM035; Steve Derezinski, MOxST: Scale-Up of Magnesium Production by Fully Stabilized Zirconia Electrolysis	PD048; Ludwig Lipp, FuelCell Energy, Inc.: Electrochemical Hydrogen Compressor	ES165; David Wood, ORNL: Roll-to-Roll Electrode Processing and Materials NDE for Advanced Lithium Secondary Batteries
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	LM056; Curt Lavender, PNNL: Non-Rare Earth High-Performance Wrought Magnesium Alloys	PD024; Barton Smith, ORNL: Composite Pipeline Technology for Hydrogen Delivery	ES036; Chris Orendorff, SNL: Abuse Tolerance Improvements
11:30 AM	LM057; Xin Sun, PNNL: PNNL: Mechanistic-Based Ductility Prediction for Complex Mg Castings	PD021; Norm Newhouse, Lincoln Composites: Development of High Pressure Hydrogen Storage Tank for Storage and Gaseous Truck Delivery	ES166; Ira Bloom, ANL: Post-test Cell Characterization Facility
12:00 PM	LM058; Govindarajan Muralidharan , ORNL: Low-Cost Magnesium Sheet Production using the Twin Roll Casting Process and Asymmetric Rolling	PD088; Wei Zhang, ORNL: Vessel Design and Fabrication Technology for Stationary High-Pressure Hydrogen Storage	ES167; Greg Krumdick, ANL: Process Development and Scale-up of Advanced Cathode Materials
12:30 PM	**LUNCH** 1:15 PM - Presentation by Mark Johnson from ARPA-E		
1:45 PM	LM036; Nagraj Kulkarni, ORNL: Diffusion Databases for Mg-ICME	PD022; Thad Adams, SRNL: Fiber Reinforced Composite Pipelines	ES168; Chris Pupek, ANL: Process Development and Scale up of Advanced Electrolyte Materials
2:15 PM	LM037; Paul Wang, Mississippi St Univ: Southern Regional Center for Lightweight Innovative Design (SRCLID)	PD025; Brian Somerday, SNL: Hydrogen Embrittlement of Structural Steels	ES035; Zonghai Chen, ANL: Develop and Evaluate Materials and Additives that Enhance Thermal and Overcharge Abuse
2:45 PM	LM068; Ba Nguyen, PNNL: Engineering Property Prediction Tools for Tailored Polymer Composite Structures	PD070; Mike Roberts, Gas Technology Inst.: One Step Biomass Gas Reforming-Shift Separation Membrane Reactor	ES037; Guoying Chen, LBNL: Overcharge Protection for PHEV Batteries
3:15 PM	LM060; Mark Smith, PNNL: Aerodynamic Lightweight Cab Structure Components	PD072; Paul Liu, Media and Process Technology Inc.: Development of Hydrogen Selective Membranes/Modules as Reactors/Separators for Distributed Hydrogen Production	ES027; Kevin Gering, INL: Novel Phosphazene Compounds for Enhancing Electrolyte Stability and Safety of Lithium-ion Cells
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	LM061; Nia Harrison, USAMP/AMD: Optimization of High-Volume Warm Forming for Lightweight Sheet Alloys	PD002; David King, PNNL: Biomass-Derived Liquids Distributed (Aqueous Phase) Reforming	ES113; Zhengcheng Zhang, ANL: High Voltage Electrolyte for Lithium Batteries
4:45 PM	LM033; Rich Davies, PNNL: Pulse-Pressure Forming of Lightweight Metals	PD004; Stefan Czernik, NREL: Distributed Bio-Oil Reforming	ES024; Richard Jow, Army Research Laboratory: High Voltage Electrolytes for Li-ion Batteries
5:15 PM	LM062; Zhili Feng, ORNL: Improving Fatigue Performance of AHSS Welds		ES025; Zhengcheng Zhang, ANL: Advanced Electrolyte Additives for PHEV/EV Lithium-ion Battery
5:45 PM			ES026; Marshall Smart, JPL: Electrolytes for Use in High Energy Lithium-Ion Batteries with Wide Operating Temperature Range

