6-15-2011

Office of Research, Awards & Recognition, June 15, 2011

University of Tennessee Office of Research

Follow this and additional works at: http://trace.tennessee.edu/utk_researchawards

Recommended Citation
http://trace.tennessee.edu/utk_researchawards/69

This Newsletter is brought to you for free and open access by the Office of Research & Engagement at Trace: Tennessee Research and Creative Exchange. It has been accepted for inclusion in Awards and Recognitions by an authorized administrator of Trace: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.
### AWARDS AND RECOGNITIONS

**Awards for May 11–31, 2011**

**http://research.utk.edu**  
**JUNE 15, 2011**

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Title</th>
<th>Sponsor</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>College of Architecture &amp; Design</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stach, Edgar; Miller, William; Rose, James</td>
<td>EPRI-UT Proposal for Collaboration in Solar Decathlon 2011</td>
<td>Electric Power Research Institute</td>
<td>$50,000</td>
</tr>
<tr>
<td><strong>College of Arts &amp; Sciences</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baker, Gregory</td>
<td>Multiscale Investigations on the Rates and Mechanisms of Targeted Immobilization</td>
<td>UT-Battelle - ORNL</td>
<td>$15,000</td>
</tr>
<tr>
<td>Binder, Brad</td>
<td>Studies on ETRI Ethylene Receptor Structure, Function and Output</td>
<td>National Science Foundation</td>
<td>$134,222</td>
</tr>
<tr>
<td>Cooper, Matthew</td>
<td>Neural Mechanisms Underlying Stress-Induced Changes in Behavior</td>
<td>Department of Health and Human Services</td>
<td>$12,858</td>
</tr>
<tr>
<td>Dessel, J.P.</td>
<td>Acting Locally: Rethinking the Late Bronze Age and Iron Age 1 From a Village</td>
<td>National Endowment for the Humanities</td>
<td>$50,400</td>
</tr>
<tr>
<td>Fedo, Christopher</td>
<td>Geochemical and Iron Isotopic Investigation of Precambrian Banded Iron Formation (3.8-1.9 Ga)</td>
<td>NASA - Headquarters</td>
<td>$28,160</td>
</tr>
<tr>
<td>Guo, Hong; Smith, Jeremy</td>
<td>QM, QM/MM MD and Free Energy Simulations of MERB and Hg(II) Binding</td>
<td>UT-Battelle - ORNL</td>
<td>$12,000</td>
</tr>
<tr>
<td>Hinde, Robert</td>
<td>Collaborative Research: Spectroscopy and Chemistry of Open-Shell Atoms in Solid Hydrogen Matrices</td>
<td>National Science Foundation</td>
<td>$100,000</td>
</tr>
<tr>
<td>Hollenbach, Kandace</td>
<td>Paleonthobotanical Analysis of 41HY165, Hays County, Texas</td>
<td>Texas State University</td>
<td>$4,501</td>
</tr>
<tr>
<td>Mays, Jimmy</td>
<td>Travel Support for Participants in ACS Division of Polymer Chemistry Symposium</td>
<td>Department of the Army</td>
<td>$4,774</td>
</tr>
<tr>
<td>McCracken, Gary</td>
<td>Fall migration of Tadarida brasiliensis and their agricultural insect pest prey</td>
<td>Bat Conservation International</td>
<td>$3,200</td>
</tr>
<tr>
<td>Musfeldt, Janice</td>
<td>Spectroscopic Investigations of Complex Magnetic and Electronic Materials</td>
<td>U.S. Dept. of Energy</td>
<td>$135,000</td>
</tr>
<tr>
<td>Roberts, Daniel</td>
<td>Nodulin Intrinsic Proteins at the Plant-microbe Symbiotic Interface</td>
<td>National Science Foundation</td>
<td>$270,928</td>
</tr>
<tr>
<td>Seal, Katayani</td>
<td>Experimental and Theoretical Studies of Metallic Nano-Plasmonic Material</td>
<td>UT-Battelle - ORNL</td>
<td>$14,527</td>
</tr>
<tr>
<td>Singh, David</td>
<td>Control of Lattice Instabilities in Ferroelectric Perovskites by Cation</td>
<td>Department of the Navy</td>
