

Opportunity Title: Interband Cascade Optical Frequency Comb Spectroscopy of

C-H Bonds

Opportunity Reference Code: 0177-NPP-NOV23-JPL-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0177-NPP-NOV23-JPL-PlanetSci

Application Deadline 11/1/2023 6:00:59 PM Eastern Time Zone

Description Our team is working on development of new generation of mid-infrared optical frequency combs and mode-locked lasers for future Earth and planetary science missions. These combs, based on a new class of semiconductor lasers, will provide enhanced sensitivity, and higher spectral resolution spectrometers. The postdoctoral researcher will have a unique opportunity to work on different aspects of this new development including but not limited to: (1) Design of the interband cascade lasers; (2) Device microfabrication; (3) Test and characterization and (4) integration into a dual frequency comb spectroscopy instrument.

> Applicants should have a recent Ph.D. in electrical engineering, or a closely related field. Experiences with semiconductor laser devices modeling, fabrication and laser spectroscopy are highly desirable.

References:

Bagheri, M., et al, Passively mode-locked interband cascade optical frequency combs. Scientific Reports, 8, 3322 (2018).

Location:

Jet Propulsion Laboratory Pasadena, California

Field of Science: Planetary Science

Advisors:

Mahmood Bagheri mahmood.bagheri@jpl.nasa.gov 818-354-0413

Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: https://www.nasa.gov/oiir/export-control.

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- . Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Eligibility • Degree: Doctoral Degree.





Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the **ORAU** Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder 2



Generated: 8/20/2024 10:27:19 AM



Opportunity Title: Interband Cascade Optical Frequency Comb Spectroscopy of

C-H Bonds

Opportunity Reference Code: 0177-NPP-NOV23-JPL-PlanetSci

Requirements

Generated: 8/20/2024 10:27:19 AM