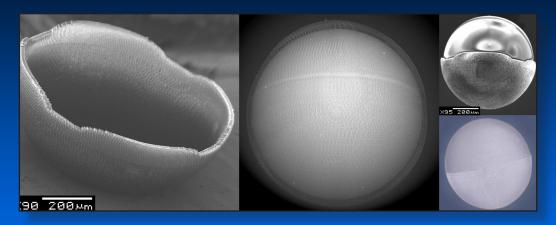
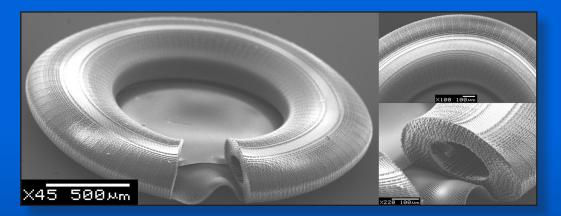
## **ADDITIVE MANUFACTURING (AM)**



Thin-wall foam hemi mounted on direct-drive capsule



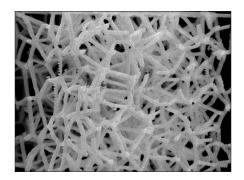
Fabrication of unique parts that cannot be made any other way



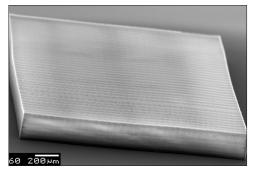
Gradient density foams in spherical geometries



## **AM TARGETS FOR HED SCIENCE EXPERIMENTS**



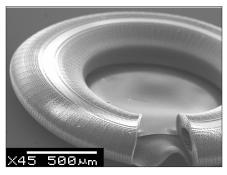
STOCHASTIC FOAMS



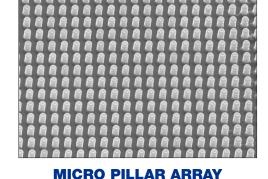
PLANAR GRADIENT DENSITY FOAM

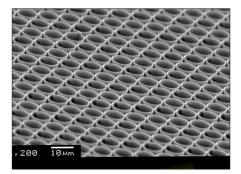


BATCH FABRICATION OF PARABOLIC CONES IN TUBES

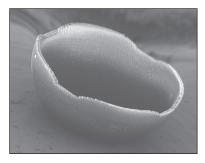


HOLLOW FOAM RING

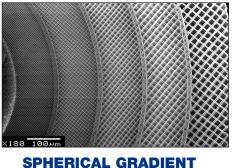




**MICRO TUBE ARRAY** 



THIN-WALL FOAM HEMI



SPHERICAL GRADIEN DENSITY FOAM

Parameter	Value
Resolution	200 nanometer
Print Volume	200mm x 200mm x 65mm
Print Speed	Up to 250mm/s

General Atomics employs a specific AM method known as two-photonpolymerization (2PP), among other techniques, in its target manufacturing activities.

In 2PP, focused, ultrashort laser pulses are directed into a volume of photosensitive material, or photoresist. The name comes from the specific chemical reaction, which involves polymerization through absorption of two photons at time.

2PP is capable of creating ultrahigh resolution features on the order of  $\leq 1 \mu m$ . GA has developed 2PP technology that can produce faster results with fewer defects over larger regions than competing methods.

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