

Opportunity Title: Coordinated Organic Geo- and Cosmochemical studies of Planetary Materials

Opportunity Reference Code: 0020-NPP-JUL24-JSC-PlanetSci

Organization National Aeronautics and Space Administration (NASA)

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How to Apply All applications must be submitted in [Zintellect](#)

Application Deadline 7/1/2024 6:00:59 PM Eastern Time Zone

Description Description:

The emergence of life on Earth (and elsewhere) relied heavily on the inventory of available organics and the environs in which they were found. This research opportunity focuses on the relationships between organic materials and their mineralogical hosts; bridging the gap between observed organics and the processes that affected them. The relationship between organic molecules and mineral hosts informs the formation and evolution of amino acids and peptides on asteroidal, cometary, and planetary bodies, as well as the emergence of homochirality on Earth.

Coordinated analyses are performed on extraterrestrial samples, terrestrial analogs, and experimental products using the wide array of instrumentation available in the Astromaterials Research and Exploration Science division at JSC, including liquid and gas chromatography mass spectrometers, scanning electron microscopes, and transmission electron microscopes. General chemistry, experimental impact, and petrology laboratories are used to simulate processes affecting organic molecules.

By exploring the relationship between organic components of astromaterials and their mineralogical hosts and environments, we can place more robust constraints on the histories of our samples.

Field of Science: Planetary Science

Advisors:

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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 Requirements • **Degree:** Doctoral Degree.



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