

## PUSHING THE BOUNDARIES OF 3D PRINTED RF DEVICES

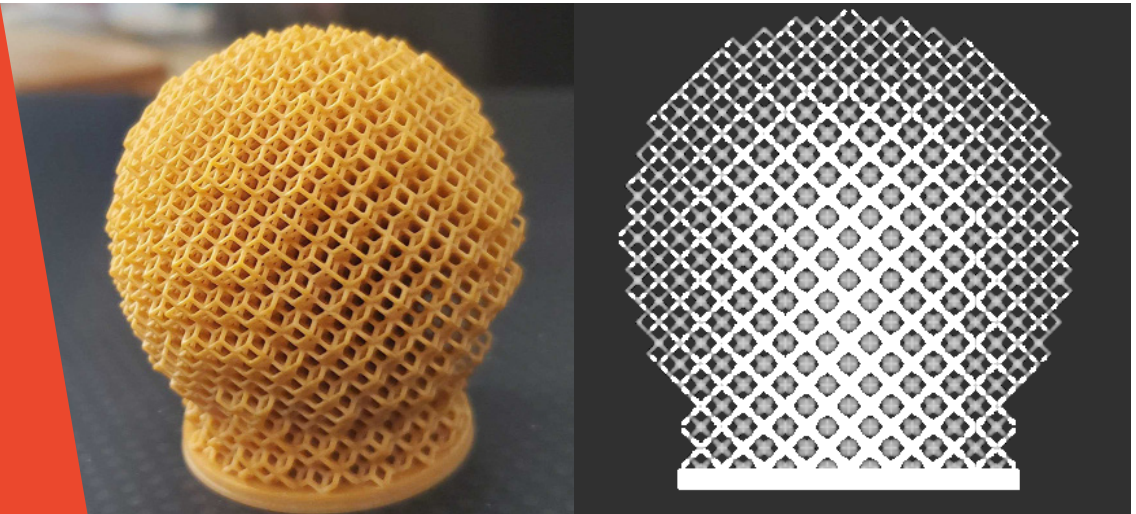
Fortify is developing a palette of materials for printing components used in high-bandwidth communication systems. Specifically designed for mm-wave applications, the Fortify platform enables high-resolution features which are not achievable using conventional modes of manufacturing.

## FORTIFY DIGITAL COMPOSITE MANUFACTURING

Fortify's patented DCM (Digital Composite Manufacturing) platform enables reliable printing of particle reinforced photopolymers. For the RF application space, a unique low-loss polymer is blended with specialty tunable dielectric ceramic additives for printing graded architectures applicable for **lenses, connectors, and wave-guides**.

*	Material A	Material B
Dielectric Constant, (Split Post Dielectric Resonator @ 10GHz)	2.6	4.9
Dissipation Factor (Split Post Dielectric Resonator @ 10GHz)	0.0049	0.0039
Water Absorption (Submerged for 24 hrs @ 50 °C)	<0.1%	<0.1%
Degradation Temp (1% wt. loss via TGA)	280 °C	280 °C

*\*Preliminary Data*



Printed dielectric lens (left) with 3D-graded dielectric properties using topology optimization via nTopology.

WHAT  
WILL  
YOU  
FORTIFY?