

Position: Forensic Material Scientist

Overview

The Material Measurement Laboratory of the National Institute of Standards and Technology is seeking qualified persons (U.S. Citizenship required) to apply their material science background to analyzing and interpreting the provenance of environmentally collected particulate samples. The applicant will work with a dynamic team using automated scanning electron-based X-ray microanalytical techniques to identify and characterize anthropogenic particles and particle populations. The applicant may also be expected to learn and apply other techniques as needs dictate. The applicant will work collaboratively with a multi-disciplinary particle characterization team.

Duties

- Lead research on the metrology of anthropogenic environmental particles and their connection to macroscopic materials and processes.
- Perform and analyze automated particle analyses of environmental samples and surrogates.
- Develop new methodologies for quantifying, classifying and determining the provenance of particulate samples.
- Perform testing and evaluation experiments to validate particle analysis methods.
- Help maintain and develop software for collection, quantification and classification of particulate samples.
- Help to improve evaluation of environmental particle samples by developing classification tools and software to combine scanning electron microscopy approaches with other metrologies to discover trends between different data sets and sources.

Qualifications

- U.S. Citizenship.
- Ph.D. in a relevant scientific discipline, including but not limited to Materials Science, Metallurgy, Physics, Chemistry, and Engineering.
- Have a record of creatively applying engineering principles to research, design, develop and implement new particle metrology instruments and applications for data collection, storage, analysis and visualization.
- Experience integrating heterogeneous data sources from multiple techniques such as light and electron microscopy, X-ray scattering, and mass spectrometry to build cross-technique characterization solutions.
- Can obtain and maintain a Secret-level security clearance. If selected, you will be subject to a government security clearance investigation and must meet the requirements for access to classified information.

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