Thursday, May 17 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**IV**	**V**	**VI**
8:15 AM			
8:30 AM	FC017; Rajesh Ahluwalia, ANL: Fuel Cells Systems Analysis	ST028; Christopher Wolverton, Northwestern U: Design of Novel Multi-Component Metal Hydride-Based Mixtures for Hydrogen Storage	VSS018; Greg Cesiel, General Motors : Plug-in Hybrid (PHEV) Vehicle Technology Advancement and Demonstration Activity
9:00 AM	FC018; Brian James, Strategic Analysis, Inc.: Fuel Cell Transportation Cost Analysis, Preliminary Results	ST031; Craig Jensen, U of Hawaii: Advanced, High-Capacity Reversible Metal Hydrides	VSS063; Abdullah Bazzi, Chrysler LLC: Advancing Plug In Hybrid Technology and Flex Fuel Application on a Chrysler Mini-Van PHEV DOE Funded Project
9:30 AM	FC097; Kathya Mahadevan, Battelle: Stationery and Emerging Market Fuel Cell System Cost Analysis	ST048; Andrew Goudy, Delaware State U: Hydrogen Storage Materials for Fuel Cell Powered Vehicles	VSS081; Pascal Amar, Volvo Trucks: Development and Demonstration of a Fuel-Efficient Class 8 Highway Vehicle
10:00 AM	FC098; Max Wei, LBNL: A Total Cost of Ownership Model for Design and Manufacturing Optimization of Fuel Cells in Stationary and Emerging Market Applications		VSS064; Dennis Jadin, Navistar: SuperTruck – Development and Demonstration of a Fuel-Efficient Class 8 Tractor & Trailer
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC020; Karren More, ORNL: Characterization of Fuel Cell Materials	ST038; Shih-Yuan Liu, U of Oregon: Hydrogen Storage by Novel CBN Heterocycle Materials	ARRAVT080; Derek Rotz, DTNA: Class 8 Truck Freight Efficiency Improvement Project
11:30 AM	FC021; David Jacobson, NIST: Neutron Imaging Study of the Water Transport in Operating Fuel Cells	ST040; Benjamin Davis, LANL: Fluid Phase H2 Storage Material Development	ARRAVT081; Scott Newhouse, Peterbilt: Technology and System Level Demonstration of Highly Efficient and Clean, Diesel Powered Class 8 Trucks
12:00 PM	FC081; Jennifer Kurtz, NREL: Fuel Cell Technology Status - Voltage Degradation	ST098; Craig Jensen, Hawaii Hydrogen Carriers, LLC: Development of a Practical Hydrogen Storage System based on Liquid Organic Hydrogen Carriers and a Homogeneous Catalyst	ARRAVT070; Jon Gustafson, Cascade Sierra Solutions: Interstate Grid Electrification Improvement Project
12:30 PM	**LUNCH** 1:15 PM - Presentation by Mark Johnson from ARPA-E		
1:45 PM	FC092; Jon Owejan, GM: Investigation of Micro- and Macro-Scale Transport Processes for Improved Fuel Cell Performance	ST099; Felix Paulauskas, ORNL: Development of Low-Cost, High Strength Commercial Textile Precursor (PAN-MA)	ARRAVT066; Don Karner, Electric Transportation Engineering Corp.: Electric Drive Vehicle Demonstration and Vehicle Infrastructure Evaluation
2:15 PM	FC026; Adam Weber, LBNL: Fuel-Cell Fundamentals at Low and Subzero Temperatures	ST093; Felix Paulauskas, ORNL: Melt Processable PAN Precursor for High Strength, Low-Cost Carbon Fibers	ARRAVT073; Kumar Gogineni, Coulomb: ChargePoint America
2:45 PM	FC028; Robert Dross, Nuvera Fuel Cells: Transport Studies Enabling Efficiency Optimization of Cost-Competitive Fuel Cell Stacks	MN008; Mark Leavitt, Quantum Fuel Systems Technologies Worldwide, Inc.: Development of Advanced Manufacturing Technologies for Low Cost Hydrogen Storage Vessels	ARRAVT071; Greg Cesiel, General Motors : Advanced Vehicle Electrification and Transportation Sector Electrification
3:15 PM	FC054; Cortney Mittelsteadt, Giner Electrochemical Systems, LLC: Transport in PEMFC Stacks	ST053; Barton Smith, ORNL: Lifecycle Verification of Polymer Liners in Storage Tanks	ARRAVT072; Robin Mackie, Smith Electric Vehicles: Smith Electric Vehicles: Advanced Vehicle Electrification + Transportation Sector
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:15 PM	FC067; Will Johnson, W.L. Gore: Materials and Modules for Low-Cost, High Performance Fuel Cell Humidifiers		ARRAVT067; Abdullah Bazzi, Chrysler LLC: Advancing Transportation Through Vehicle Electrification - PHEV
4:45 PM	FC083; Chris Ainscough, NREL: Enlarging Potential National Penetration for Stationary Fuel Cells Through System Design Optimization		ARRAVT069; Dion Van Leeve, Navistar, Inc.: Advanced Vehicle Electrification
5:15 PM	FC077; Satish Mohapatra, Dynalene: Fuel Cell Coolant Optimization and Scale-up (plus work under SBIR III project)		VSS019; Julie D'Annunzio, Ford: Ford Plug-In Project: Bringing PHEVs to Market
5:45 PM			VSS093; Jim McCabe, ANSI: ANSI Electric Vehicle Standards Roadmap

