DE-FOA-0001647: Fuel Cell Technologies Office Annual FOA Recepients

Topic	Recipient	Title	Proposed DOE Share (FY17)
Topic 1: ElectroCat (Electrocatalysis Consortium) – PGM-free Catalyst and Electrode R&D	Carnegie Mellon University	Advanced PGM-free Cathode Engineering for High Power Density and Durability	$2,000,000
Topic 1: ElectroCat (Electrocatalysis Consortium) – PGM-free Catalyst and Electrode R&D	GreenWay Energy, LLC	PGM-free Engineered Framework Nano-Structure Catalysts	$2,000,000
Topic 1: ElectroCat (Electrocatalysis Consortium) – PGM-free Catalyst and Electrode R&D	Giner, Inc.	Durable Mn-based PGM-Free Catalysts for Polymer Electrolyte Membrane Fuel Cells	$1,999,029
Topic 1: ElectroCat (Electrocatalysis Consortium) – PGM-free Catalyst and Electrode R&D	Pacific Northwest National Laboratory	Highly Active and Durable PGM-free ORR Electrocatalysts through the Synergy of Active Sites	$645,101
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – High Temperature Electrolysis	University of Connecticut	Proton-Conducting Solid Oxide Electrolysis Cells for Large-scale Hydrogen Production at Intermediate Temperatures	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – High Temperature Electrolysis	United Technologies Research Center	Thin-Film, Metal-Supported High-Performance and Durable Proton-Solid Oxide Electrolyzer Cell	$249,978

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Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – High Temperature Electrolysis	Northwestern University	Degradation Characterization and Modeling of a New Solid Oxide Electrolysis Cell Utilizing Accelerated Life Testing	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Low Temperature Electrolysis	Proton Energy Systems	High Efficiency PEM Water Electrolysis Enabled by Advanced Catalysts, Membranes and Processes	$248,931
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Low Temperature Electrolysis	Northeastern University	Developing Novel Platinum Group Metal-Free Catalysts for Alkaline Hydrogen and Oxygen Evolution Reactions	$250,500
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Low Temperature Electrolysis	Los Alamos National Laboratory	High-Performance Ultralow-Cost Non-Precious Metal Catalyst System for AEM Electrolyzer	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Low Temperature Electrolysis	Argonne National Laboratory	PGM-free OER Catalysts for PEM Electrolyzer	$250,000

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Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Low Temperature Electrolysis	Los Alamos National Laboratory	Scalable Elastomeric Membranes for Alkaline Water Electrolysis	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Photoelectrochemical	University of Hawaii at Manoa	Novel Chalcopyrites For Advanced Photoelectrochemical Water Splitting	$238,113
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Photoelectrochemical	University of Michigan	Monolithically Integrated Thin-Film/Silicon Tandem Photoelectrodes for High Efficiency and Stable Photoelectrochemical Water Splitting	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Photoelectrochemical	Rutgers - State Un. of NJ: New Brunswick/Piscataway	Best-in-class Platinum Group Metal-free (PGM-free) Catalyst Integrated Tandem Junction Photoelectrochemical (PEC) Water Splitting Devices	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Photoelectrochemical	Stanford University	Protective Catalyst Systems on III-V and Si-based Semiconductors for Efficient, Durable Photoelectrochemical Water Splitting Devices	$222,566
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for	Los Alamos National Laboratory	Efficient Solar Water Splitting with 5,000 Hours Stability Using Earth-abundant Catalysts and Durable Layered 2D Perovskites	$250,000

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Advanced Water Splitting – Photoelectrochemical			
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Solar Thermochemical H2 Production	University of Colorado Boulder	Computationally Accelerated Discovery and Experimental Demonstration of High-Performance Materials for Advanced Solar Thermochemical Hydrogen Production	$247,509
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Solar Thermochemical H2 Production	Northwestern University	Transformative Materials for High-Efficiency Thermochemical Production of Solar Fuels	$250,000
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Solar Thermochemical H2 Production	GreenWay Energy, LLC	High Temperature Reactor Catalyst Material Development for Low Cost and Efficient Solar Driven Sulfur-based Processes	$249,898
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water Splitting – Solar Thermochemical H2 Production	Colorado School of Mines	Accelerated Discovery of Solar Thermochemical Hydrogen Production Materials via High-Throughput Computational and Experimental Methods	$249,684
Topic 2A: HydroGEN – Durable, High-Performance Materials and Interfaces for Advanced Water	Arizona State University	Mixed Ionic Electronic Conducting Quaternary Perovskites: Materials by Design for Solar Thermochemical Hydrogen	$166,213

Topic	Recipient	Title	Proposed DOE Share (FY17)
Splitting – Solar Thermochemical H2 Production			
Topic 2B: HydroGEN - Development of Best Practices in Materials Characterization and Benchmarking for Advanced Water Splitting Technologies	Proton Energy Systems Inc	Benchmarking Advanced Water Splitting Technologies: Best Practices in Materials Characterization	$2,000,000
Topic 3: HyMARC - Hydrogen Storage Materials Discovery	University of Michigan	Optimized Hydrogen Adsorbents via Machine Learning and Crystal Engineering	$250,000
Topic 3: HyMARC - Hydrogen Storage Materials Discovery	University of California, Berkeley	Super Metallated Frameworks as Hydrogen Sponges	$250,000
Topic 3: HyMARC - Hydrogen Storage Materials Discovery	National Renewable Energy Laboratory	ALD (Atomic Layer Deposition) Synthesis of Novel Nanostructured Metal Borohydrides	$151,260
Topic 3: HyMARC - Hydrogen Storage Materials Discovery	National Renewable Energy Laboratory	Fluorinated Covalent Organic Frameworks: A Novel Pathway to Enhance Hydrogen Sorption and Control Isosteric Heats of Adsorption	$149,165
Topic 4: Precursor development for low-cost, high-strength carbon fiber for use in composite overwrapped pressure vessel applications	University of Kentucky	Precursor Processing Development for Low Cost, High Strength Carbon Fiber for Composite Overwrapped Pressure Vessel Applications	$984,939
Topic 4: Precursor development for low-cost, high-strength carbon fiber for use in composite overwrapped pressure vessel applications	The Pennsylvania State University	Developing A New Polyolefin Precursor for Low-Cost, High-Strength Carbon Fiber	$804,563

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Topic 4: Precursor development for low-cost, high-strength carbon fiber for use in composite overwrapped pressure vessel applications	Oak Ridge National Laboratory	Novel Plasticized Melt Spinning Process of PAN Fibers Based on Task-Specific Ionic Liquids	$274,000
			~$15.8M