

**Opportunity Title:** High Temperature Reusable Materials Research and Development for Atmospheric Entry

**Opportunity Reference Code:** 0152-NPP-MAR26-ARC-MatPhysSci

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

**Reference Code** 0152-NPP-MAR26-ARC-MatPhysSci

**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:**

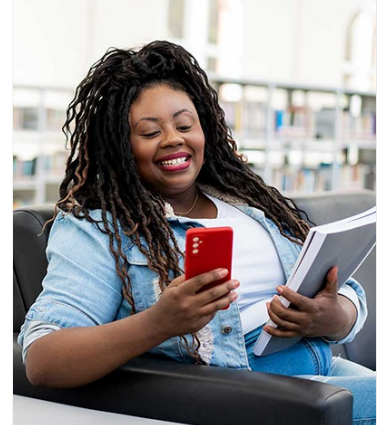
This opportunity is located at the NASA Ames Research Center (ARC) in the Thermal Protection Materials Branch. It is focused on development of reusable thermal protection systems (RTPS) for use in atmospheric (re)entry. RTPS is a critical enabling technology for the future of the burgeoning commercial space industry as well as NASA missions for lowering the cost of high cadence flight into space. Ongoing efforts at ARC are focused on understanding the structure-property behavior of ceramic materials in high thermal gradient environment with implications on manufacturing and system performance. Relevant materials being explored include low density, fibrous ceramic insulators, glass coatings, and the compatibility between them. Efforts will include hands on lab scale material production and subsequent testing and characterization efforts. Targeted development areas include increased thermal capability, structural robustness, and/or manufacturing scalability with reduced cost.

**Field of Science:** Materials and Physical Sciences

**Advisors:**

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Adam Caldwell



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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/oiiir/export-control>.

**Questions about this opportunity?** Please email [npp@orau.org](mailto:npp@orau.org)

**Qualifications** Degree in materials science/engineering or related engineering field with laboratory experience is required. A background in high temperature materials or technical ceramics is preferred. An ideal candidate has experience in metallographic preparation and microstructural characterization techniques and knowledge of glass and/or ceramic fiber processing.

**Point of Contact** [Mikeala](#)

- Eligibility**
- **Citizenship:** LPR or U.S. Citizen
- Requirements**
- **Degree:** Doctoral Degree.