

PREP Postdoctoral Research Associate

This position is part of the National Institute of Standards (NIST) Professional Research Experience (PREP) program. NIST recognizes that its research staff may wish to collaborate with researchers at academic institutions on specific projects of mutual interest, thus requires that such institutions must be the recipient of a PREP award. The PREP program requires staff from a wide range of backgrounds to work on scientific research in many areas. Employees in this position will perform technical work that underpins the scientific research of the collaboration.

Research Title:

Postdoctoral Research Associate

The work will entail:

Performing experimental studies on vibrational state control and precision spectroscopy of trapped molecular ions

Key responsibilities will include but are not limited to:

- Designing, constructing, improving, and maintaining an experimental apparatus for studies of trapped molecular ions
- Conducting experiments
- Collaborating with and providing guidance to junior project members when applicable
- Recording and managing experimental data
- Publishing research findings in peer-reviewed journals
- Presenting results at internal meetings, and occasional scientific community meetings

Qualifications

- **U.S. Citizen Preferred**
- PhD in physics, chemistry, or a related field.
- Five years of relevant experience.
- Preferred: Proficiency with lasers, optics, and trapped ions.
- Ability to work with python programming language.
- Preferred: Extensive experience with ARTIQ experimental control systems.
- Strong oral and written communication skills.

Privacy Act Statement

Authority: 15 U.S.C. § 278g-1(e)(1) and (e)(3) and 15 U.S.C. § 272(b) and (c)

Purpose: The National Institute for Standards and Technology (NIST) hosts the [Professional Research Experience Program \(PREP\)](#) which is designed to provide valuable laboratory experience and financial assistance to undergraduates, post-bachelor's degree holders, graduate students, master's degree holders, postdocs, and faculty.

PREP is a 5-year cooperative agreement between NIST laboratories and participating PREP Universities to establish a collaborative research relationship between NIST and U.S. institutions of higher education in the following disciplines including (but may not be limited to) biochemistry, biological sciences, chemistry, computer science, engineering, electronics, materials science, mathematics, nanoscale science, neutron science, physical science, physics, and statistics. This collection of information is needed to facilitate administrative functions of the PREP Program.

Routine Uses: NIST will use the information collected to perform the requisite reviews of the applications to determine eligibility, and to meet programmatic requirements. Disclosure of this information is also subject to all the published routine uses as identified in the Privacy Act System of Records Notices: NIST-1: NIST Associates.

Disclosure: Furnishing this information is voluntary. When you submit the form, you are indicating your voluntary consent for NIST to use of the information you submit for the purpose stated.