











### U.S. DEPARTMENT OF

### **ENERGY**

# Hydrogen and Fuel Cells Program



Merit Review and Peer Evaluation Report

May 13–17, 2013 Arlington, Virginia

DOE/GO-102013-4177

October 2013

#### **About the Cover**

Photo collage (from top to bottom, left to right):

Development of nanosegregated cathode catalysts with ultra-low platinum loading at Argonne National Laboratory (ANL). Image courtesy of ANL. (NREL 27573)

Bandgap tuning in copper chalcopyrite thin films for photoelectrochemical hydrogen production. Photo courtesy of the Hawai'i Natural Energy Institute. (NREL 27570)

A diaphragm compressor by PDC Machines. Photo courtesy of PDC Machines. (NREL 27575)

A Los Alamos National Laboratory (LANL)/Lawrence Livermore National Laboratory (LLNL)-developed hydrogen safety sensor operating in a convenient, easy-to-handle package. Photo courtesy of LLNL, LANL, and the National Renewable Energy Laboratory (NREL). (NREL 27571)

Neutron imaging at the National Institute of Standards and Technology (NIST) provided this high-resolution (~10 micron) image of membrane electrode assembly (MEA) water content to study fuel cell flooding and water-related degradation in catalyst layers. Photo courtesy of NIST. (NREL 27572)

Fuel cell backup power units deployed (Q1, 2009–Q4, 2012). Image courtesy of NREL.

Photo on right:

U.S. Capitol Building. Photo courtesy of www.istockphoto.com.

Cover images with a reference number are available in NREL's Image Gallery at <a href="http://images.nrel.gov/">http://images.nrel.gov/</a>

### U.S. Department of Energy Hydrogen and Fuel Cells Program

## 2013 Annual Merit Review and Peer Evaluation Report

May 13–17, 2013 Arlington, VA

October 2013

#### NOTICE

This report was prepared as an account of work sponsored by an agency of the United States government. Neither the United States government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or any agency thereof.

Available electronically at <a href="http://www.osti.gov/bridge">http://www.osti.gov/bridge</a>

Available for a processing fee to U.S. Department of Energy and its contractors, in paper, from:

U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831-0062

phone: 865.576.8401 fax: 865.576.5728

email: mailto:reports@adonis.osti.gov

Available for sale to the public, in paper, from:

U.S. Department of Commerce National Technical Information Service 5285 Port Royal Road Springfield, VA 22161

Springfield, VA 22161 phone: 800.553.6847 fax: 703.605.6900

email: orders@ntis.fedworld.gov

online ordering: <a href="http://www.ntis.gov/ordering.htm">http://www.ntis.gov/ordering.htm</a>

