

3D Printed Metal for Spacecraft

- NASA developed and 3D printed a new copper-based alloy ([GRCop-42](#)) for use in rocket propulsion components in 2019
- Achieve near-fully-dense
- For combustion chamber liners and fuel injector faceplates
- Use a Concept Laser M2 3D printer, a Powder Bed Fusion (PBF) AM system.
- High thermal conductivity, excellent creep (deformation) resistance, and strength at elevated temperatures.
- [Relativity Space](#): who 3D printed most structural part of their rocket (Terran 1)
- Launched in 2023, but failed

