

**RESEARCH ENGINEER IN ADVANCED  
ANALYTICAL ELECTRON MICROSCOPY**

Department of Materials Science and Engineering  
Lehigh University, Bethlehem, PA

The Nanocharacterization Laboratory at Lehigh University houses an impressive array of electron-optical instruments including two state-of-the-art aberration-corrected analytical electron microscopes. It is also the home of the world-renowned Lehigh Microscopy School. The Research Engineer position entails managing all aspects of TEM/STEM operations within this user facility. Major responsibilities of the successful candidate include: training users in the operation of the laboratory's TEM/STEM microscopes and related specimen preparation equipment, including a dual-beam FIB; performing routine maintenance and overseeing essential repairs of the instrumentation; managing routine operation, including logs, book-keeping, billing, maintenance records, and safety; making recommendations and assisting in the purchase, installation and commissioning of new equipment; liaison with external users from other universities, government laboratories, and local industry; providing outreach and tours for the general public; and participating in the annual Lehigh Microscopy School (<http://www.lehigh.edu/microscopy>). Further details of the Nanocharacterization Laboratory and position requirements can be found at <http://www.lehigh.edu/~inmicro/>.

Applicants should submit a complete CV and the names of three referees to Sharon Coe, Department of Materials Science and Engineering, Lehigh University, 5 East Packer Avenue, Bethlehem, PA 18015-3195, USA. We will start reviewing applications after March 15, 2010, and the search will continue until the position is filled. *Lehigh University is committed to recruiting and retaining women and members of minority groups.*

## **Job Description** (for website)

**Job Title:** Research Engineer in Advanced Analytical Electron Microscopy

**Location:** Bethlehem, PA

**Full/Part Time:** Full-Time

**Regular/Temporary:** Regular

**Application deadline:** We will start reviewing applications after March 15<sup>th</sup> 2010 and the search will continue until the position is filled.

**Department:** Department of Materials Science and Engineering, Rossin College of Engineering and Applied Science, Lehigh University.

**Salary Range:** Negotiable depending on qualifications and experience.

**Qualifications:** Advanced University degree (Master's or higher) in a physical science or an engineering discipline and four years of demonstrated experience in electron microscopy.

**Requirements:** This position is very specialized and requires the applicant to have:

- \* Proven knowledge and hands-on experience with transmission electron microscopes (- familiarity with aberration corrected scanning transmission electron microscopy would be a distinct advantage)
- \* The ability to operate advanced laboratory equipment
- \* The ability to maintain advanced laboratory equipment (-prior experience with vacuum technology and electronics would be advantageous)
- \* The ability to train and convey technical information to technical and non-technical users
- \* Good management skills relevant to a multi-user environment
- \* The ability to perform log and book-keeping functions
- \* Good communication and interpersonal skills
- \* The ability to establish and maintain effective working relationships.

### **Contact for further information:**

Dr. Christopher J. Kiely ([chk5@lehigh.edu](mailto:chk5@lehigh.edu))

Dr. Masashi Watanabe ([maw3@lehigh.edu](mailto:maw3@lehigh.edu))

For further information on the Nanocharacterization Laboratory at Lehigh University please visit <http://www.lehigh.edu/~inmicro/>

### **Responsibilities:**

Some of the major responsibilities of this position are as listed below:-

- \* Interacting, assisting and training users for routine and advanced operation of the TEM/STEM instruments and occasionally SEM's
- \* Advising users on the use of related TEM sample preparation equipment, including dual beam FIB technology
- \* Assisting users with image simulation and data analysis
- \* Performing routine maintenance and essential repair of the microscopes and related

sample preparation equipment. (Some, but not all, of our microscopes are under service contract)

- \* Liaison with instrument service engineers and external users from other universities, government laboratories and local industry
- \* Making recommendations and assisting in the purchase, installation and commissioning of new equipment.
- \* Managing routine day-to-day operation of the Nanocharacterization Laboratory (- including logs, book-keeping, billing, maintenance records, inventory, and consumables purchases)
- \* Overseeing safety aspects of the Nanocharacterization Laboratory
- \* Liaison with personnel from the Facilities Department with regard to environmental issues in the microscopy suite
- \* Participating in the annual Lehigh Microscopy Schools
- \* Providing outreach and tours for the general public.

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