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Repurposing a Consumer Product as Low-cost, Quasi-random Nanoimprinting

Templates for Photon Management

Quasi-random nanostructures have attracted significant interests for photon management purposes. To optimize such patterns, typically very expensive fabrication processes are needed to create the pre-designed, sub-wavelength nanostructures. While quasi-random photonic nanostructures are abundant in nature (e.g., in structural coloration), interestingly, they also exist in some engineering products made without the purpose of photon management. One such example showing repurposing of an already mass-produced consumer product as nanoimprinting template for light trapping applications in solar cells will be discussed.