zintellect
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Opportunity Title: Evolution of Organic Matter in Planetary Ices
Opportunity Reference Code: 0038-NPP-MAR26-JPL-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0038-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:

The research work focuses on Physics and Chemistry of Outer Planetary Ices using Laboratory Simulations and Spectroscopy. The goal is to understand the evolution of organic matter in ices under the conditions similar to Solar System icy bodies such as comets, satellites of Jupiter and Saturn, Saturnian Rings etc. In order to achieve this goal, it is also necessary to get accurate data on the physical properties of crystalline and amorphous forms of water-rich ices. In addition to the fundamental research mentioned above, the post-doctoral colleague will have an opportunity to participate in next-generation space instrumentation, and analysis of observational data.

The candidates should have a Ph.D. in chemistry, physics, or astrophysics and strong passion to undertake multidisciplinary research to explore unknown territories of astrophysics of ices. Experience and expertise in the following techniques is highly desirable: low-temperature techniques, laboratory ultraviolet and infrared spectroscopy, laser spectroscopy, ultra-high vacuum techniques, mass-spectrometry, and quantum chemistry.

References:

1. Unusual Stability of PAH radical cations in Amorphous Water-ices up to 120 K – Astronomical Implications; Gudipati, M. S, Allamandola, L.J.; Astrophys. J. 638 (2006) 286 2. Matrix-Isolation in Cryogenic Water Ices:

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Facile Generation, Storage and Optical Spectroscopy of Aromatic Radical Cations; Gudipati, M. S. J. Phys. Chem. 108 (2004) 4412

Location:
Jet Propulsion Laboratory
Pasadena, California

Field of Science: Planetary Science

Advisors:
Murthy S Gudipati
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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

This opportunity may require the following: 1- Mandatory drug testing; 2-Random drug testing; 3- Testing prior to initiation of fellowship appointment.

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

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.