

ADVANCED MANUFACTURING OFFICE
 PEER REVIEW
 MAY 28-29, 2015



Washington Marriott Wardman Park
 2660 Woodley Road NW
 Washington, DC 20008

PRELIMINARY AGENDA

Day 1 (May 28)

8:00 – 8:45 am	Peer Reviewer Briefing Breakfast Mark Johnson, Isaac Chan, Mark Shuart, and Jay Wrobel, DOE-AMO			
8:45 – 9:00 am	BREAK			
8:00 – 9:00 am	REGISTRATION FOR ATTENDEES			
9:00 – 9:30 am	Welcome and AMO Overview Mark Johnson, DOE-AMO			
9:30 – 9:50 am	Sustainable Manufacturing via Multi-Scale Physics-Based Process Modeling and Manufacturing-Informed Design		Third Wave Systems Inc.	
9:50 – 10:10 am	High Metal Removal Rate Process for Machining Difficult Materials		Delphi Automotive Systems, LLC	
10:10 – 10:30 am	Coatings and Process Development Reduced Energy Automotive OEM Manufacturing		PPG Industries, Inc.	
10:30 – 10:50 am	BREAK			
TRACK A		TRACK B		
Research, Development, and Demonstration Review		Analysis		
10:50 – 11:10 am	Development of Integrated Die Casting Process For Large Thin-Wall Magnesium Applications	General Motors LLC	10:50 – 11:00 am	Analysis Introduction Joe Cresko, DOE-AMO
			11:00 – 11:20 am	Materials Flow Analyses Birdie Carpenter, National Renewable Energy Laboratory
11:10 – 11:30 am	Rapid Freeform Sheet Metal Forming: Technology Development and System Verification	Ford Motor Co.	11:20 – 11:40 am	LIGHTEn-UP Bill Morrow, Lawrence Berkeley National Laboratory

Day 1 (May 28) Continued

TRACK A		TRACK B	
11:30 – 11:50 am	Quenching and Partitioning Process Development to Replace Hot Stamping of High Strength Automotive Steel	Colorado School of Mines	11:40 am–12:00 pm Technology Analysis Diane Graziano, Argonne National Laboratory
12:00 – 1:00 pm	LUNCH		
Research, Development, and Demonstration Review			R&D Facilities
1:00 – 1:20 pm	Hot Rolling Scrap Reduction thru Edge Cracking and Surface Defects Control	University of Illinois	1:00 – 2:00 pm Critical Materials Institute Alex King, Ames Laboratory
1:20 – 1:40 pm	Novel Flash Ironmaking Process	American Iron and Steel Institute	
1:40 – 2:00 pm	A New Method of Low Cost Production of Ti Alloys to Reduce Energy Consumption of Mechanical Systems	The University of Utah	
2:00 – 2:20 pm	BREAK		2:00 – 3:00 pm Manufacturing Demonstrations Facility Bill Peter, Oak Ridge National Laboratory
2:20 – 2:40 pm	High Efficiency 370KW Microturbine with Integral Heat Recovery	Capstone Turbine Corp.	
2:40 – 3:00 pm	Waste Heat-to-Power Using Scroll Expander for Organic Rankine Bottoming Cycle	TIAX	
3:00 – 3:20 pm	Advanced, Energy-Efficient Hybrid Membrane System for Industrial Water Reuse	Research Triangle Institute	3:00 – 3:30 pm BREAK
3:20 – 3:40 pm	BREAK		3:30 – 4:30 pm PowerAmerica Nick Justice, North Carolina State University
3:40 – 4:00 pm	Novel Membranes and Systems for Industrial and Municipal Water Purification and Reuse	GE Global Research	