<td>$19,500</td>
</tr>
<tr>
<td>Thompson, James</td>
<td>Formation and Properties of Materials for Advanced Energy Technologies</td>
<td>UT-Battelle - ORNL</td>
<td>$13,362</td>
</tr>
<tr>
<td>Weilinger, Hanno</td>
<td>Ultrathin Oxide Growth and Characterization</td>
<td>UT-Battelle - ORNL</td>
<td>$26,604</td>
</tr>
<tr>
<td>Weilinger, Hanno</td>
<td>Experimental Studies of Organic Spintronics</td>
<td>UT-Battelle - ORNL</td>
<td>$16,178</td>
</tr>
<tr>
<td>Weilinger, Hanno</td>
<td>Exploration of quantum size effects in ultrathin magnesium films for hydrogen</td>
<td>UT-Battelle - ORNL</td>
<td>$13,262</td>
</tr>
<tr>
<td>Weilinger, Hanno</td>
<td>Exploration of quantum size effects in ultrathin ruthenium films for surface</td>
<td>UT-Battelle - ORNL</td>
<td>$13,262</td>
</tr>
<tr>
<td>Wilhelm, Steven</td>
<td>Collaborative Research: Decoding Virus Leviathans</td>
<td>National Science Foundation</td>
<td>$6,950</td>
</tr>
<tr>
<td><strong>College of Business Administration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hutcheson, Joan</td>
<td>Developing Shared Understanding through Knowledge Management: C-MAP</td>
<td>Department of the Navy</td>
<td>$65,000</td>
</tr>
<tr>
<td><strong>College of Education, Health &amp; Human Sciences</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brewer, Ernest</td>
<td>Upward Bound USDA Summer Food Service Program--Math and Science Center</td>
<td>Tennessee Department of Human Services</td>
<td>$3,745</td>
</tr>
<tr>
<td>Brewer, Ernest</td>
<td>Upward Bound USDA Summer Food Service Program--Academic Enrichment Upward Bound</td>
<td>Tennessee Department of Human Services</td>
<td>$3,404</td>
</tr>
<tr>
<td>Brewer, Ernest</td>
<td>Upward Bound USDA Summer Food Service Program Pre-College</td>
<td>Tennessee Department of Human Services</td>
<td>$3,830</td>
</tr>
<tr>
<td>Kim, Youn-Kyung; Fairhurst, Ann; Runyan, Rodney</td>
<td>International Retail Management Curriculum and Instructional Module Development</td>
<td>U.S. Dept. of Education</td>
<td>$43,743</td>
</tr>
<tr>
<td>Spence, Marsha</td>
<td>Clinton City Schools Child Nutrition Consultation</td>
<td>Clinton City Schools</td>
<td>$540</td>
</tr>
<tr>
<td><strong>College of Engineering</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarke, David</td>
<td>Provide Technology Transfer, Tech Assistance and Training for Local Transp. Agencies in TN</td>
<td>Tennessee Department of Transportation</td>
<td>$2,600,000</td>
</tr>
<tr>
<td>Dimowski, Wojciech</td>
<td>Atomic Study of Bulk Metallic Glasses</td>
<td>UT-Battelle - ORNL</td>
<td>$30,000</td>
</tr>
<tr>
<td>Dodds, Harold</td>
<td>Nuclear Safety Research and Development</td>
<td>UT-Battelle - ORNL</td>
<td>$3,715</td>
</tr>
<tr>
<td>Duscher, Gerd</td>
<td>Atomic-scale Investigation of Energy Materials</td>
<td>UT-Battelle - ORNL</td>
<td>$41,500</td>
</tr>
<tr>
<td>He, Wei; Liaw, Peter</td>
<td>Surface Science and Engineering towards Bioactive Bulk Metallic Glasses</td>
<td>National Science Foundation</td>
<td>$296,536</td>
</tr>
<tr>
<td>Li, Husheng</td>
<td>Collaborative Research: Quickest Detection in Ad Hoc Networks with Application in Cognitive Radio</td>
<td>National Science Foundation</td>
<td>$6,250</td>
</tr>
<tr>
<td>Maldonado, Guillermo</td>
<td>Curriculum Development for Consortium for Advanced Simulation of Light Water</td>
<td>UT-Battelle - ORNL</td>
<td>$80,000</td>
</tr>
<tr>
<td>Mandrus, David</td>
<td>Correlated and Complex Materials</td>
<td>UT-Battelle - ORNL</td>
<td>$18,144</td>
</tr>
</tbody>
</table>
AWARDS FOR MAY 11–31, 2011 (CONT.)

