

Opportunity Title: Post Bachelor's Research Associate - Mechanical Engineer

Opportunity Reference Code: ORNL13-50-MSTD

Organization Oak Ridge National Laboratory (ORNL)

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Description A Post-Bachelor's position is available in the Oak Ridge National Laboratory (ORNL) in the Materials Science and Technology Division. The sucessful applicant for this position wil have many responsibilities, ranging from heat treating carbon materials in various high temperature furnaces, producing foams and other carbon materials using a hot isostatic press, and testing of applications fabricated using carbon and graphite foams. The primary project is that of developing a replacement runway light bulb using graphite foam as a cooling system for the light-emitting diodes (LED's). The appointee will be in charge of various tasks associated with developing the replacement light bulb and will need to coordinate research with other technicians at the laboratory. The appointee will work on acoustic and thermal testing of small arms, developing radiators and heat sinks for race cars, and thermal testing of heat exchangers and heat-transfer systems. In addition, the appointee will also mentor undergraduate summer interns as a leadership-development part of the position.

- Qualifications · BS Degree Mechanical Engineering, GPA > 3.2
  - · Proficient in Solidworks, Solidworks Flow Simulation, StarCCM+, Labview Development, Matlab, C++, Excel, Word, and Powerpoint.
  - · Experience operating high temperature furnaces, Hot Isostatic Presses (HIP's), Kilns, 3-D printers, and inorganic membranes.
  - · Needs to be proficient in programing furnace controllers such as micristar and yokagawa.
  - · Needs prior experience working with the production of carbon materials from mesophase pitches, such as fibers,

foams, or composites. Experience utilizing graphene, carbon nanotubes, and dilatent fluids is a plus.

This appointment is offered through the ORNL Postgraduate Research Associates Program and is administered by ORAU through the Oak Ridge Institute for Science and Education (ORISE).

## Eligibility

• Citizenship: LPR or U.S. Citizen

## Requirements

- **Degree:** Bachelor's Degree received within the last 36 month(s).
- Discipline(s):
  - Engineering (27 )

Affirmation I certify that I have completed coursework towards a degree in science, technology, engineering, mathematics, or a related field

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