

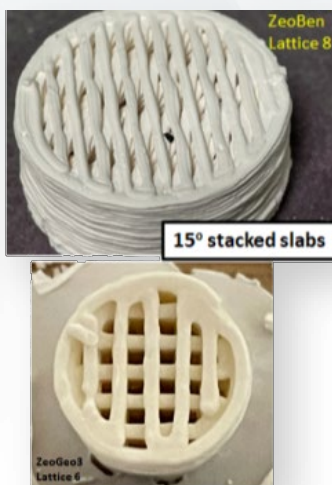
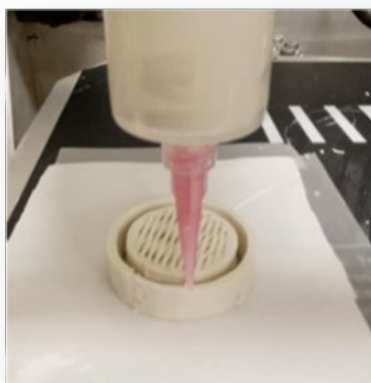
3DZeoGeo

Additively-Manufactured, Net-Shape Adsorbent Beds for Carbon Dioxide Removal

HiFunda LLC develops and commercializes materials and systems with the goal of bringing better, more environmentally-friendly and energy efficient technology solutions to market. HiFunda is currently designing hierarchical zeolite-based, monolithic adsorbent beds for CO₂ removal that are 3D-printed using an aluminosilicate to bind particles together. This product will serve as a drop-in replacement for existing powder beds with improved mass transfer, heat transfer, and mechanical robustness properties.

Capabilities

- Improved mass transfer, heat transfer, and mechanical robustness
- Hierarchical (meso, macro, micro porosity)
- Zeolite-based
- Aluminosilicate (geopolymer) 3D printed to join commercially-available zeolite particles together
- Custom net-shape adsorbent bed design(s) for your application(s)



Applications

- Space exploration
- Automotive
- Chemical industry
- Custom catalytic reactors
- Air purification (VOC removal)
- Environmental remediation
- Can be customized for your unique application

Examples of 3DZeoGeo monolithic adsorbent beds

Company Profile



Founded 2008



Salt Lake City, UT



8 Employees

R&D technology incubator

2 spinout companies

Opportunity

Current Funding/Partner

HiFunda teamed with PADT on this Phase I SBIR project that was funded by NASA

Next Stage

Looking for R&D funding to further advance the 3DZeoGeo technology for unique applications

Opportunity

We are seeking potential end-users in additional applications areas beyond the envisioned initial product for NASA, including commercial space use, automotive, and the chemical industry.

Innovative Materials & Electrochemical Sensor Solutions

The HiFunda Approach:

Develop and advance new and disruptive materials technologies through the valley-of-death that may prevent the commercialization of novel ideas and technologies.

PROVEN SUCCESS: Demonstrated track record of developing and commercializing, scaling up, and spinning out new companies that provide innovative materials solutions.

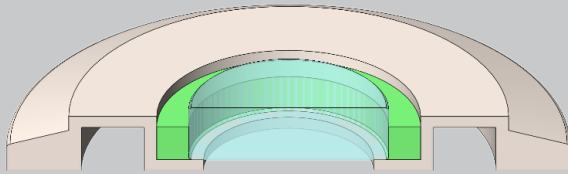
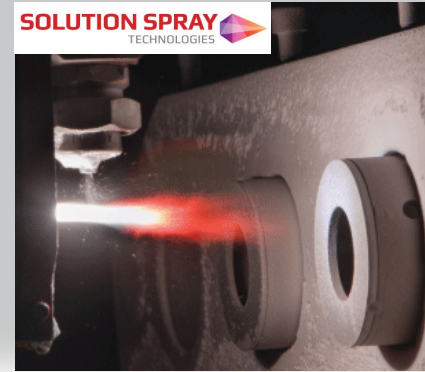
GREAT SCIENCE, GOOD BUSINESS: Excellent scientific and engineering experience with the business acumen to commercialize technologies.

PRODUCTIVE PARTNERSHIPS: Significant experience collaborating with industrial, government, and academic partners and taking excellent ideas from the bench to the marketplace.

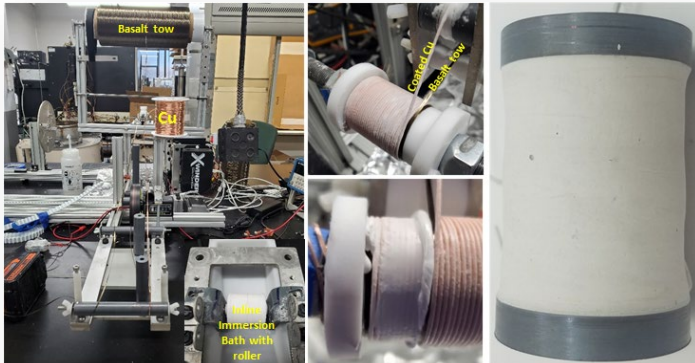
HiFunda's Technologies and Projects:

HiFunda develops new technologies in materials science, ceramics, electrochemical devices, composites, coatings, clean technologies, sensors, and catalysis.

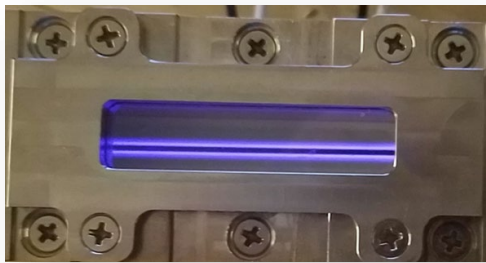
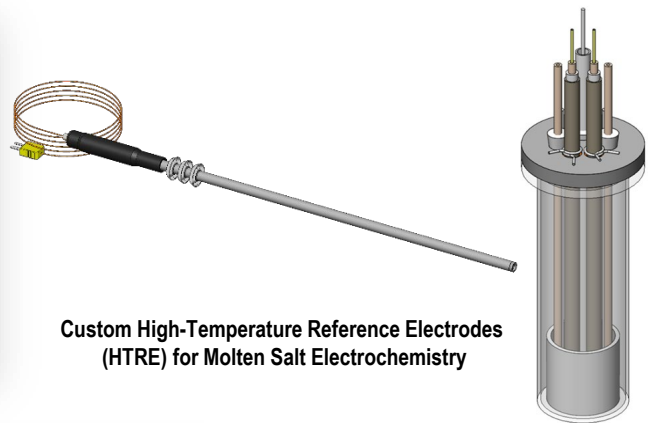
Spinout Companies:



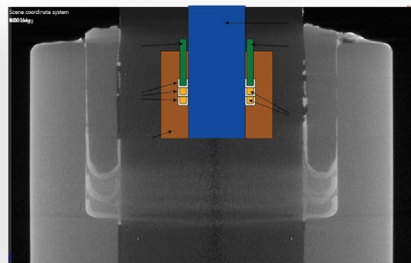
Thermal Expansion Matched Glass Frits used for Sealing Assemblies for Alpha Detection



Castable Inorganic Composite Potting Material for High-Temperature Electromagnets (HTEM)



Plasma Catalyst Coupling for Valorization of Methane and CO₂



Novel Ceramic-to-Metal Seal for High-Temperature, High-Pressure Applications



Low-Cost, Low-Temperature Geopolymer Composite Overwraps for Gun Barrels



HiFunda works with customers to solve their most demanding technical challenges to develop and commercialize new materials and technologies

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