

Three-dimensional hybrid superlattice structures

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Recent enthusiasm in photonics, chemical sensors, catalytic support, data storage, nano- and microfluidic networks, and tissue engineering has driven the development of three-dimensional hybrid superlattice structures. Among various fabrication methods based on self-assembly and lithography, we introduce three-dimensional lithography using optical interferences. This review discusses the pore connectivity of three-dimensional structures analyzed by level-set approach. Finally, practical applications of these structures in microfluidic and optofluidic devices are also reviewed.