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Sommario/riassunto

Metasurfaces, the two-dimensional analog of metamaterials, have attracted progressively increasing attention in recent years due to their planar configurations and, thus, ease of fabrication, while enabling an unprecedented control over optical fields. The phase, amplitude, polarization, helicity, and even angular momentum of the reflected or transmitted optical fields can be controlled at will by tailoring optically thin planar arrays of resonant subwavelength elements arranged in a periodic or aperiodic manner. As a result, numerous applications and fascinating devices have been realized by designed planar metasurfaces, including beam deflectors, wave plates, flat lenses, holograms, surface wave couplers, and freeform metasurfaces. This Special Issue is launched to provide a possibility for researchers in the area of metasurfaces to highlight the most recent exciting developments and discuss different metasurface configurations in depth, so as to further promote practical applications of metasurfaces. There are 12 papers selected for this Special Issue, representing fascinating progress and potential applications in the area of metasurfaces, which is highly recommended and believed to benefit readers in various aspects.