



MATERIALS THAT MATTER

FVMat

DESIGN, SIMULATION & PRODUCTION
OF NOVEL-META MATERIALS

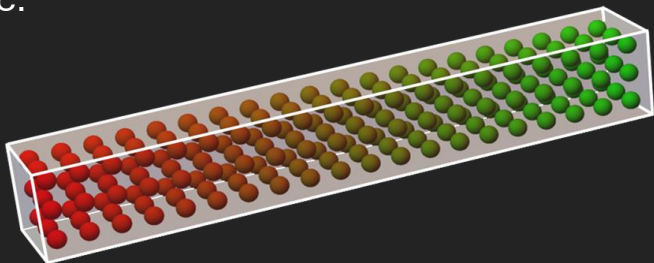
What are Meta-Materials?

The era of 3D printing opens many horizons, and the capabilities of this technology go far beyond providing an advantageous way of producing conventional parts and products. Today the dream of creating a new class of materials with an endless variety of possible features becomes a goal within reach.

Meta-Materials are materials with an engineered artificial micro-structure that is designed to produce desired physical and mechanical properties, which cannot be found in nature.

New Class of Meta-Materials

FVMat pioneers a new concept of meta-materials that enables the production of materials with extra ordinary properties. We can design and manufacture materials with controllable stiffness, heat transfer, electromagnetic characteristics, etc.

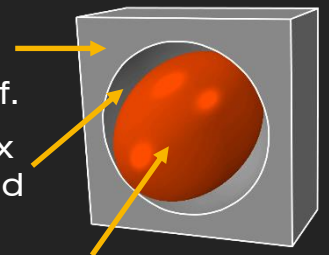


All properties can be dynamically controlled and varied in all three dimensions. Moreover, these meta-materials can alter their properties to adapt to changing external conditions.

Meta-Material Micro-Structure

A matrix – the main substance from which the material is made of.

A void inside the matrix – with an optimized void shape and size.



A substance – particles, fluids, powders, gases, or any combination of these.

By modifying these building blocks, we engineer multi-physical characteristics and behavior, thus creating materials with groundbreaking properties never thought of before.

The basic concept is simple, but the applications are vast!

Applications

This new class of meta-materials opens a unique playground for design, simulation and fabrication of novel materials, products, and devices in various fields:

Consumer electronics, UAVs, Airplane & Automotive components, Focus configurable antennas, Controllable heat transfer, Self-lubricating materials, Damage indicating & self-repairing materials, Frequency tuned dampers, Acoustic controlled materials, and more.

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FVMat LTD – Novel Materials with Extraordinary Properties