

List of Projects Not Reviewed

Project ID	Project Title	Principal Investigator Name	Organization
BES-001	Overview of the BES Hydrogen Storage Activities	John Vetrano	U.S. Department of Energy, Office of Basic Energy Sciences
BES-002	From Fundamental Understanding to Predicting New Nanomaterials for High-Capacity Hydrogen Storage	Taner Yildirim	National Institute of Standards and Technology
BES-003	Novel Theoretical and Experimental Approaches for Understanding and Optimizing Hydrogen-Sorbent Interactions in Metal Organic Framework Materials	Yves Chabal	University of Texas at Dallas
BES-004	Design and Synthesis of Chemically and Electronically Tunable Nanoporous Organic Polymers for Use in Hydrogen Storage Applications	Hani El-Kaderi	Virginia Commonwealth University
BES-005	Atomistic Mechanisms of Metal-Assisted Hydrogen Storage in Nanostructured Carbons	Nidia Gallego	Oak Ridge National Laboratory
BES-006	Elucidation of Hydrogen Interaction Mechanisms with Metal-Doped Carbon Nanostructures	Ragay Zidan	Savannah River National Laboratory
BES-007	Synthetic Design of New Metal-Organic Framework Materials for Hydrogen Storage	Pingyun Feng	University of California, Riverside
BES-008	New Pathways and Metrics for Enhanced, Reversible Hydrogen Storage in Boron-Doped Carbon Nanospaces	Peter Pfeifer	University of Missouri-Columbia
BES-009	Novel Molecular Materials for Hydrogen Storage Applications	Maddury Somayazulu	Carnegie Institute of Washington
BES-010	Energy Storage in Clathrate Hydrogen Material	Carolyn Koh	Colorado School of Mines
BES-011	Hydrogen Caged in Carbon—Exploration of Novel Carbon-Hydrogen Interactions	Angela Lueking	Pennsylvania State University
BES-012	Complex Hydrides - A New Frontier for Future Energy Applications	Vitailij Pecharsky	Ames Laboratory
BES-013	Atomistic Transport Mechanisms in Aluminum-Based Hydrides	Jason Graetz	Brookhaven National Laboratory

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BES-014	Kinetics and Thermodynamics of Metal and Complex Hydride Nanoparticles	Chris Wolverton	Northwestern University
BES-015	Computational Studies of Hydrogen Interactions with Storage Materials	Chris Van de Walle	University of California, Santa Barbara
BES-016	Discovery of a New Species in the Hydrogen Chemistry of NaAlH ₄ in <i>In Situ</i> NMR	Mark Conradi	Washington University in St. Louis
BES-019	Activation of Hydrogen with Bi-Functional Ambiphilic Catalyst Complexes	Tom Autrey	Pacific Northwest National Laboratory
BES-020	Heavy Cycloadditions: Reactions of Digallene with Cyclic Polyolefins	Philip Power	University of California, Davis
BES-021	Ammonia-Borane: A Promising Material for Hydrogen Storage	Larry Sneddon	University of Pennsylvania
BES-023	Ammonia-Borane under High Pressure	Jiuhua Chen	Florida International University
ST-018	Improving Porosity and H ₂ -Affinity of Porous Framework Materials	Joe Zhou	Texas A&M University
ST-031	Advanced, High-Capacity Reversible Metal Hydrides	Craig Jensen	University of Hawaii
ST-034	Aluminum Hydride	Jim Wegrzyn	Brookhaven National Laboratory
ST-038	Hydrogen Storage by Novel CBN Heterocycle Materials	Shih-Yuan Liu	University of Oregon
ST-052	Best Practices for Characterizing Engineering Properties of Hydrogen Storage Materials	Karl Gross	H2 Technology Consulting LLC
ST-063	Electrochemical Reversible Formation of Alane	Ragay Zidan	Savannah River National Laboratory
ST-085	Glasses and Nanocomposites for Hydrogen Storage	Kristina Lipinska-Kalita	University of Nevada, Las Vegas

