

Department of Energy Nuclear Science User Facilities Awards 10 Rapid Turnaround Research Proposals

IDAHO FALLS — The U.S. Department of Energy (DOE) Nuclear Science User Facilities (NSUF) has selected 10 new rapid turnaround experiment (RTE) projects, totaling up to \$500,000. These projects will advance research in nuclear fuels and help extend the lifetime of structural components in nuclear systems.

The NSUF, first established at Idaho National Laboratory (INL), is the nation’s only designated nuclear energy user facility. NSUF provides research teams with no-cost access to reactor, post-irradiation examination, high-performance computing, and beamline capabilities at a diverse mix of affiliated partner facilities in university, national laboratory and industry institutions across the country.

NSUF competitively selected the 10 RTE projects from high-quality proposals submitted during the solicitation period. Each proposal was evaluated based on a variety of factors including feasibility, programmatic relevance and scientific-technical merit. All reviews were then passed through a panel committee before the proposals were placed in their final ranking positions.

Research teams from Idaho National Laboratory, University of Wisconsin-Madison, University of Oxford, University of Liverpool, Los Alamos National Laboratory, University of Illinois, Boise State University and Oak Ridge National Laboratory will work with the NSUF on their proposed experiments. The newly awarded RTE projects are:

PI Name	Institution	Title	Facility
Ang, Caen	Oak Ridge National Laboratory	Improving understanding of defect evolution in neutron-irradiated MAX phases	Oak Ridge National Laboratory – Low Activation Materials Development and Analysis (LAMDA)
Briggs, Samuel	University of Wisconsin - Madison	Parametric study of factors affecting precipitation in model FeCrAl alloys	Idaho National Laboratory & Center for Advanced Energy Studies
Campbell, Anne	Oak Ridge National Laboratory	Radiation-Induced Changes to the Nanometer-Sized Pores in Fine-Grained Nuclear Graphite	Oak Ridge National Laboratory – Low Activation Materials Development and Analysis (LAMDA)
Hoelzer, David	Oak Ridge National Laboratory	Neutron Irradiation Effects on Tensile Properties and Deformation Behavior of 14YWT	Oak Ridge National Laboratory – Low Activation Materials Development and Analysis (LAMDA)
Roberts, Steve	University of Oxford	A TEM study of proton, heavy-ion and neutron irradiated FeCr	Idaho National Laboratory & Center for Advanced Energy Studies

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Stubbins, James	University of Illinois	Nanoindentation investigations of neutron-irradiated Fe-Cr-C ternary model alloys	University of California – Berkeley
Swenson, Matthew	Boise State University	Modeling nanocluster evolution in irradiated ferritic ODS and ferritic/martensitic alloys	Idaho National Laboratory & Center for Advanced Energy Studies
Wachs, Daniel	Idaho National Laboratory	Destructive Examination of Metallic Fuel Elements Subjected to Transient Irradiation	Idaho National Laboratory - Hot Fuels Examination Facility
Whittle, Karl	University of Liverpool	Analysis of differential damage in binary carbide hybrids undergoing radiation damage	Argonne National Laboratory – Intermediate Voltage Electron Microscope & Oak Ridge National Laboratory – Low Activation Materials Development and Analysis (LAMDA)
Yablinsky, Clarissa	Los Alamos National Laboratory	Atom Probe Characterization of Two Different Precipitation Regimes in a U-6wt.%Nb alloy	Idaho National Laboratory & Center for Advanced Energy Studies

The NSUF reviews RTEs three times per year. The call offers any interested researcher from a university, national laboratory or industry the opportunity to perform short-term analyses of a limited scope of work. Facilities included in this call include mechanical testing facilities, ion irradiation capabilities, high-performance computing, the Intermediate Voltage Electron Microscopy facility, and the North Carolina State University PULSTAR reactor. The 10 RTE awards being announced today were submitted during the previous call, which began in February and closed in May 2016. The next call for solicitations is currently open and scheduled to close Sept. 29.

For user guides and more information about submitting proposals, visit the NSUF website, <http://nsuf.inl.gov>.

INL is a DOE multiprogram national laboratory, and performs work in each of DOE's strategic goal areas: energy, national security, science and environment. INL is the nation's leading center for nuclear energy research and development. Day-to-day management and operation of the laboratory is the responsibility of Battelle Energy Alliance.

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