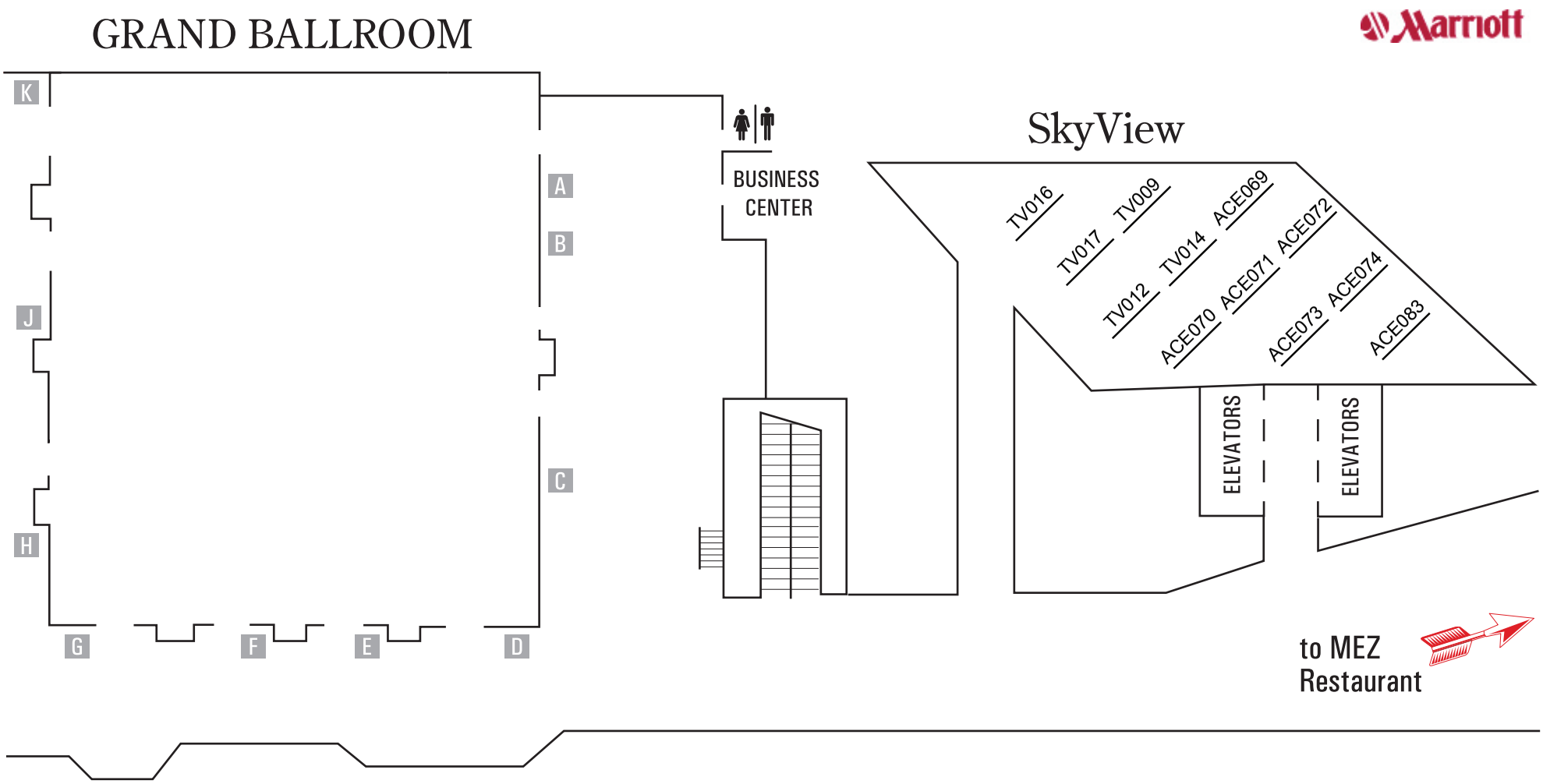
Thursday, May 17 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:15 AM			ED000; Gregory Kleen, DOE: Education and Outreach Session Introduction
8:30 AM	ARRAVT048; Maria Redmond, State of Wisconsin: Wisconsin Clean Transportation Program	ACE030; Puxian Gao, U of Connecticut: Three-Dimensional Composite Nanostructures for Lean NOx Emission Control	ED010; Shannon Baxter-Clemmons, South Carolina Hydrogen and Fuel Cell Alliance: Development of Hydrogen Education Programs
9:00 AM	ARRAVT050; Patrick Flynn, State of Indiana: State of Indiana/Greater IN Clean Cities Alternative Fuels Implementation Plan	ACE077; Bill Partridge, ORNL: CRADA with Cummins on Characterization and Reduction of Combustion Variations	ED013; Pat Valente, Ohio Fuel Cell Coalition: Raising H2 and Fuel Cell Awareness in Ohio
9:30 AM	ARRAVT051; Chuck Feinberg, New Jersey Clean Cities Coalition: NJ Compressed Natural Gas Refuse Trucks, Shuttle Buses and Infrastructure	ACE032; Bill Partridge, ORNL: Cummins/ORNL-FEERC CRADA: NOx Control & Measurement Technology for Heavy-Duty Diesel Engines	ED012; Joel Rinebold, Connecticut Center for Advanced Technology, Inc.: State and Local Government Partnership
10:00 AM	ARRAVT054; Cynthia Maves, Clean Fuels Ohio: The Ohio Advanced Transportation Partnership (OATP)	ACE033; Todd Toops, ORNL: Emissions Control for Lean Gasoline Engines	ED014; Patrick Serfass, Technology Transition Corporation: H2L3: Hydrogen Learning for Local Leaders
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	ARRAVT055; Sean Reed, Clean Energy Coalition : RECOVERY ACT -- CLEAN ENERGY COALITION MICHIGAN GREEN FLEETS	ACE078; George Muntean, PNNL: Investigation of Mixed Oxide Catalysts for NO Oxidation	ED017; Mary Spruill, NEED: H2 Educate! Hydrogen Education for Middle Schools
11:30 AM	ARRAVT061; Samantha Bingham, City of Chicago, Department of Environment: Chicago Area Alternative Fuels Deployment Project (CAAFDP)	ACE055; Chuck Peden, PNNL: Deactivation Mechanisms of Base Metal/Zeolite Urea Selective Catalytic Reduction Materials, and Development of Zeolite-Based Hydrocarbon Adsorber Materials	
12:00 PM	ARRAVT063; Christopher Rice, Maryland Energy Administration: Maryland Hybrid Truck Goods Movement Initiative	ACE056; Mark Stewart, PNNL: Fuel-Neutral Studies of Particulate Matter Transport Emissions	
