zintellect
climb higher

**Opportunity Title:** Interband Cascade Optical Frequency Comb Spectroscopy of C-H Bonds
**Opportunity Reference Code:** 0177-NPP-MAR26-JPL-PlanetSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0177-NPP-MAR26-JPL-PlanetSci

**How to Apply** All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

**Application Deadline** 4/2/2026 6:00:59 PM Eastern Time Zone

**Description** **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

**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

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**Opportunity Reference Code:** 0177-NPP-MAR26-JPL-PlanetSci

Pasadena, California

**Field of Science:**Planetary Science

**Advisors:**
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**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

**Questions about this opportunity?** Please email npp@orau.org

**Point of Contact** Mikeala

**Eligibility Requirements**

- **Degree:** Doctoral Degree.