Electron Microprobe Position - University of Iowa

The University of Iowa Central Microscopy Research Facility is an Office of the Vice President for Research core resource, offering a wide array of instrumentation to research investigators. We are currently in search of a Core Facility Research Specialist to oversee a newly established Electron Microprobe (EPMA) facility serving a multidisciplinary community of users. Essential responsibilities include using wavelength-dispersive (WDS) and energy-dispersive (EDS) microanalytical techniques on a JEOL JXA-8230 electron probe micro-analyzer (EPMA) to assist research on geologic and other solid-state specimens.

Job Duties:

- Perform chemical microanalyses of geologic, ceramic, and other solid materials using a JEOL JXA-8230 electron probe micro-analyzer (EPMA).
- Daily calibration of the instrument and monitoring performance of researchers/investigators collecting their own data, data collection and reduction, analysis for some researchers/investigators, and instrument demonstrations for classes and visitors.
- Effectively communicate to provide consultation, written reports, and verbal presentations describing sample preparation, analytical methods, analytical data acquisition, and interpretation of results.
- Provide education and training to EPMA users on sample preparation, electron microprobe instrumentation analytical procedures, and data analysis.
- Stay current with state-of-art characterization techniques to provide solutions for researchers/investigators.
- Handle multiple projects while guaranteeing very high data quality standards.
- Work closely with researchers/investigators in conducting and/or developing new and specialized scientific research procedures.
- Maintain a working knowledge of EPMA software and hardware, provide oversight and routine maintenance of the electron microprobe, and oversee repairs.

Required Qualifications:

- A Master's degree in a scientific field or an equivalent combination of education and experience is required.
- At least three years of experience in electron probe micro-analysis (EPMA) of geological materials using both energy dispersive x-ray spectroscopy (EDS) and wavelength dispersive x-ray spectroscopy (WDS).
- Demonstrated ability to independently design EMPA WDS and EDS analytical routines for a variety of materials while optimizing accuracy and precision to suit the analytical needs.
- Understanding the factors that affect the accuracy and precision of EMPA analyses, and the ability to clearly communicate these to colleagues and students with expertise in other fields.
- Strong analytical and problem solving skills.
- Excellent written and verbal communication skills.
- Ability to work independently in a position of increasing responsibility.

Desirable Qualifications:

- PhD in a scientific field
- Post-degree professional experience of at least one year after the completion of the doctoral degree.
- EPMA publications on geological topics.
- Familiarity with Scanning Electron Microscopy (SEM), Cathodoluminescence (CL) and Laser-Ablation Inductively Coupled Plasma Mass Spectrometry (LA ICP-MS) analytical techniques and data analysis.

Salary range for this position is $45,000 to commensurate for the Specialist level position. UI also offers an excellent benefits package.

Please apply on line using Jobs@UIOWA at https://jobs.uiowa.edu/pands/view/63691