12:30 PM	**LUNCH - Lunch speaker will be in the Crystal Gateway Hotel**		
1:30 PM			TV000; Jason Marcinkoski, DOE: Technology Validation Session Introduction
1:45 PM	ARRAVT041; Beth Baird, Idaho Petroleum Reduction Leadership Project: Idaho Petroleum Reduction Leadership Project	ACE079; Rangachary Mukundan, LANL: Robust Nitrogen Oxide/Ammonia Sensors for Vehicle On-board Emissions Control	TV001; Keith Wipke, NREL: Controlled Hydrogen Fleet and Infrastructure Analysis
2:15 PM	ARRAVT042; Stephanie Meyn, Puget Sound Clean Air Agency: Puget Sound Clean Cities Petroleum Reduction Project	ACE044; Dan Greenbaum, Health Effects Institute: Advanced Collaborative Emissions Study (ACES)	TV008; Leslie Eudy, NREL: Technology Validation: Fuel Cell Bus Evaluations
2:45 PM	ARRAVT043; Robin Erickson, Utah Clean Cities Coalition: Utah Clean Cities Transportation Sector Petroleum Reduction Technologies Program		TV006; Ed Heydorn, Air Products: Validation of an Integrated Hydrogen Energy Station
3:15 PM	ARRAVT056; Kelly Gilbert, Metropolitan Energy Information Center: Midwest Region Alternative Fuels Project		TV007; Ed Heydorn, Air Products: California Hydrogen Infrastructure Project
3:45 PM	**BREAK**	**BREAK**	**BREAK**
4:00 PM		ACE00C; Roland Gravel, DOE: Overview of the DOE High Efficiency Engine Technologies R&D	
4:15 PM	ARRAVT049; Lee Grannis, Connecticut Clean Cities Future Fuels Project: Connecticut Clean Cities Future Fuels Project	ACE060; Pascal Amar, Volvo: Volvo SuperTruck - Powertrain Technologies for Efficiency Improvement	TV015; Kevin Harrison, NREL: Renewable Electrolysis Integrated System Development & Testing
4:45 PM	ARRAVT052; Rita Ebert, Greater Long Island Clean Cities Coalition: Promoting a Green Economy through Clean Transportation Alternatives	ACE057; David Koeberlein, Cummins: Cummins SuperTruck Program - Technology and System Level Demonstration of Highly Efficient and Clean, Diesel Powered Class 8 Trucks	
5:15 PM	ARRAVT053; Adam Ruder, New York State Energy Research and Development Authority: New York State-wide Alternative Fuel Vehicle Program for Vehicles and Fueling Stations	ACE058; Kevin Sisken, Detroit Diesel: Supertruck - Improving Transportation Efficiency through Integrated Vehicle, Engine and Powertrain Research	
5:45 PM		ACE059; Dennis Jadin, Navistar International Corp.: Supertruck - Development and Demonstration of a Fuel-Efficient Class 8 Tractor & Trailer	

