

## **Bio-Brick: Myco-Architecture Materials**

This brick is a composite of wood and fungal mycelium. Fungi break down biochemicals like cellulose converting them into their own chitin-rich biomass. By growing mycelium on plant fodder they fuse at a cellular level allowing us to utilize the best characteristics of their respective Kingdoms - Plantae and Fungi.

Researchers are currently developing methods to grow these multi-kingdom composites off-planet to save transport cost, reduce energy demands, and utilize bio-performative aspects like radiosynthesis that may one day convert space travel's biggest liability, ionizing radiation, into a resource for material production.

**NASA Innovative Advanced Concepts (NIAC) Program**

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**Being Utilized in Lunar and Martian Conceptual Design Reference Mission Architectures:**

**Co-I Professor James Head and Student Teams**

**Brown University**



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