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ST-100	Hydrogen Storage Cost Analysis, Preliminary Results	Brian James	Strategic Analysis, Inc.
ST-101	Enhanced Materials and Design Parameters for Reducing the Cost of Hydrogen Storage Tanks	Kevin Simmons	Pacific Northwest National Laboratory
ST-102	Room Temperature Hydrogen Storage in Nano-Confined Liquids	John Vajo	HRL Laboratories, LLC
ST-103	Hydrogen Storage in Metal-Organic Frameworks	Jeffrey Long	Lawrence Berkeley National Laboratory
ST-104	Novel Carbon (C)-Boron (B)-Nitrogen (N)-Containing H ₂ Storage Materials	Shih-Yuan Liu	University of Oregon
ST-105	Ultra Lightweight High Pressure Hydrogen Fuel Tanks Reinforced with Carbon Nanotubes	Dongsheng Mao	Applied Nanotech, Inc.
ST-106	Alternative Fiber Evaluation and Optimization of Filament Winding	Mark Leavitt	Quantum Fuel Systems Technologies Worldwide
ST-107	The Quantum Effects of Pore Structure on Hydrogen Adsorption	Raina Olsen	Oak Ridge National Laboratory
PD-020	Inexpensive Delivery of Cold Hydrogen in Glass Fiber Composite Pressure Vessels	Andrew Weisberg	Lawrence Livermore National Laboratory
PD-051	Surface Validation: Physical and Electronic Characterization of Materials for Photoelectrochemical Hydrogen Production	Clemens Heske	University of Nevada, Las Vegas
PD-052	PEC Materials: Theory and Modeling	Muhammad Huda	University of Texas at Arlington
PD-056	Critical Research for Cost-Effective Photoelectrochemical Production of Hydrogen	Liwei Xu	Midwest Optoelectronics, LLC
PD-058	Characterization and Optimization of Photoelectrode Surfaces for Solar-to-Chemical Fuel Conversion	Tadashi Ogitsu	Lawrence Livermore National Laboratory/National Renewable Energy Laboratory
PD-076	Photoelectrochemical Generation of Hydrogen from Water Using Nanotube-Based Semiconductor Systems for Improved Visible Light Activity	Mano Misra	University of Nevada, Reno
PD-077	Solar Energy Utilization	Ravi Subramanian	University of Nevada, Reno

APPENDIX D: PROJECTS NOT REVIEWED

Project ID	Project Title	Principal Investigator Name	Organization
PD-082	Process Intensification of Hydrogen Unit Operations Using an Electrochemical Device	Glenn Eisman	H2 Pump LLC
PD-085	Hour-by-Hour Cost Modeling of Optimized Central Wind-Based Water Electrolysis Production	Chris Ainscough	National Renewable Energy Laboratory
PD-089	H2A Hydrogen Production Analysis Model Version 3	Darlene Steward	National Renewable Energy Laboratory
PD-090	Low Cost Large Scale PEM Electrolysis for Renewable Energy Storage	Katherine Ayers	Proton OnSite
FC-001	Advanced Cathode Catalysts and Supports for PEM Fuel Cells	Mark Debe	3M
FC-002	Highly Dispersed Alloy Catalyst for Durability	Lesia Protsailo	UTC Power
FC-011	Molecular-scale, Three-dimensional Non-Platinum Group Metal Electrodes for Catalysis of Fuel Cell Reactions	John Kerr	Lawrence Berkeley National Laboratory
FC-015	Improved Accelerated Stress Tests Based on FCV Data	Timothy Patterson	UTC Power
FC-025	Air Cooled Stack Freeze Tolerance	Dave Hancock	Plug Power, Inc.
FC-027	Development and Validation of a Two-phase, Three-dimensional Model for PEM Fuel Cells	Ken Chen	Sandia National Laboratories
FC-030	Water Transport in PEM Fuel Cells: Advanced Modeling, Material Selection, Testing, and Design Optimization	Vernon Cole	CFD Research Corp.
FC-031	Development and Demonstration of a New Generation High Efficiency 10kW Stationary PEM Fuel Cell System	Durai Swamy	Intelligent Energy
FC-035	Lead Research and Development Activity for DOE's High Temperature, Low Relative Humidity Membrane Program	James Fenton	University of Central Florida
FC-038	NanoCapillary Network Proton Conducting Membranes for High Temperature Hydrogen/Air Fuel Cells	Peter Pintauro	Vanderbilt University
FC-039	Novel Approaches to Immobilized Heteropoly Acid (HPA) Systems for High Temperature, Low Relative Humidity Polymer-Type Membranes	Andrew Herring	Colorado School of Mines