Day 1 (May 28) Continued

TRACK A			TRACK B	
4:00 – 4:20 pm	Sacrificial Protective Coating Materials that can be Regenerated In-Situ to Enable High Performance Membranes	Teledyne Scientific and Imaging	3:30 – 4:30 pm	PowerAmerica Nick Justice, North Carolina State University
4:20 – 4:40 pm	Bio-Oxo Technology	Easel Biotechnologies	4:30 – 5:30 pm	Institute for Advanced Composite Materials Innovation Craig Blue, Oak Ridge National Laboratory
4:40 – 5:00 pm	Conversion of Waste CO ₂ and Shale Gas to High Value Chemicals	Novomer		
5:00 – 5:30 pm	BREAK			

5:30 – 7:30 pm	POSTER SESSION AND NO-HOST RECEPTION (10 posters)
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Project Title	Performer
Crosscutting Manufacturing R&D	Argonne National Laboratory
Combined Heat and Power R&D	Oak Ridge National Laboratory
Melt Processing of Covetic Materials	National Energy Technology Laboratory
Covetic Materials	Argonne National Laboratory
An Industrial Membrane System Suitable for Distributed Oil Re-refining	Media and Process Technology Inc.
High Flux Ti Nanofiltration Membrane for Efficient Processing of Bioproducts	Cerahelix, Inc.
Single Step Manufacturing of Low Catalyst Loading Electrolyzer Membrane Electrode Assemblies	Proton On Site Gas Generation
Flash® Processed Steel for Automotive Applications	SFP Works, LLC (dba Flash Bainite)
High Performance Computing for Manufacturing	Lawrence Livermore National Laboratory
Advanced Manufacturing Office Small Business Innovation Research Portfolio	Advanced Manufacturing Office

Day 2 (May 29)

7:30 – 8:30 am	REGISTRATION FOR ATTENDEES	
Research, Development, and Demonstration Review		
8:30 – 8:35 am	Welcome Isaac Chan, DOE-AMO	
8:35 – 8:55 am	Development and Implementation of an Automatic Continuous Online Monitoring and Control Platform for Polymerization Reactions to Sharply Boost Energy and Resource Efficiency in Polymer Manufacturing	Tulane University
8:55 – 9:15 am	Development of Method and Algorithms to Identify Easily Implementable Energy-Efficient Low-Cost Multicomponent Distillation Column Trains with Large Energy Savings for Wide Number of Separations	Purdue University
9:15 – 9:35 am	One Step Hydrogen Generation through Sorption Enhanced Reforming	Aerojet Rocketdyne
9:35 – 9:55 am	High Quality, Low Cost Bulk Gallium Nitride Substrates Grown by the Electrochemical Solution Growth Method	Sun Edison Semiconductors
9:55 – 10:15 am	BREAK	
10:15 – 10:35 am	Carbon Fiber Technology Facility	Oak Ridge National Laboratory
10:35 – 10:55 am	Low-Cost Bio-Based Carbon Fiber for High Temperature Processing	GrafTech International Holdings Inc.
10:55 – 11:15 am	Continuous Processing of High Thermal Conductivity Polyethylene Fibers and Sheets	Massachusetts Institute of Technology
11:15 – 11:35 am	High Thermal Conductivity Polymer Composites for Low Cost Heat Exchangers	UTRC
11:45 am – 12:45 pm	LUNCH and Reviewer Discussions	
12:45 – 1:05 pm	Energy Efficient Thermoplastic Composite Manufacturing	The Boeing Company
1:05 – 1:25 pm	Industrial Scale Demonstration of Smart Manufacturing Achieving Transformational Energy Productivity Gains	University of Texas at Austin

Day 2 (May 29) Continued

1:25 – 1:45 pm	Manufacturing of Protected Lithium Electrodes for Advanced Lithium-Air, Lithium-Water & Lithium-Sulfur Batteries	PolyPlus Battery Company
1:45 – 2:05 pm	No Heat Spray Drying Technology	ZoomEssence
2:05 – 2:10 pm	Closing Remarks Isaac Chan, DOE-AMO	
2:30 – 4:00 pm	MEETING OF REVIEW PANEL (<i>including up to 30 minutes with AMO R&D management to address outstanding questions</i>)	