



National
Aeronautics and
Space
Administration

Disclosure of Invention and New Technology (Including Software)

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DATE

CONTRACTOR CASE NO.

NASA CASE NO. (OFFICIAL USE ONLY)

This is an important legal document. Carefully complete and forward to the Patent Representative (NASA in-house innovation) or New Technology Representative (contractor/grantee innovation) at NASA. Use of this report form by contractor/grantee is optional; however, an alternative format must at a minimum contain the information required herein. NASA in-house disclosures should be read, understood and signed by a technically competent witness in the witness signature block at the end of this form. In completing each section, use whatever detail deemed appropriate for a "full and complete disclosure." Contractors/Grantees please refer to the New Technology or Patent Rights – Retention by the Contractor clauses. When necessary, attach additional documentation to provide a full, detailed description.

1. DESCRIPTIVE TITLE

Utilizing Lunar Regolith in Manufacturing High Strength Fiberglass

2. INNOVATOR(S) *(For each innovator provide: Name, Title, Work Address, Work Phone Number, and Work E-mail Address. If multiple innovators, number each to match Box 5.)*

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3. INNOVATOR'S EMPLOYER WHEN INNOVATION WAS MADE (For each innovator provide: Name, Division and Address of Employer, Organizational Code/Mail Code, and Contract/Grant Number if applicable. If multiple innovators, number each to match Box 5.)

Boise State University, Department of Mechanical & Biomedical Engineering,
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Arizona State University, School for MTE
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University of Central Florida, UCF Department of Mechanical and Aerospace Engineering
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4. PLACE OF PERFORMANCE (Address(es) where innovation made)

1910 W University Dr, Boise, ID, 83725

5. EMPLOYER STATUS (choose one for each innovator)

<u>Innovator #1</u>	<u>Innovator #2</u>
CU	CU
<u>Innovator #3</u>	<u>Innovator #4</u>
CU	CU

GE = Government
CU = College or University
NP = Non-Profit Organization
SB = Small Business Firm
LE = Large Entity

6. ORIGIN (Check all that apply and provide all applicable numbers. If multiple Contracts/Grants, etc., list Contract/Grant Numbers in Box 3 with applicable employer information.)

- NASA In-house Org. Mail Code : WBS
- Grant/Cooperative Agreement No. 80NSSC19M0186 : WBS
- Prime Contract No. : WBS
- Task No. Report No. :
- Subcontractor; Subcontract Tier : WBS
- Joint Effort (contractor, subcontractor and/or grantee contribution(s), and NASA in-house contribution) :
- Multiple Effort (multiple contractor, subcontractor and/or grantee contributions, no NASA in-house contribution) :
- Other (e.g., Space Act Agreement, MOA) No. : WBS

7. NASA CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) John Dankanich	8. CONTRACTOR/GRANTEE NEW TECHNOLOGY REPRESENTATIVE (POC) Space Tech Mission Directorate
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9. BRIEF ABSTRACT *(A general description of the innovation which describes its capabilities, but does not reveal details that would enable duplication or imitation of the innovation.)*

The present innovation is a new extrusion device capable of creating fiberglass made almost entirely of simulated lunar regolith. This would be a clear demonstration of an efficient, in-situ manufacturing method that has the potential for expedited construction during future lunar missions. Additionally, this lunar fiberglass would demonstrate a significantly increased tensile strength with a decreased fiber diameter, allowing for the use of the material in concrete and insulation manufacturing applications.