

## **3D-PRINTING OF ARTIFICIAL DIELECTRICS USING LOW TEMPERATURE ELECTROCERAMI**

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**A**dditive manufacturing (AM) is a novel technology for producing prototypes as well as functional parts in a layer by layer manner. AM technologies have recently gained increased importance, as they allow production of complex geometries with high levels of accuracy and repeatability in a cost-effective way. Artificial dielectrics and metamaterials have extraordinary properties and are capable of controlling electromagnetic (EM) wave propagation and tailoring EM properties. Currently, manufacturing of metamaterials is costly and time consuming as several processes are required such as micromachining, etching and assembling. We are presenting initial results, investigating multi-material AM of ceramics and metals as an alternative manufacturing method and their RF properties.

### **Biography**

Reza Gheisari has obtained his MSc in Advanced Manufacturing Technology and Systems Management from the University of Manchester. The focus of his MSc dissertation was on fabrication of hybrid micro moulds using additive manufacturing techniques to replicate polymeric micro-cantilevers for MEMS relays. He is currently pursuing his PhD at Loughborough University, working on additive manufacturing of 3D metamaterials.

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