<table>
<thead>
<tr>
<th>INVESTIGATOR</th>
<th>TITLE</th>
<th>SPONSOR</th>
<th>AWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>McHargue, Carl</td>
<td>Mechanical Properties of Nuclear Materials</td>
<td>UT-Battelle - ORNL</td>
<td>$27,527</td>
</tr>
<tr>
<td>McHargue, Carl; Barabash, Rozaliya</td>
<td>X-Ray Diffuse Scattering- 2</td>
<td>UT-Battelle - ORNL</td>
<td>$12,020</td>
</tr>
<tr>
<td>McHargue, Carl; Meisner, Roberta</td>
<td>Materials Characterization</td>
<td>UT-Battelle - ORNL</td>
<td>$16,145</td>
</tr>
<tr>
<td>Mench, Matthew</td>
<td>CAREER: Sensors for Quantification of Degradation in Polymer Electrolyte Fuel Cells</td>
<td>National Science Foundation</td>
<td>$204,680</td>
</tr>
<tr>
<td>Pharr, George</td>
<td>ARCAM Electron Beam Melting Technology</td>
<td>UT-Battelle - ORNL</td>
<td>$8,097</td>
</tr>
<tr>
<td>Rack, Philip</td>
<td>Center for Nanophase Materials Science (CNMS)</td>
<td>UT-Battelle - ORNL</td>
<td>$50,000</td>
</tr>
<tr>
<td>Ruggles, Arthur</td>
<td>HFIR Target Assessments</td>
<td>UT-Battelle - ORNL</td>
<td>$3,195</td>
</tr>
<tr>
<td>Ruggles, Arthur</td>
<td>HFIR Safety Analysis For LEU Fuel</td>
<td>UT-Battelle - ORNL</td>
<td>$14,000</td>
</tr>
<tr>
<td>Toole, Glenn</td>
<td>Reconstruction of Upper Colorado River Basin Snowpack Using Tree-Rings and Climate</td>
<td>National Science Foundation</td>
<td>$19,500</td>
</tr>
<tr>
<td>Wang, Shanfeng</td>
<td>Phenotypic Modulation of Smooth Muscle Cells on Biodegradable Elastomeric</td>
<td>National Science Foundation</td>
<td>$245,600</td>
</tr>
<tr>
<td>Zhang, Zhi</td>
<td>Rydberg State Spectroscopy for Complex Chemical Detection</td>
<td>UT-Battelle - ORNL</td>
<td>$25,000</td>
</tr>
</tbody>
</table>

COLLEGE OF SOCIAL WORK

<table>
<thead>
<tr>
<th>INVESTIGATOR</th>
<th>TITLE</th>
<th>SPONSOR</th>
<th>AWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campbell, Paul; Cunningham, Maryanne</td>
<td>21st Century Afterschool Program Evaluation</td>
<td>University of Tennessee - Institute of Public Service</td>
<td>$290,000</td>
</tr>
<tr>
<td>Patterson, David</td>
<td>Knoxville KMIS</td>
<td>Housing &amp; Urban Development</td>
<td>$132,282</td>
</tr>
<tr>
<td>Patterson, David</td>
<td>ARRA: KnoxHMS HPRP Evaluation</td>
<td>Knoxvill/Knox County - Community Action Committee</td>
<td>$3,410</td>
</tr>
</tbody>
</table>

