

Dielectric optical metasurfaces and their fabrication

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Abstract:

The trend in miniaturization of everyday objects is reflected in optics too. Nanostructured optical metasurfaces have brought new perspectives into the well-known behavior of light and enable us to mimic functionalities of traditional bulky optical components within significantly smaller footprints. To ensure high effectivity of optical metasurfaces, high-aspect-ratio dielectric nanostructures (e. g. from TiO_2 , HfO_2 , VO_2 , ...) are used as metasurface building blocks. The challenges tied to fabrication of such nanostructures will be discussed, along with a brief introduction to the field of optical metasurfaces itself.