Thursday, May 17 - Poster Presentations

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

Technology Validation
TV016; Jennifer Kurtz, NREL: Stationary Fuel Cell Evaluation
TV017; Sam Sprik, NREL: Next Generation H2 Station Analysis
TV009; Mitch Ewan, Hawaii Natural Energy Inst.: Hawaii Hydrogen Power Park
TV012; David Block, U of Central Florida: Florida Hydrogen Initiative (FHI)
TV014; David Blekhman, Cal State LA U Aux. Services, Inc.: Sustainable Hydrogen Fueling Station, California State University, Los Angeles
Solid-State Energy Conversion
ACE069; Yongho Ju, UCLA: Integration of Advanced Materials and Interfaces for Durable Thermoelectric Automobile Exhaust Waste Heat Harvesting Devices
ACE070; Ali Shakouri, UC Santa Cruz: Mg2Si Composites with Embedded Si Nanoparticles for Energy Recovery of Waste Exhaust Heat
ACE071; Sreeram Vaddiraju, Texas A&M Univ. : NSF/DOE Thermoelectric Partnership: Inorganic-Organic Hybrid Thermoelectrics
ACE072; Scott Huxtable, VPI & SU: An integrated approach towards efficient, scalable, and low cost thermoelectric waste heat recovery devices for vehicles
ACE073; Chad Baker, Univ of Texas, Austin: NSF/DOE Thermoelectric Partnership: High-Performance Thermoelectric Devices Based on Abundant Silicide Materials for Vehicle Waste Heat Recovery
ACE074; Xianfan Xu, Purdue Univ: Thermoelectrics for Automotive Waste Heat Recovery
Advanced Combustion
ACE083; Kyeong Lee, ANL: Detailed Assessment of Particulate Characteristics from Low-Temperature Combustion Engines



POSTER MAP

Thursday, May 17

Crystal Gateway Marriott

2012 DOE ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING

Friday, May 18 - Oral Presentations

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**I**	**II**	**III**
8:15 AM			
8:30 AM	LM063; Gene Hsiung, USAMP/ASP: Advanced High-Strength Steel Stamping		
9:00 AM	LM064; Thomas Stoughton, USAMP/ASP: Nonlinear Strain Paths		
9:30 AM	LM065; Raj Sohmshetty, USAMP/ASP: Mapping of Forming Effects to Structural Models		
10:00 AM	LM066; Phil Yaccarino, USAMP/ASP: Lightweight Sealed Steel Fuel Tanks for Advanced Hybrid Electric Vehicles		
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	LM067; Xin Sun, PNNL: First Generation Advanced High-Strength Steels Deformation Fundamentals		
11:30 AM	LM030; Yuri Hovanski, PNNL: Friction Stir and Ultrasonic Solid State Joining of Magnesium to Steel		
12:00 PM	LM028; Edgar Lara-Curzio, ORNL/HTML: Materials Characterization Capabilities at the High Temperature Materials Laboratory and HTML User Program Success Stories		