CAMPUS CENTERS & INSTITUTES

<table>
<thead>
<tr>
<th>INVESTIGATOR</th>
<th>TITLE</th>
<th>SPONSOR</th>
<th>AWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell, Larry</td>
<td>Sigma Space - NASA/LBA</td>
<td>Sigma Space Corporation</td>
<td>$12,023</td>
</tr>
<tr>
<td>Burman, Elizabeth</td>
<td>Ready for the World: The University of Tennessee, Knoxville. Application</td>
<td>Kellogg (W K) Foundation</td>
<td>$7,000</td>
</tr>
<tr>
<td>Harrison, Robert</td>
<td>Slavici Summer Internship</td>
<td>UT-Battelle - ORNL</td>
<td>$9,580</td>
</tr>
<tr>
<td>Harrison, Robert</td>
<td>Miller Single Mode Fibers</td>
<td>UT-Battelle - ORNL</td>
<td>$22,226</td>
</tr>
<tr>
<td>Harrison, Robert</td>
<td>Kevin Stock Summer Internship</td>
<td>UT-Battelle - ORNL</td>
<td>$10,973</td>
</tr>
<tr>
<td>Loefller, Frank; Ritalaht, Kinski</td>
<td>BioRed: Biomakers and Tools for Reductive Decholorination Site Assessment</td>
<td>U.S. Department of Defense</td>
<td>$100,000</td>
</tr>
<tr>
<td>Moeller, Trevor Michael</td>
<td>Cryotank Reliability Study</td>
<td>Gloyer-Taylor Laboratories</td>
<td>$3,554</td>
</tr>
<tr>
<td>Sayler, Gary; Cox, Chris; Jouline, Igor; Smith, Jeremy; Stewart, Charles</td>
<td>Cellulosic Biomass Deconstruction, Characterization and Modeling</td>
<td>UT-Battelle - ORNL</td>
<td>$529,000</td>
</tr>
</tbody>
</table>

UT KNOXVILLE INVENTION DISCLOSURES

February 2011

- Novel electronic, chemical, and biological sensors with composite hybrid nanomaterials by Ramki Kalyanaraman
- Deformable articulating template by Mohamed R. Mahfouz
- Doping a low-dimensional semiconductor by carrier transfer from a doped three-dimensional semiconductor by Gong Gu
- Rapid response microsensor for hydrogen detection by Michael T. Sepaniak, James F. Patton, David B. Smith, Panagiotis Datskos, Scott R. Hunter, and Nickolay V. Lavnik
- Catalysts for alkene aziridination and click chemistry by Ramez A. Elgammal, Shane Foister, Ashleigh Price, Belinda Lady, and Ashesh S. Belapure
- Implant design analysis suite (IDAS) by Mohamed R. Mahfouz

March 2011

- Calibration process and associated algorithm for predicting surface heat flux via in-depth temperature sensors by Jay I. Frankel and Majid Keyhani
- Science, technology, engineering, and math Storycenter by Olga D. Ebert and Richard Audet
- Lipids microplate assay-che mi by Michael D. Best
- Mobile biometrics information collection and identification by J. Doug Birdwell, N. Quentin Haas, and Scott F. Hansen
- Conversion of biomass to value-added products by Ramez A. Elgammal and Shane Foister
- Development of novel surfaces, electrodes, and catalysts for PEM fuel cells by Ramez A. Elgammal and Shane Foister
- Assessment of reading instructional knowledge-adults by Mary F. Ziegler, Steve McCallum, and Sherry M. Bell

April 2011

- Electrical spectrum database by J. Doug Birdwell, Scott F. Hansen, Carl Sapp, Tse-Wei Wang, Roger D. Horn, and Mark S. Rader
- Method for efficient sensing of MeV photons in non-scintillating glasses by Jason P. Hayward
- A technique that utilizes meltblown fibers to improve the mechanical filtration efficiency of fabric without a significant increase of the pressure drop by Peter P. Tsai, Clifton Woods, III, and Jack L. Wyrick