



## **FOR IMMEDIATE RELEASE**

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### **Mainstream Engineering Awarded Contract from NASA for MOF based Adsorbents for Carbon Dioxide Removal.**

ROCKLEDGE, FL — **Aug 15th, 2022** —Mainstream has been awarded the Ph I from NASA for MOF based Adsorbents for Carbon Dioxide Removal Assembly.

Carbon dioxide and moisture removal is critical for maintaining efficient air purification in extravehicular space suit life support systems. Stable, high performance, low pressure drop CO<sub>2</sub> and moisture removal sorbents are a critical part of the space suit life support system and there is a need for alternative high performance adsorbent systems.

Mainstream has integrated highly tailorable metal organic frame work molecules (MOFs) sorbents which provide a highly selective, high-capacity carbon dioxide and water vapor absorbent level for vacuum swing CO<sub>2</sub> absorbent system. Mainstream has fabricated the MOFs into a high stability, high porosity polymeric beads with readily controllable sizes, forming beads that provide full access to their extraordinarily high surface area and gas storage capacity, while allowing the integration into a low pressure drop packed bed adsorbent cartridges that can be readily integrated into the adsorbent bed as a drop-in replacement for the current adsorbents.

### **About Mainstream Engineering Corporation**

[www.mainstream-engr.com](http://www.mainstream-engr.com)

Mainstream Engineering Corporation is a 36-year-old Brevard County, Florida manufacturer with a history of leading-edge research and development that has resulted in advanced cost-competitive products, which are made in the USA. Founded in 1986, Mainstream's mission is to transition advanced R&D into high-quality, environmentally-safe, green, commercial products using lean manufacturing techniques. Areas of research include thermal control, energy conversion, power electronics, biomass conversion, chemical technology and materials science.

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