



2 μ m P μ SL Based 3D Printing and its' application in Microfluidics, Microneedles, Biomimetics, Metamaterial, Micromechanics, etc.

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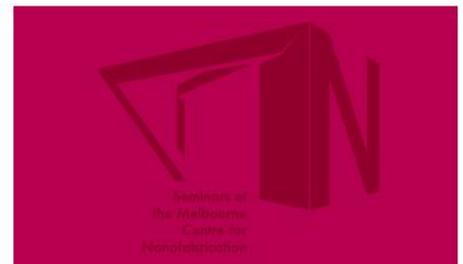
11:00am, 28/06/2023

At the Melbourne Centre for Nanofabrication Boardroom

151 Wellington Road, Clayton, 3168

Zoom link: [click here](#)

Meeting ID: 832 3710 7490 and passcode: 758502



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Abstract:

The trend towards miniaturization is occurring in more and more types of products and technologies, especially medical devices, flexible electronics, biomimetics, robotics, metamaterials, etc. Traditional manufacturing technologies face greater challenges in producing parts that are smaller in size but more complex in structure. For example, it is costly and time-consuming to build a mold for micro-injection molding or to complete the initial programming for CNC machining. Lithography technologies are mold-free, but require complex manual operations, resulting in very low productivity. To address the challenge of microfabrication, projection micro stereolithography (P μ SL) technology, with its breakthrough resolution of 2 μ m/10 μ m, has been increasingly applied in microfluidics and microneedles. Through continuous development, P μ SL has enabled multi-scale fabrication from 10 μ m to 100mm, high aspect ratio, high production efficiency, excellent biocompatibility, good performance for PDMS molding, and microscopic observation.

