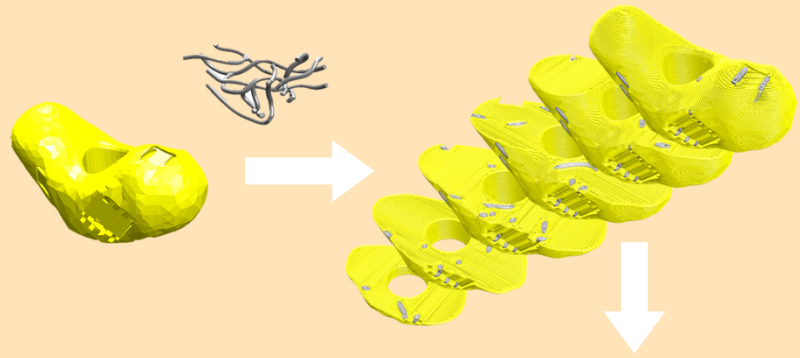
Hybrid Direct-Write Additive Manufacturing

Pioneering 21st Century Electromagnetics & Photonics

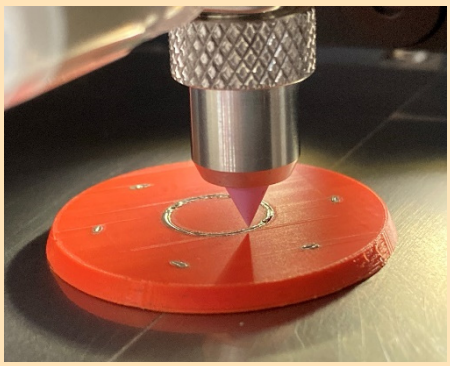
SUMMARY

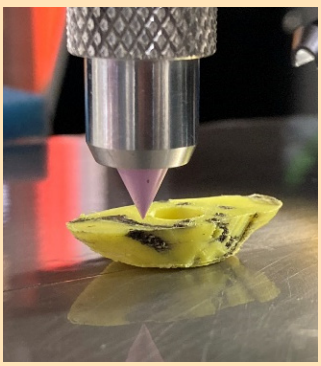
The EMLab and Kraetonics LLC have developed the only known capability in the world to build three-dimensional (3D) parts with complete freedom of the distribution of conductors, dielectrics, and other materials. The technology uses fused filament fabrication to deposit dielectrics and micro-dispensing to deposit conductors or other materials. The capability includes processes, materials, and a custom slicer for hybrid manufacturing and that be extended to include additional tooling or drive other printers.

DESCRIPTION



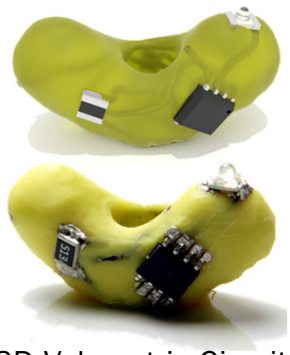
OmniFAB™ is an advanced slicer for hybrid 3D printing developed by Kraetonics LLC. It can slice any number of different materials, each with unique slicing parameters. G-code is generated to automate the build in a hybrid 3D printer. Currently focusing on nScrypt printers, but g-code for other printers is an option.





Hybrid printing includes processes to make different materials compatible, switch between tools mid build, and clean and maintain tools during the build. Multi-material parts can be manufactured in a single build.

APPLICATIONS



3D Volumetric Circuits

Conformal Circuits

Flexible Circuits

3D Antennas

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