Position ID 3450: Research Associate

**Position Description:**

The Advanced Electron Microscopy and Nanostructured Materials Group in CMPMS, BNL, is seeking postdoctoral research associate for cryogenic electron microscopy study of quantum materials.

The goal of the research is to explore, understand, and control the novel physical mechanisms of quantum materials, including charge-spin-lattice interactions at a wide range of temperatures, especially at low temperatures where intriguing materials behavior emerges. The research will focus on quantum materials exhibiting intriguing physical behavior such as insulator-metal-transition, spin-torque-oscillator, or topological properties for novel forms of information storage and manipulation.

The position will provide an exceptional opportunity for research in quantum materials and devices for one or two of the following areas: strongly correlated electron systems, multiferroics, topological materials, skyrmions, and superconductors, at the forefront of electron microscopy with extraordinary spatiotemporal resolutions to understand structure-property relationship. Planed experiments with quantitative data analyses include, but not limited to, low temperature atomic imaging, high energy-resolution energy-loss spectroscopy, nanoprobe 4D scanning diffraction, and in-situ electromagnetic biasing and microwave excitation. The work will be conducted under the direction of Dr. Yimei Zhu. Close collaborations with leading theoretical and experimental groups at BNL and elsewhere are an essential ingredient of the research.

**Position Requirements:**

o Ph.D. in Condensed Matter Physics, Materials Science, or closely related fields.

o Solid background in electron microscopy and structural characterization.

o Experience in aberration corrected electron microscopy and/or monochromated electron energy-loss-spectroscopy.

o Effective communication skills.

BNL policy states that research associate appointments may be made to individuals who have received their Ph.D. within the past five years. BNL is an Affirmative Action/Equal Opportunity Employer committed to the development of a diverse workforce.

For those interested and qualified please contact Professor Yimei Zhu at [zhu@bnl.gov](mailto:zhu@bnl.gov).