

## **Position Description for Power and Energy Post Doctorate Position**

The Advanced Power and Energy Branch (Code 636) at the Naval Surface Warfare Center, Carderock Division (NSWCCD) is seeking recent Ph.D. recipient to fill a Naval Postdoctoral Fellow research position in the area of multi-physics modeling of electrochemical energy storage devices. The candidate is expected to have a doctorate in electrochemistry, engineering, physics or related field, and a proven capability of developing and validating computer models of electrochemical systems. The candidate will support a multi-year modeling effort focused on multi-physics modeling of lithium-ion cells, battery packs, and host systems. The purpose of this work is to aid in the development and validation of models utilizing experimental data collected from lithium-ion battery safety tests conducted at NSWCCD. The candidate must have experience with electrochemical systems and the use of commercial finite element and volume software (CD-adapco/Battery Design Studio and/or ANSYS/Fluent). Experience with developing custom battery models in Matlab or Python is desirable but not required. Position awards are expected to advance the development of power and energy technologies in any of the following areas:

- Electrochemical performance modeling
- Electrochemical, thermal, and mechanical abuse and fire modeling
- Development of experimental measurement techniques to support modeling.
- Failure analysis and destructive physical analysis to support modeling.

Postdoctoral fellows are expected to dedicate 80 percent of their time on a core research project and 20 percent of their time as part of a larger team supporting Navy and Marine Corps program office technical needs. Candidates are required to have strong command of the English language both orally and writing. Benefits include a yearly stipend, research allowance, health insurance and travel.

All correspondence should be directed to  
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