Hotel	Crystal Gateway	Crystal Gateway	Crystal Gateway
Salon	**IV**	**V**	**VI**
8:15 AM			VSS082; Yury Kalish, DOE: Overview of VMT Reduction and Legacy Fleet Improvement
8:30 AM	FC035; James Fenton, U of Central Florida: Lead Research and Development Activity for DOE's High Temperature, Low Relative Humidity Membrane Program		VSS083; Jay Kim, Cooper Tire: Improving Vehicle Fuel Efficiency Through Tire Design, Materials, and Reduced Weight
9:00 AM	FC038; Peter Pintauro, Vanderbilt U: NanoCapillary Network Proton Conducting Membranes for High Temperature Hydrogen/Air Fuel Cells		VSS084; Timothy Okel, PPG: A Materials Approach to Fuel-Efficient Tires
9:30 AM	FC039; Andrew Herring, Colorado School of Mines: Novel Approaches to Immobilized Heteropoly Acid (HPA) Systems for High Temperature, Low Relative Humidity Polymer-Type Membranes		VSS085; Robert Benedict, Goodyear: System for Automatically Maintaining Pressure in a Commercial Truck Tire
10:00 AM	FC040; Ludwig Lipp, FuelCell Energy, Inc.: High Temperature Membrane with Humidification-Independent Cluster Structure		VSS086; Matthew Barth, University of California at Riverside: Next Generation Environmentally Friendly Driving Feedback Systems Research and Development
10:30 AM	**BREAK**	**BREAK**	**BREAK**
11:00 AM	FC036; Cortney Mittelsteadt, Giner Electrochemical Systems, LLC: Dimensionally Stable High Performance Membranes		VSS087; Zwick Tang, Eaton: Look-ahead Driver Feedback and Powertrain Management
11:30 AM	FC090; Stephen Grot, Ion Power: Corrugated Membrane Fuel Cell Structures		
12:00 PM			

Friday, May 18 - Oral Presentations

Hotel	Crystal City	Crystal City	Crystal City
Salon	**D**	**E**	**F**
8:15 AM			ACE00E; John Fairbanks, DOE: Automotive Thermoelectric Generators and HVAC
8:30 AM	ARRAVT057; Lori Clark, North Central Texas Council of Governments: North Central Texas Alternative Fuel and Advanced Technology Investments	ACE061; Michael Ruth, Cummins: ATP-LD; Cummins Next Generation Tier 2 Bin 2 Diesel Engine	ACE047; Clay Maranville, Ford Motor Company: Thermoelectric HVAC and Thermal Comfort Enablers for Light-Duty Vehicle Applications
9:00 AM	ARRAVT058; Heather Ball, Railroad Commission of Texas: Texas Propane Vehicle Pilot Project	ACE037; Harold Sun, Ford Motor Company: Advanced Boost System Development for Diesel HCCI/LTC Application	ACE048; Jeffrey Bozeman, General Motors: Energy Efficient HVAC System for Distributed Cooling/Heating with Thermoelectric Devices
9:30 AM	ARRAVT059; Todd Ewing, Texas State Technical College: Development of National Liquid Propane (Autogas) Refueling Network, Clean School Bus/Vehicle Incentive & Green Jobs Outreach Program	ACE062; Ron Reese, Chrysler: A MultiAir / MultiFuel Approach to Enhancing Engine System Efficiency	ACE080; Vladimir Jovovic, Amerigon: Thermoelectric Waste Heat Recovery Program for Passenger Vehicles
10:00 AM		ACE063; Halim Santoso, General Motors: Lean Gasoline System Development for Fuel Efficient Small Car	ACE081; Greg Meisner, General Motors: Development of 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		ACE064; Keith Confer, Delphi Automotive Systems: Gasoline Ultra Fuel Efficient Vehicle	ACE082; Chris Caylor, GMZ Energy Inc.: Nanostructured High-Temperature Bulk Thermoelectric Energy Conversion for Efficient Automotive Waste Heat Recovery
11:30 AM		ACE065; Corey Weaver, Ford Motor Company: Advanced Gasoline Turbocharged Direct Injection (GTDI) Engine Development	ACE067; Kenneth Goodson, Stanford Univ: Thermoelectrics Partnership: Automotive Thermoelectric Modules with Scalable Thermo- and Electro-Mechanical Interfaces
12:00 PM		ACE066; Hakan Yilmaz, Robert Bosch: Advanced Combustion Concepts - Enabling Systems and Solutions (ACCESS) for High Efficiency Light Duty Vehicles	ACE068; Joseph Heremans, Ohio State Univ: DOE/NSF Thermoelectric Partnership Project SEEBECK Saving Energy Effectively By Engaging in Collaborative Research and Sharing Knowledge