

Office of Research Newsletter – November 7, 2014

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Part I. News and Announcements

Three New BRAIN Funding Opportunities

New BRAIN funding opportunities were recently announced:

BRAIN Initiative: New Technologies and Novel Approaches for Large-Scale Recording and Modulation in the Nervous System (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-15-003.html>

BRAIN Initiative: Integrated Approaches to Understanding Circuit Function in the Nervous System (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-15-005.html>

BRAIN Initiative: Optimization of Transformative Technologies for Large Scale Recording and Modulation in the Nervous System (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-15-004.html>

In 2013 President Obama announced the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. The BRAIN initiative, and President Obama’s concept of this as “one of the Administration’s Grand Challenges of the 21st century,” presents an extraordinary opportunity for the neuroscience community and for patients with brain disorders. Given the cross-cutting nature of this project, the NIH Blueprint for Neuroscience Research—an initiative spanning 14 NIH Institutes and Centers—is the leading NIH contributor to its implementation. NIH is working in close collaboration with other government agencies, including the Defense Advanced Research Projects Agency (DARPA) and the National Science Foundation (NSF). Strong interest has also been expressed by several private foundations, including the Howard Hughes Medical Institute, the Allen Institute for Brain Science, and the

Kavli Foundation, and the Salk Institute for Biological Studies. Private industries have also expressed a high level of interest in participation in this groundbreaking initiative.

More at <http://www.nih.gov/science/brain/index.htm>

A Message from the Grand Challenges Team

The Bill & Melinda Gates Foundation and its Grand Challenges partners are now accepting applications for the following grant programs – for more information on these programs please visit the grant opportunities page at www.grandchallenges.org, or contact Deborah Chesky at cheskd@rpi.edu in Corporate and Foundation Relations.

“1) The Bill & Melinda Gates Foundation has launched three new Grand Challenges:

- [Putting Women and Girls at the Center of Development](#)
- [Creating and Measuring Integrated Solutions for Healthy Birth, Growth, and Development \(part of the All Children Thriving platform\)](#)
- [New Interventions for Global Health](#)

Proposals will be accepted until **January 13, 2015**.

2) Grand Challenges Explorations (GCE) Round 14 is still accepting applications for the following topics:

- [Surveillance Tools, Diagnostics and an Artificial Diet to Support New Approaches to Vector Control](#)
- [New Approaches for Addressing Outdoor/Residual Malaria Transmission](#)
- [New Ways to Reduce Pneumonia Fatalities Through Timely, Effective Treatment of Children](#)
- [Enable Universal Acceptance of Mobile Money Payments](#)
- [Explore New Ways to Measure Brain Development and Gestational Age](#)
- [New Ways of Working Together: Integrating Community-Based Interventions](#)

Proposals will be accepted until **November 12, 2014, at 11:30 a.m. PST**. We are also announcing the GCE grants awarded from Round 13 [here](#).

3) In response to the ongoing Ebola epidemic, the U.S. Agency for International Development (USAID) has launched [Fighting Ebola: A Grand Challenge for Development](#) to develop practical and cost-effective innovations to improve infection treatment and control that can be rapidly deployed. Submissions received by **November 7, 2014**, will be part of the first round of review, and submissions received by **December 1, 2014**, will be part of the second round of review. Expressions of interest received after December 1, 2014, will be reviewed in subsequent rounds.”

A Weekly Newsletter from DOE Office of Energy Efficiency and Renewable Energy (EERE): <http://apps1.eere.energy.gov/news/enn.cfm>

MARK YOUR CALENDAR

December 4, 2014, DTRA Broad Agency Announcement Webinar

Covered Topics:

- Introduction to the DTRA mission and its research and development goals and objective.
- Review of the December 1, 2014 Basic Research BAA eligibility, timelines, award types, and sizes.
- Review by the portfolio manager of each Basic Research topic advertised in the December 1, 2014 BAA.
- Question and Answer session on specific research topics and overall BAA eligibility, timelines, award structure.

More at <https://www.signup4.net/public/ap.aspx?EID=BAAW11E&OID=50>

Part II. Funding Opportunities

AFRL

Integrated Photonics Institute for Manufacturing Initiative

https://www.fbo.gov/index?s=opportunity&mode=form&id=a354f1a61c1e7f0a5f222ae309b5ae8e&tab=core&_cview=0

December 19, 2014

Army

Deployed War Fighter Protection Program (DWFP) Call For FY-15 Pre-Proposals

https://www.fbo.gov/index?s=opportunity&mode=form&id=ced8568d08233f952864bc4b432e1d3f&tab=core&_cview=0

January 5, 2015

Strategic Environmental Research and Development Program

https://www.fbo.gov/index?s=opportunity&mode=form&id=eaca1a5688f6e8b56b97216ab20ec358&tab=core&_cview=0

January 8, 2015

Strategic Environmental Research and Development Program Exploratory Development

https://www.fbo.gov/index?s=opportunity&mode=form&id=9d3df4076d2ba2dc20202bad5428c06f&tab=core&_cview=0

March 10, 2015

ONR

National Security Science and Engineering Faculty Fellowship

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=269330>

LOI Due Date: December 5, 2014; White Paper, Supporting Documentation and Nomination Letter Due Date: January 2, 2015; Full Proposal and Confidential Letters of Recommendation Due Date: April 24, 2015

