

**Refractive Index Sensing in the Mid-Infrared Regime with Ice-Lithography Enabled
2.5-Dimensional Metasurfaces**

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Figure S1 to S4.

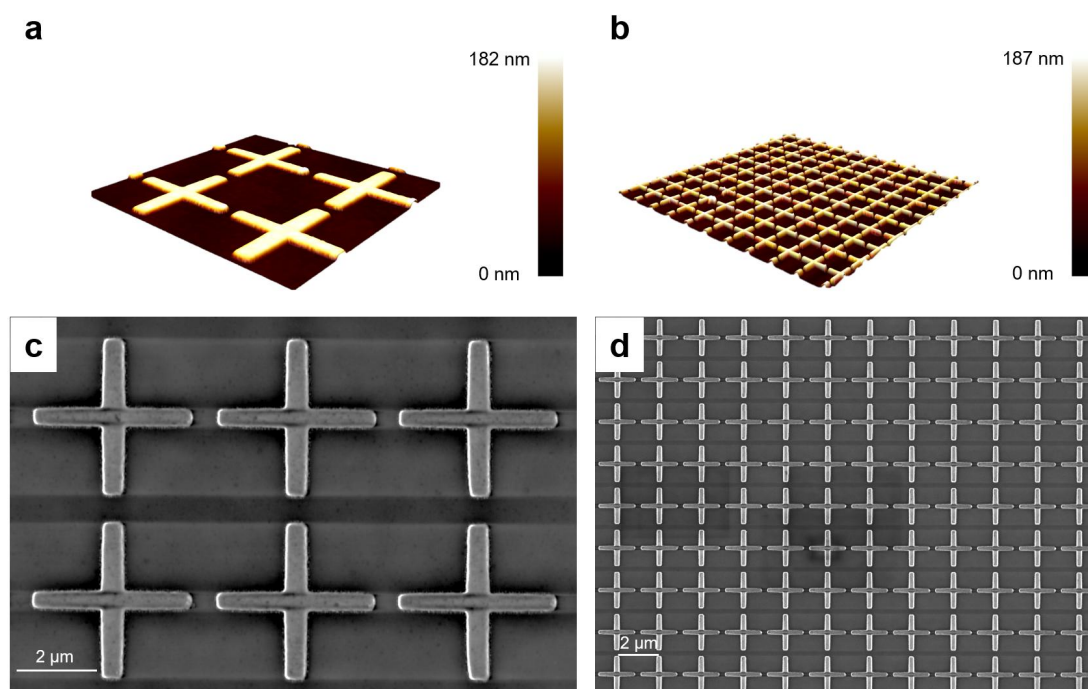


Figure S1. (a,b) Local and global atomic force microscopy (AFM) 3D images of the planar

sample ($h_2 = 0$ nm). (c,d) Local and global scanning electron microscopy images of the planar sample ($h_2 = 0$ nm).

