



Re-energizing the **LHC**

also:

- Can helium be a supersolid? ▶
- Heavy water hints at Martian history ▶
- Meet the science press ▶

232-PH11
000582448

*****FROM 80401
54393 PT V088 I05 OF 1 A.P1
CHUCK STONE
COLORADO SCHOOL OF MINES
1523 ILLINOIS ST
DEPT. OF PHYSICS
GOLDEN CO 80401
PK032813
P0126

The 2015 Cottrell Awards

Through its Cottrell Scholar program, Research Corporation for Science Advancement nurtures outstanding teacher-scholars recognized for innovative, high-quality research as well as academic leadership skills. In addition to the 15 new scholars awarded this year, three accomplished Cottrell Scholars are the first recipients of RCSA's new TREE Award (Transformational Research and Excellence in Education). The TREE Award celebrates the improvement of science education at America's universities and colleges.

2015 Cottrell Scholar Awardees



TIMOTHY J. ATHERTON
Physics, Tufts University
Predicting the Stability of Pickering Emulsion through Computer Simulations

GARY A. BAKER
Chemistry, University of Missouri-Columbia
Tailoring Bacterial Cellulose Nanogels for Diverse Chemical Tasks

EMILY R. BALESKUS
Chemistry, Harvard University
Chemically-Guided Enzyme Discovery: An Approach to Identifying New Biological Reactions and a Tool for Inspiring Future Scientists

JEFFREY A. BYERS
Chemistry, Boston College
Redox Switchable Iron Catalysts for the Synthesis of Biodegradable Polymers

JAMES R. CANNON
Chemistry, University of North Carolina at Chapel Hill
Designing Photocathode Materials for Solar Fuel Photoelectrosynthesis: From the Lab to the Classroom



LUIS M. CAMPOS
Chemistry, Columbia University
Development of Polymers for Next-Generation Singlet Fission Solar Cells

AARON R. ESSER-KAHN
Chemistry, University of California, Irvine
Activation of the Innate Immune System with Light: A Chemical Biology Approach to Improving Vaccination

KAI-MEI C. FU
Physics, University of Washington
Zinc Oxide Impurity-Bound Electrons for Optics-Based Quantum Information

CATHERINE L. GIMES
Chemistry, University of Delaware
Remodeling Bacterial Cell Walls and Biochemistry Laboratory Curriculum

JENNIFER M. HIMMETYLA
Chemistry, University of Utah
Fluorescent Biomolecular Labeling to Image RNA Localization and Promote Independent Learning



M. LISA MANNING
Physics, Syracuse University
Using Single-Cell Mechanical Properties to Predict Pattern Formation and Mechanical Response in Biological Tissues

THOMAS E. MARKLAND
Chemistry, Stanford University
Unraveling Quantum Fluctuations in Charge and Energy Transport

JILL E. MILLINGTON
Chemistry, University of Pittsburgh
Using Metal-Ligand Chemistry to Understand, Form, and Tailor Nanoscale Alloys

STEFAN STOLL
Chemistry, University of Washington
Quantifying the Conformational Landscape of Maltose Binding Protein

ERIC S. TOBERNER
Physics, Colorado School of Mines
Embracing Asymmetry—Designing Materials for Thermoelectric Power Conversion

2015 TREE Awardees



CATHERINE J. MURPHY
Cottrell Scholar 1996
Chemistry, University of Illinois, Urbana-Champaign

MAYS SALEH
Cottrell Scholar 1996
Physics, University of Illinois, Urbana-Champaign

KEVIN STAGGLIN
Cottrell Scholar 2006
Physics, Vanderbilt University

RESEARCH CORPORATION 
for SCIENCE ADVANCEMENT
A foundation dedicated to science since 1912.

For additional information visit
www.rcsa.org or call 520.571.1111.