DOE

Solid Oxide Fuel Cells (SOFC) Prototype System Testing Project

<https://www.fedconnect.net/fedconnect/?doc=DE-FOA-0001230&agency=DOE>

November 28, 2014

RFI: High Impact Commercial Building Technology

<https://eere-exchange.energy.gov/#FoaIda71feb08-0a34-4319-92a5-1e21ae74ca8f>

December 30, 2014

NASA

Discovery 2014 Announcement of Opportunity

<https://prod.nais.nasa.gov/cgi-bin/eps/synopsis.cgi?acqid=163241>

February 16, 2015

NIH

The Early Detection Research Network: Biomarker Reference Laboratories (U24)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-14-016.html>

LOI Due Date: December 6, 2014. Application Due Date: January 6, 2015

The Early Detection Research Network: Biomarker Developmental Laboratories (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-14-014.html>

LOI Due Date: December 6, 2014. Application Due Date: January 6, 2015

Centers of Excellence on Environmental Health Disparities Research (P50)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-14-010.html>

LOI Due Date: December 9, 2014. Application Due Date: January 9, 2015

NIBIB Quantum Program: Technological Innovation to Solve a Major Medical or Public Health Challenge (U01)

<http://grants.nih.gov/grants/guide/pa-files/PAR-15-031.html>

LOI Due Dates: December 12, 2014; December 11, 2015; December 12, 2016. Application Due Dates: January 26, 2015; January 26, 2016; January 26, 2017

Request for Information (RFI) on the NIH Big Data to Knowledge (BD2K) Initiative Resources for Teaching and Learning Biomedical Big Data Management and Data Science

<http://grants.nih.gov/grants/guide/notice-files/NOT-LM-15-001.html>

December 31, 2014

BRAIN Initiative: New Technologies and Novel Approaches for Large-Scale Recording and Modulation in the Nervous System (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-15-003.html>

LOI Due Date: January 10, 2015. Application Due Date: February 10, 2015

BRAIN Initiative: Integrated Approaches to Understanding Circuit Function in the Nervous System (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-15-005.html>

LOI Due Date: January 10, 2015. Application Due Date: February 10, 2015

BRAIN Initiative: Optimization of Transformative Technologies for Large Scale Recording and Modulation in the Nervous System (U01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-15-004.html>

LOI Due Date: January 10, 2015. Application Due Date: February 10, 2015

Promoting Research in Basic Neuroscience (R01)

<http://grants.nih.gov/grants/guide/pa-files/PAS-15-029.html>

February 5, 2015

Mechanistic Studies of Pain and Alcohol Dependence (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-15-026.html>

February 5, 2015

NSF

CISE-MPS Interdisciplinary Faculty Program in Quantum Information Science

http://www.nsf.gov/pubs/2015/nsf15512/nsf15512.htm?WT.mc_id=USNSF_25&WT.mc_ev=click

February 2, 2015; December 7, 2015

Benchmarks of Realistic Scientific Application Performance of Large-Scale Computing Systems Grant

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=269416>

February 2, 2015

Science of Science and Innovation Policy Doctoral Dissertation Research Improvement Grants (SciSIP-DDRIG)

http://www.nsf.gov/pubs/2015/nsf15513/nsf15513.htm?WT.mc_id=USNSF_25&WT.mc_ev=click

February 9, 2015; September 9, 2015; September 9, Annually Thereafter

NEH

Media Projects

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=269414>

Jan 14, 2015

Industry

Technology Request TN 14 029 – Innovative Electrochemical Oxidation Processes

Please contact the Office of Technology Transfer if you are interested.

On behalf of a client, the *Deutsche Technologiendienst* is looking for:
“*innovative electrochemical oxidation processes with, for example, diamond electrodes, and electrochemical cells for domestic appliances containing water.*“

Technical background and description of the current system
(Keywords: *electrochemistry, electrodes, diamond electrodes, boron-doped diamond electrodes, EAOP – Electrochemical Advanced Oxidation Processes, ...*)

So-called Advanced Oxidation Processes, above all Electrochemical Advanced Oxidation Processes (EAOP), can be used as innovative cleaning methods e.g. for water treatment. These processes create hydroxyl radicals that are capable of decomposing organic particles thanks to their high redox potential (2.8 V).

The methods are mainly based on the use of diamond electrodes. These electrodes are associated with the largest possible overvoltage for water electrolysis and they generate highly reactive OH radicals straight from the water. Diamond electrodes also have some remarkable chemical and electrochemical properties: extreme chemical stability, high electrochemical stability and high current yield for the generation of oxidants. The operating costs for diamond electrodes merely involve the electricity needed to run the process. Diamond electrodes are often also doped with boron (BDE) in order to ensure that there is sufficient conductivity for electrolysis.

Detailed description of the required solution

Our client is looking for innovative electrochemical oxidation processes and providers / manufacturers of electrochemical solutions, including diamond electrodes, boron-doped diamond electrodes and electrochemical cells for use in domestic appliances that contain water.

We are looking for

- innovative electrochemical oxidation processes for use in devices/appliances that contain water and
- manufacturers of electrodes, above all diamond electrodes, e.g. boron-doped diamond electrodes, etc.,
- manufacturers of electrochemical cells,
- providers of innovative overall solutions.

The process will be used to clean devices/appliances that contain water and will be integrated directly into the final device. The oxidants generated in the water, above all OH radicals, are intended to break down bacteria, fat/grease and organic particles. The complete cell is required as soon as possible (within 6 months) for basic demonstrational trials (in a test rig).

Potential forms of cooperation

The aim is to find an oxidation process and the relevant components such as electrodes and cells that are suitable for cleaning and disinfecting appliances containing water.

The following forms of cooperation are conceivable:

- Applied R&D cooperation
- Product development / process development
- Licensing, patent or product acquisition

Please note that this bulletin is not intended to be an exhaustive listing of funding opportunities. Your input and feedback are always welcome. Please send your comments and requests to be removed from the distribution list to huangj7@rpi.edu.