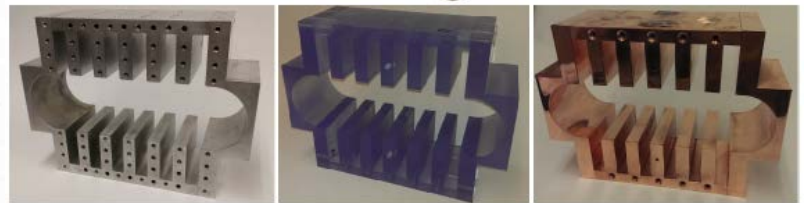
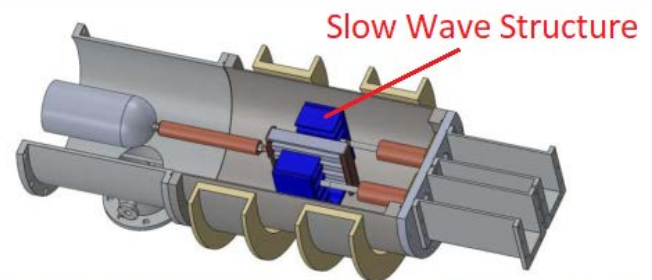


# AFRL

## Additive Manufacturing (AM) for High Power Electromagnetic (HPEM) Systems

AM techniques have the potential to dramatically reduce cost and fabrication time for HPEM technology development. AFRL is studying properties of 3D printed (3DP) materials in HPEM-relevant environments to better understand the cost vs. benefit tradeoffs of use.



(Upper) Schematic of the University of Michigan Recirculating Planar Magnetron  
(Lower) Printed structures fabricated by AFRL for testing at University of Michigan. (Photo credit: Courtesy)

### Features:

1. Rapid prototyping of HPEM source and system component concepts
2. Reductions in development time and cost of HPEM systems
3. Enables potential reductions of system size and weight by incorporation of lightweight materials and hybrid/conformal electromagnetic structures

*New HPEM-relevant AM/3DP techniques are deployed to the Directed Energy enterprise as they are developed and characterized by the Air Force Research Laboratory and our collaborators.*

**Revolutionizing HPEM Source Prototyping**