

Proposed Advisor: Dr. Jeffrey C. Owrutsky

Lab Location: NRL (Washington DC)

Research Description: The objective of this research is to develop and apply optical studies to characterize and improve systems for power generation and storage. Ongoing efforts include thermal imaging and spectroscopic studies of solid oxide fuel cells as well as molecular spectroscopy to investigate emerging materials, such as sulfur tolerant electrodes for polymer electrolyte membrane fuel cells. Techniques being employed include a variety of in situ, real time methods capable of detecting and characterizing intermediates and material processes in electrode assemblies, such as thermal imaging, Raman, and infrared spectroscopy.

Keywords: Solid oxide fuel cells; In situ; In operando; Thermal imaging; Emission spectroscopy; Raman spectroscopy.

Contact Information:

Shannon Koonce
1818 N St. NW
Suite 600
Washington DC 20036
postdocs@asee.org