TITLE: Materials science and rheology of complex polymeric and composite materials (U.S. Citizens preferred)

The Materials Measurement Laboratory of the National Institute of Standards and Technology is seeking a qualified materials scientist (U.S. Citizens preferred) to advance metrology development in rheology, thermal analysis, and structure–property relationships for complex polymeric and composite materials. Candidate will conduct high-level, independent research, translating cutting-edge measurements into industry-relevant metrics, reference methods/materials, and standards.

Duties:

- Design and execute rheological characterization of complex fluids and soft solids
- Lead thermal and thermomechanical characterization
- Characterize and model reactive/curing systems
- Build structure–property insights through multimodal characterization
- Author publications and present research to stakeholders

Required Skills, Expertise and Qualifications:

- Ph.D. in polymer science, materials science, chemical engineering, or a related discipline.
- Expertise in rheology, including advanced techniques such as orthogonal superposition rheology and large amplitude oscillatory shear rheology.
- Experience with thermal analysis (DSC and at least one of DMA/TGA/TMA/CTE/thermal conductivity methods), including calibration/validation.
- Solid background in cure kinetics, chemorheology, and polymer polymer physics.
- Experience with additive manufacturing (extrusion-based and vat photopolymerization)
- Strong quantitative/data skills (e.g., Matlab/Python/Origin/JMP) for processing large datasets, fitting models, and producing publication-quality figures.
- Track record of technical writing (peer-reviewed papers, technical reports, SOPs) and communicating results to mixed audiences.
- Demonstrated ability to lead projects, mentor students/postdocs, and coordinate cross-functional collaborations.
- Ability to work on-site in a laboratory setting in Gaithersburg, MD and meet all safety/training requirements.

Employment Terms: This opportunity is to be an associate researcher in the NIST Materials Science and Engineering Division for a term of 1 year, with options to renew. Associate researchers are NOT Federal Employees, but they work along with NIST researchers and with NIST's often world class instrumentation. Relocation expenses will not be provided. U.S. Citizens hired into associate positions may have the opportunity to seek longer term Federal Employment.

Salary: up to $120,510 annually, commensurate with qualifications and experience

How to express interest: Persons (U.S. Citizens Preferred) who meet all of the required qualifications and who would be interested in taking this position are invited to express their interest by sending an email that briefly describes their qualifications along with a CV to 643assoc@nist.gov. US Citizens should note "US Citizen" and the opportunity title in the email subject line. All others should note "Non-US Citizen" and the opportunity title in the email subject line.