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FC-040	High Temperature Membrane with Humidification-Independent Cluster Structure	Ludwig Lipp	FuelCell Energy, Inc.
FC-041	Novel Approach to Advanced Direct Methanol Fuel Cell Anode Catalysts	Huyen Dinh	National Renewable Energy Laboratory
FC-042	Advanced Materials for RSOFC Dual Operation with Low Degradation	Randy Petri	Versa Power
FC-043	Resonance-Stabilized Anion Exchange Polymer Electrolytes	Yu Seung Kim	Los Alamos National Laboratory
FC-051	The Fuel Cell Testing at the Argonne Fuel Cell Test Facility	Ira Bloom	Argonne National Laboratory
FC-075	Fuel Cell Balance of Plant Reliability Testbed	Susan Shearer	Stark State College
FC-097	Stationery and Emerging Market Fuel Cell System Cost Analysis	Kathya Mahadevan	Battelle
FC-098	A Total Cost of Ownership Model for Design and Manufacturing Optimization of Fuel Cells in Stationary and Emerging Market Applications	Max Wei	Lawrence Berkeley National Laboratory
FC-100	High Aspect Ratio Nano-Structured Pt-based PEM Fuel Cell Catalysts	Brian Larsen	National Renewable Energy Laboratory
MN-011	Cause and Effect: Flow Field Plate Manufacturing Variability and its Impact on Performance	Eric Stanfield	National Institute of Standards and Technology
TV-006	Validation of an Integrated Hydrogen Energy Station	Ed Heydorn	Air Products
TV-007	California Hydrogen Infrastructure Project	Ed Heydorn	Air Products
TV-009	Hawaii Hydrogen Power Park	Richard Rocheleau	Hawaii Natural Energy Institute
TV-014	Sustainable Hydrogen Fueling Station, California State University, Los Angeles	David Blekman	Cal State LA University Auxiliary Services, Inc.
TV-016	Stationary Fuel Cell Evaluation	Jennifer Kurtz	National Renewable Energy Laboratory

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TV-017	Next Generation H2 Station Analysis	Sam Sprik	National Renewable Energy Laboratory
SCS-013	International Energy Agency Hydrogen Implementing Agreement Task 31 Hydrogen Safety	William Hoagland	Element One, Inc.
ED-012	State and Local Government Partnership	Joel Rinebold	Connecticut Center for Advanced Technology, Inc.
ED-014	H2L3: Hydrogen Learning for Local Leaders	Patrick Serfass	Technology Transition Corporation
ED-017	H2 Educate! Hydrogen Education for Middle Schools	Mary Spruill	National Energy Education Development Project
AN-028	Evaluation of U.S. DOE Energy Recovery Act Fuel Cell (Technologies Program) Initiative (ARRA-FCI)	Toni Marechaux	Strategic Analysis, Inc.
H2RA-004	Advanced Direct Methanol Fuel Cell for Mobile Computing	Jim Fletcher	University of North Florida
H2RA-006	PEM Fuel Cell Systems Providing Backup Power to Commercial Cellular Towers and an Electric Utility Communications Network	Mike Maxwell	ReliOn Inc.
H2RA-009	Fuel Cell-Powered Lift Truck FedEx Freight Fleet Deployment	John King	FedEx Freight
H2RA-010	Fuel Cell-Powered Lift Truck Sysco Houston Fleet Deployment	Scott Kliever	Sysco of Houston
H2RA-011	GENCO Fuel Cell Powered Lift Truck Fleet Deployment	Jim Klingler	GENCO