

TITLE: Carbon Nanotube Processing and Separations Research (U.S. Citizens Preferred)

Overview

The Materials Measurement Laboratory of the National Institute of Standards and Technology is seeking qualified persons (U.S. Citizens preferred) to advance processing and scale-up of separations of nanomaterials, including single wall carbon nanotubes. The applicant will work with a dynamic team in the Particles Nanotube and Colloids project to advance standards research and fundamental measurement science that serves broad-based technologies including advanced materials, semiconductors, advanced materials, and biosensing. Generated materials are also expected to support a wide variety of collaborative efforts, including interlaboratory comparisons and metrology development.

Duties

- Optimize aqueous two-phase extraction-based separation of single-chirality single-wall carbon nanotube (SWCNT) species.
- Advance scale-up capabilities for producing liter-scale volumes and support the standardization of nanotube sorting protocols.
- Apply processing and characterization methods developed by NIST for assessment of SWCNT species chirality, length, and morphological purity

Required Skills, Expertise and Qualifications

- A PhD in Science or Engineering disciplines including Chemical Engineering, Materials Science, soft-matter physics, chemistry, colloidal science or related disciplines.
- Experience in synthesis, liquid-phase processing and separations, and characterization of nanomaterials by optical spectroscopic methods including near infrared, fluorescence, UV-vis, and/or Raman and fluorescence spectroscopy.
- Excellent written and oral communication skills. Demonstrated excellence in maintaining organized laboratory notebooks and data for archival and review purposes.

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: Between \$77,000 and \$83,000

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 642assoc@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.