Electronic Supplementary Material (ESI) for Nanoscale.

Supplementary Information

All-Dielectric Metasurface for Simultaneously Realizing Polarization Rotation and Wavefront Shaping for Visible Light

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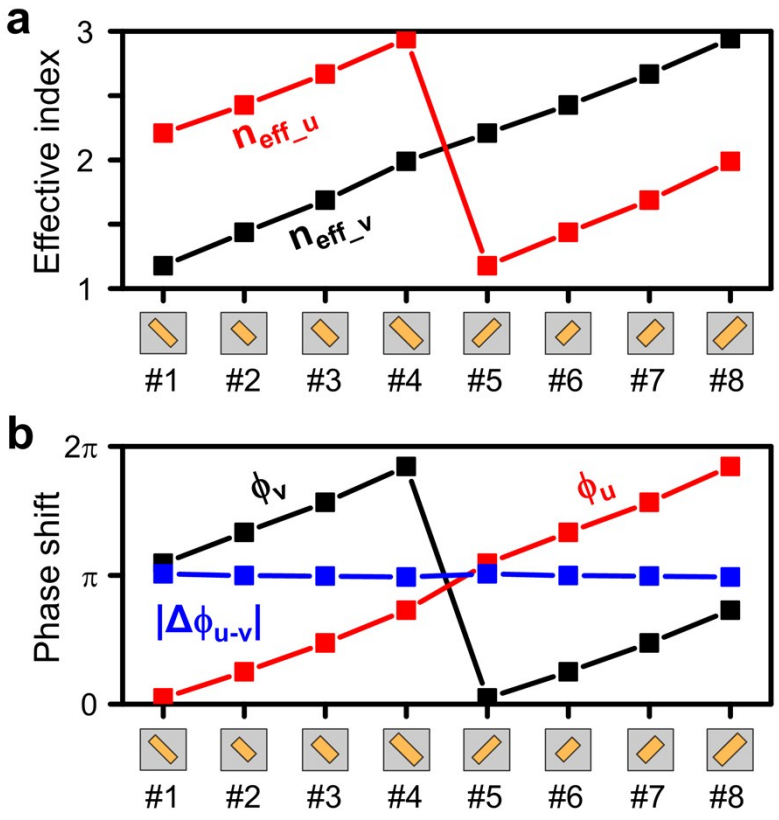

Fig. S1. (a) Simulated effective indices of the fundamental modes with respect to the (slow) u- and (fast) v-axis. (b) Calculated phase shifts based on the simulated effective indices. The phase shifts are folded into 0-2π. For each nanopost, blue line implies the absolute phase difference $|\Delta\phi_{u\text{-}v}|$ between the u- and v-axes.

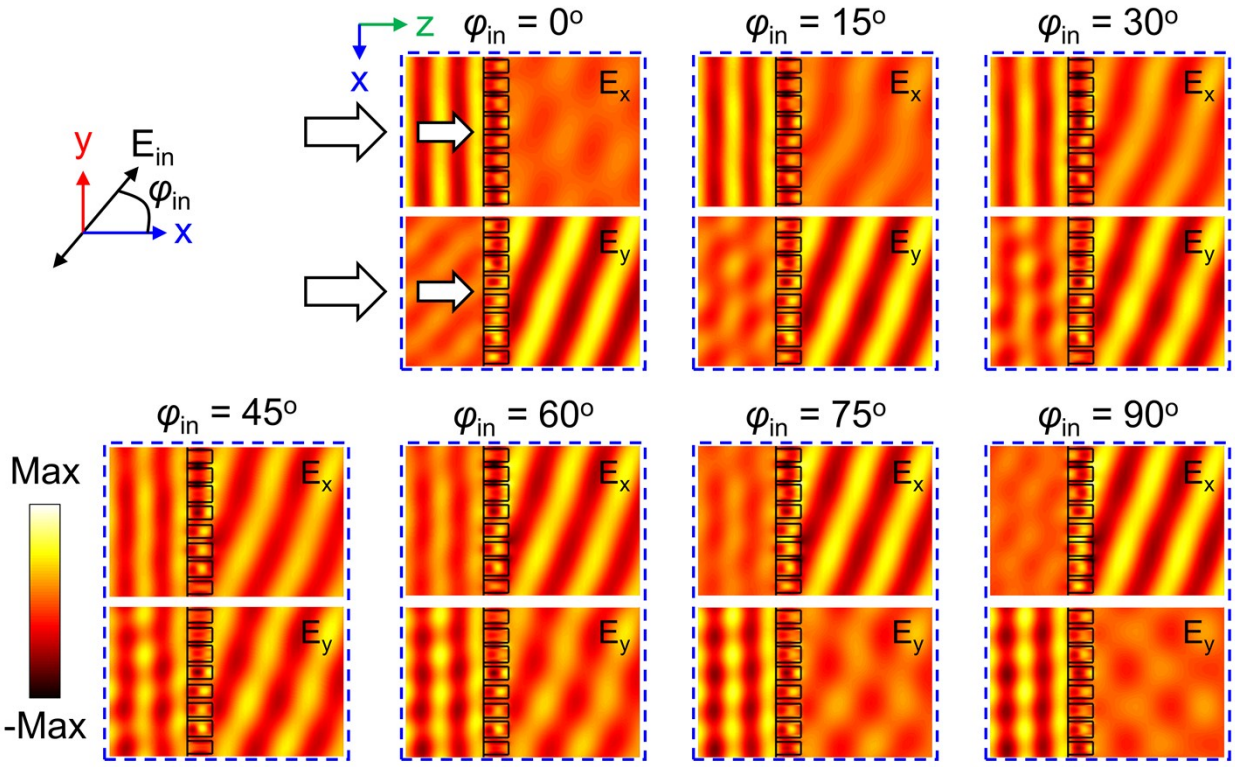

Fig. S2 Transmitted light wavefronts relating to the E_x and E_y components for different incident light polarization angle φ_{in}.

For normally incident light with a polarization angle φ_{in} defined as the angle between the electric field and the x-axis, the wavefronts relating to the E_x and E_y component are simulated and shown in Fig. S2, where the polarization angle increases from 0° (x-polarized) to 90° (y-polarized), in steps of 15°. The transmitted x- and y-polarized light wavefronts gradually emerge and vanish, respectively, both exhibiting the same oblique propagation angle.