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**Postdoctoral Research Associate: Advanced Electron Microscopy and  
Microfabrication**  
**NUANCE Center | Northwestern University**

A postdoctoral research associate position is immediately available at Northwestern University in the area of advanced applications of aberration-corrected and *in-situ* TEM on various materials systems including all-solid-state batteries, catalysts, organic perovskite solar cells, and metal–organic frameworks. The candidate will perform research on the degradation/evolution process of these materials under different stimuli and environments utilizing advanced TEMs equipped with *in-situ* K2/K3 direct electron detectors. The candidate will also collaborate with Nano-Fabrication Facility (NUFAB) team to design and fabricate customized chips used in operando TEM experiments.

The candidate will be supervised by Dr. Xiaobing Hu and will mainly conduct the research work in the Northwestern University Atomic and Nanoscale Characterization Experimental (NUANCE) Center, which was founded and is directed by Prof. Vinayak P. Dravid. An NSF Center for Facility Excellence in the greater Midwest, NUANCE houses the most comprehensive sample preparation, fabrication, and atomic-/nano-scale characterization capabilities for soft, hard and hybrid structures. In addition to independent research work, the candidate is encouraged to collaborate with high-impact faculty research groups in Northwestern’s departments of Material Science and Engineering and Chemistry, among others.

The preferred candidate should:

- Have a doctoral degree in Materials Science, Chemistry, Physics (or related).
- Demonstrate a strong background in advanced TEM methods, including atomic-resolution HAADF/ABF/BF/EDS/EELS with *in-situ* TEM and FIB.
- Have experience in cleanroom fabrication and coding for imaging processing.
- Demonstrate a strong motivation, ambition, and passion for academic research. A proven high-impact publishing record is required.

The position is available immediately for two years with the possibility for extension or promotion to a research faculty position.

Applicants will send as a single PDF to ([nuance@northwestern.edu](mailto:nuance@northwestern.edu)):  
**CV, research statement (2-3 pages), and three academic reference letters**