

**Department of Energy, Office of Science  
Basic Research for Solar Energy Utilization  
Basic Energy Sciences, 27 FY2007 Awards**

<b>Principal Investigator</b>			<b>Project Title</b>
<b>Last Name</b>	<b>First Name</b>	<b>Institution</b>	

**Solar Energy to Electricity**

Gould	Ian	Arizona State University	Dynamical Arrest, Structural Disorder, and Optimization of Organic Photovoltaic Devices
Atwater	Harry	California Institute of Technology	Plasmonic Photovoltaics
Jonas	David	University of Colorado	Study of Multiple Exciton Generation with New Multi-Dimensional Spectroscopies
Chan	Garnet	Cornell University	Cross-Cutting Tools for Theoretical Organic Photovoltaic Research
Bawendi	Moungi	Massachusetts Institute of Technology	Probing Nanocrystal Electronic Structure and Dynamics in the Limit of Single Nanocrystals
Baldo	Marc	Massachusetts Institute of Technology	High Efficiency Biomimetic Organic Solar Cells
Gladfelter	Wayne	University of Minnesota	Monodispersed Zinc Oxide Nanoparticle-Dye Dyads and Triads: Characterization of the Early Events in Dye-Sensitized Solar Cells
Zhu	Xiaoyang	University of Minnesota	Extracting Hot or Multiple Charge Carriers from Photoexcited Semiconductor Nanocrystals
Wu	Yiying	Ohio State University	Designing Nanoparticle/Nanowire Composites and "Nanotree" Arrays as Electrodes for Efficient Dye-Sensitized Solar Cells
Lonergan	Mark	University of Oregon	Conjugated Ionomers for Photovoltaic Applications: Electric Field Driven Charge Separation at Organic Junctions
Waldeck	David	University of Pittsburgh	Nanocrystal-Based Dyads for Solar to Electric Energy Conversion
Adams	Richard	University of South Carolina	Hybrid Organic-Inorganic Composite Solar Cells for Efficient, Low-Cost, Photoelectric Energy Conversion
Fan	Shanhui	Stanford University	Nanophotonics-Enhanced Solar Cells
Jenekhe	Samson	University of Washington	Molecular and Nanoscale Engineering of High Efficiency Polymer and Hybrid Organic/Inorganic Solar Cells

## Solar Energy to Fuels

Fujita	Etsuko	Brookhaven National Laboratory	Solar Fuel Production Catalyzed by Transition-Metal Complexes
Hopkins	Michael	University of Chicago	New Transition Metal Building Blocks and Assemblies for Photocatalytic Fuel Production
Hill	Craig	Emory University	Solar Energy-Driven Robust Multi-Electron-Transfer Catalysts for Water Oxidation
Strano	Michael	University of Illinois	Self Assembly & Self-Repair of Novel Photosynthetic Reaction Center/Single Walled Carbon Nanotube Complexes for Solar Energy Conversion-Synthetic Analogs to Natural Processes
Alivisatos	A. Paul	Lawrence Berkeley National Laboratory	Nanomaterials and Bio-inspired Approaches to Solar Derived Fuels
Ogilvie	Jennifer	University of Michigan	Two-Dimensional Electronic Spectroscopy of Light-Harvesting Complexes
Douglas	Trevor	Montana State University	Protein Architectures for Photo-Catalytic Hydrogen Production
Maggard	Paul	North Carolina State University	Molecular-Level Organization of Heterometallic Oxides/Organics for Photocatalysis
Rappe	Andrew	University of Pennsylvania	Semiconductor Ferroelectrics and Surface Nanomaterials for Highly Efficient Solar Hydrogen Production
Mallouk	Thomas	Pennsylvania State University	Nanostructured Photocatalytic Water Splitting Systems
Lakshmi	K.V.	Rensselaer Polytechnic Institute	Elucidating the Principles that Control Proton-Coupled Electron Transfer Reactions in the Photosynthetic Protein, Photosystem II. A Model for Design of Bio-inspired Photocatalytic Water Splitting
Blankenship	Robert	Washington University	Mechanism of Solar Energy Storage by Chlorosome Antennas of Green Photosynthetic Bacteria
Brudvig	Gary	Yale University	Oxomanganese Catalysts for Solar Fuel Production