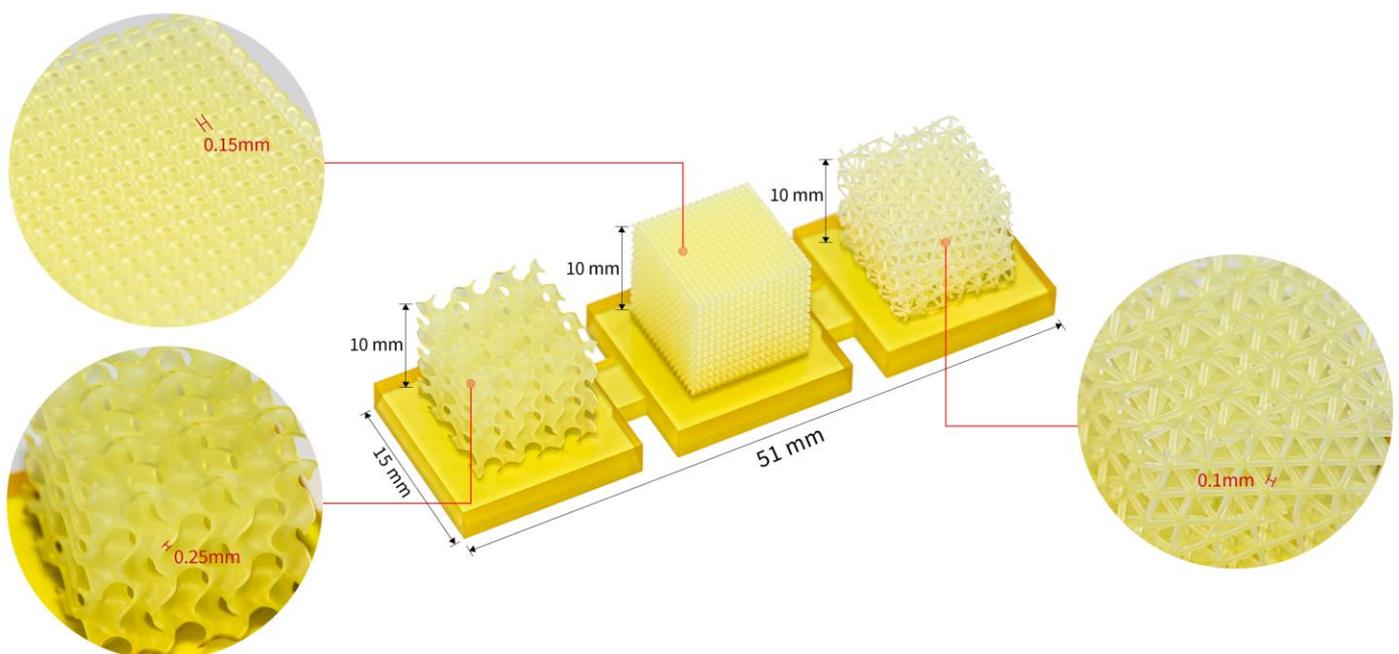


Fig 1: Lattice Group-2

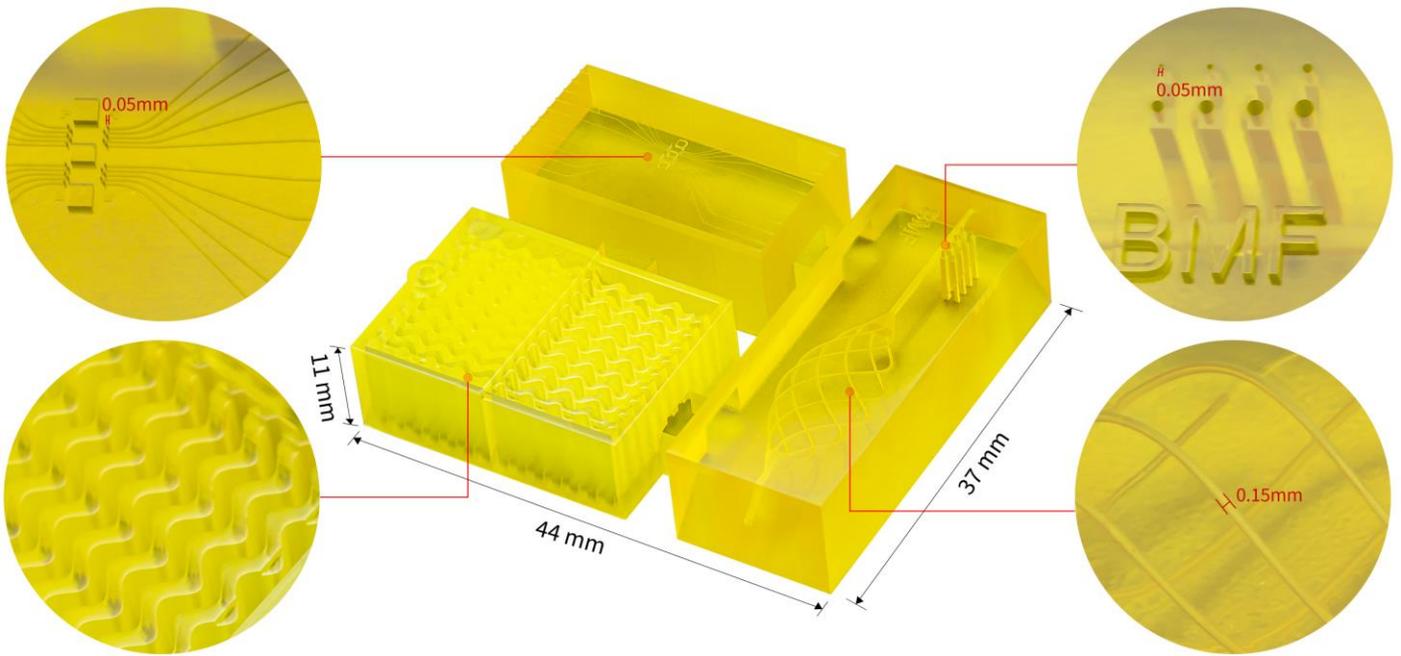


Fig 2: Microfluidics Group

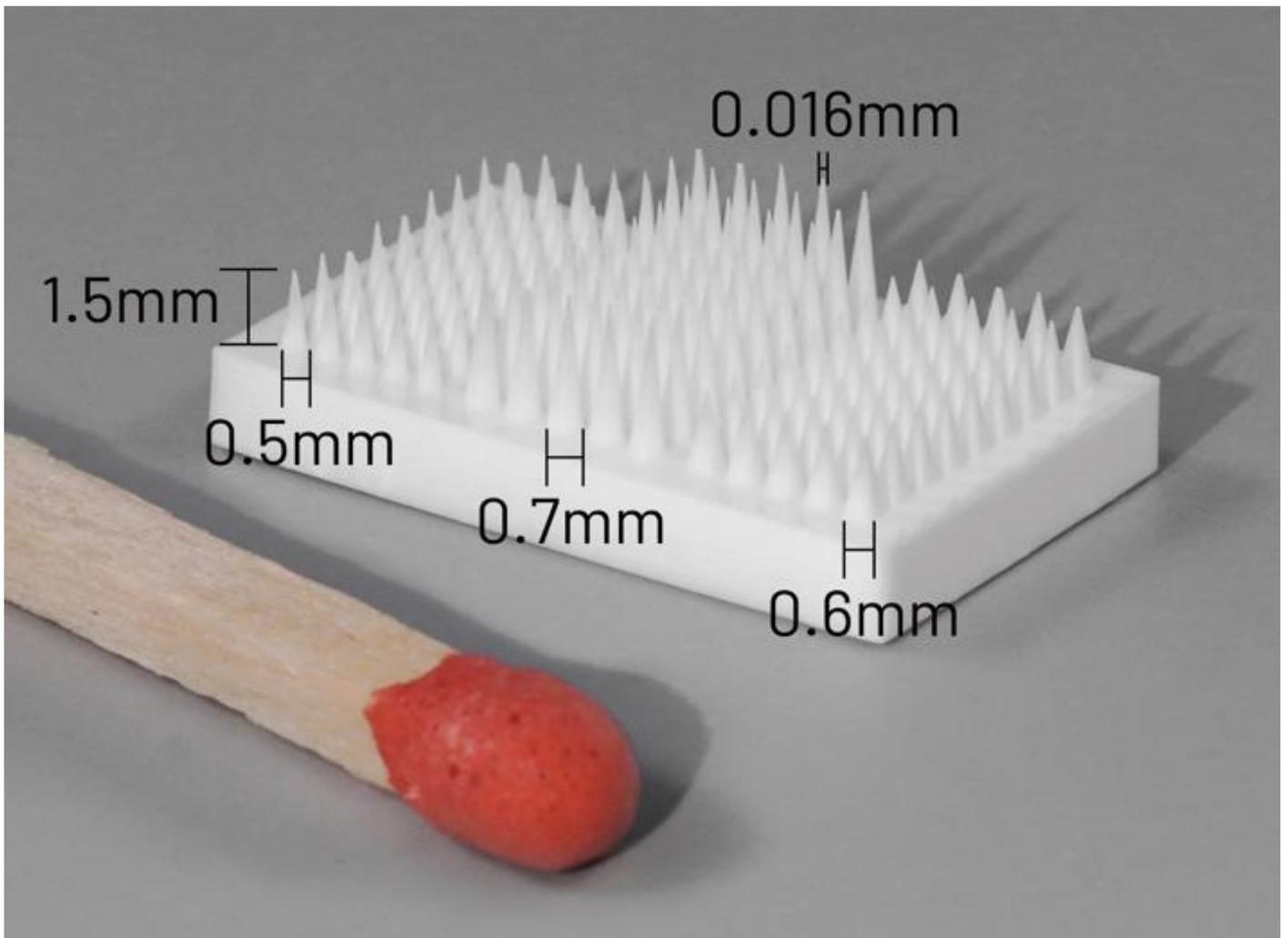


Fig 3: Ceramic Microneedle Array

Donald Chen is a Senior Sales Manager on the Boston Micro Fabrication (BMF)-APAC team with over 4 years of experience in microfabrication. Having worked with innovative biomedical companies and research groups for many years, he has a unique insight into microfluidic and microneedle manufacturing.