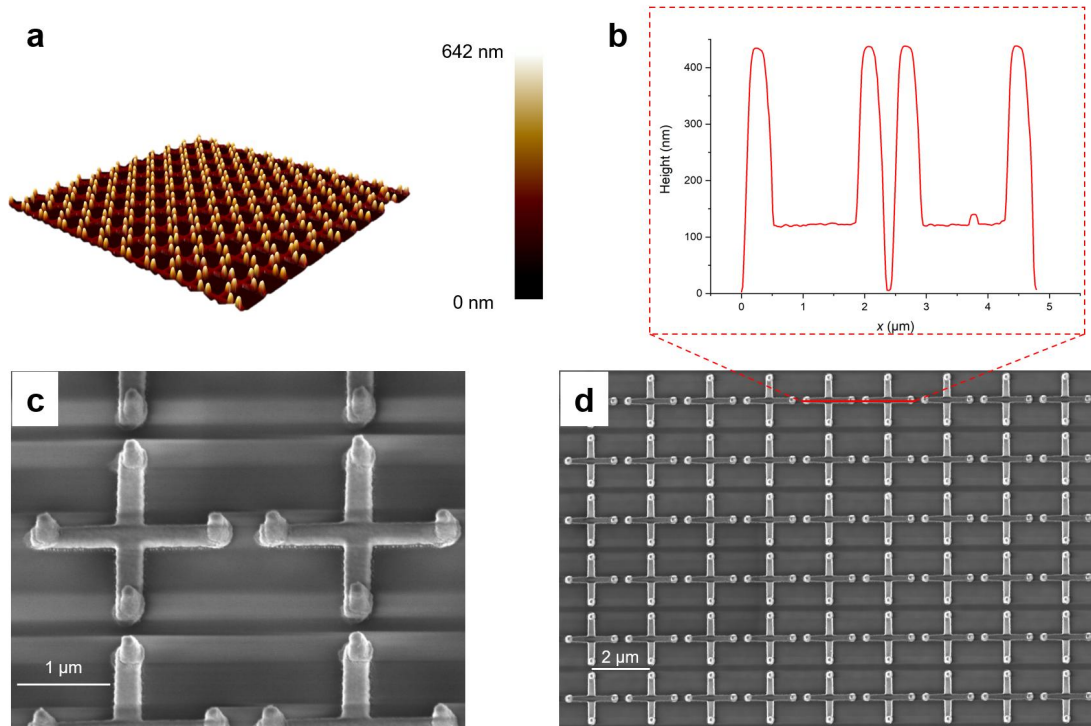


Figure S2 (a) Global AFM 3D images of the 2.5D sample ($h_2 = 300$ nm). (b) Profile of the 2.5D structure by AFM. (c) Tilted SEM view (30°) of the 2.5D structure. (d) Global SEM images of the 2.5D sample.

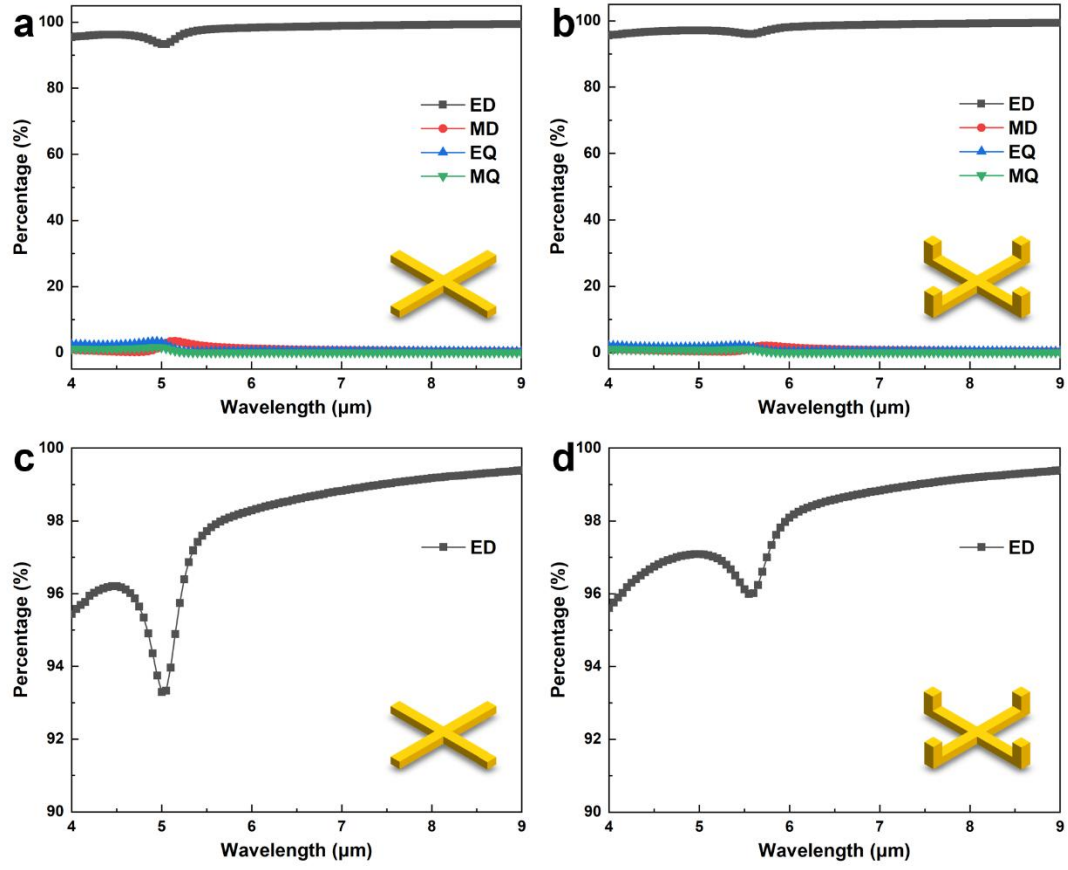


Figure S3. Dispersion of radiation power for various multipole moments induced in the (a,c) planar ($h_2 = 0$ nm) and (b,d) 2.5D ($h_2 = 300$ nm) plasmonic metasurfaces respectively.

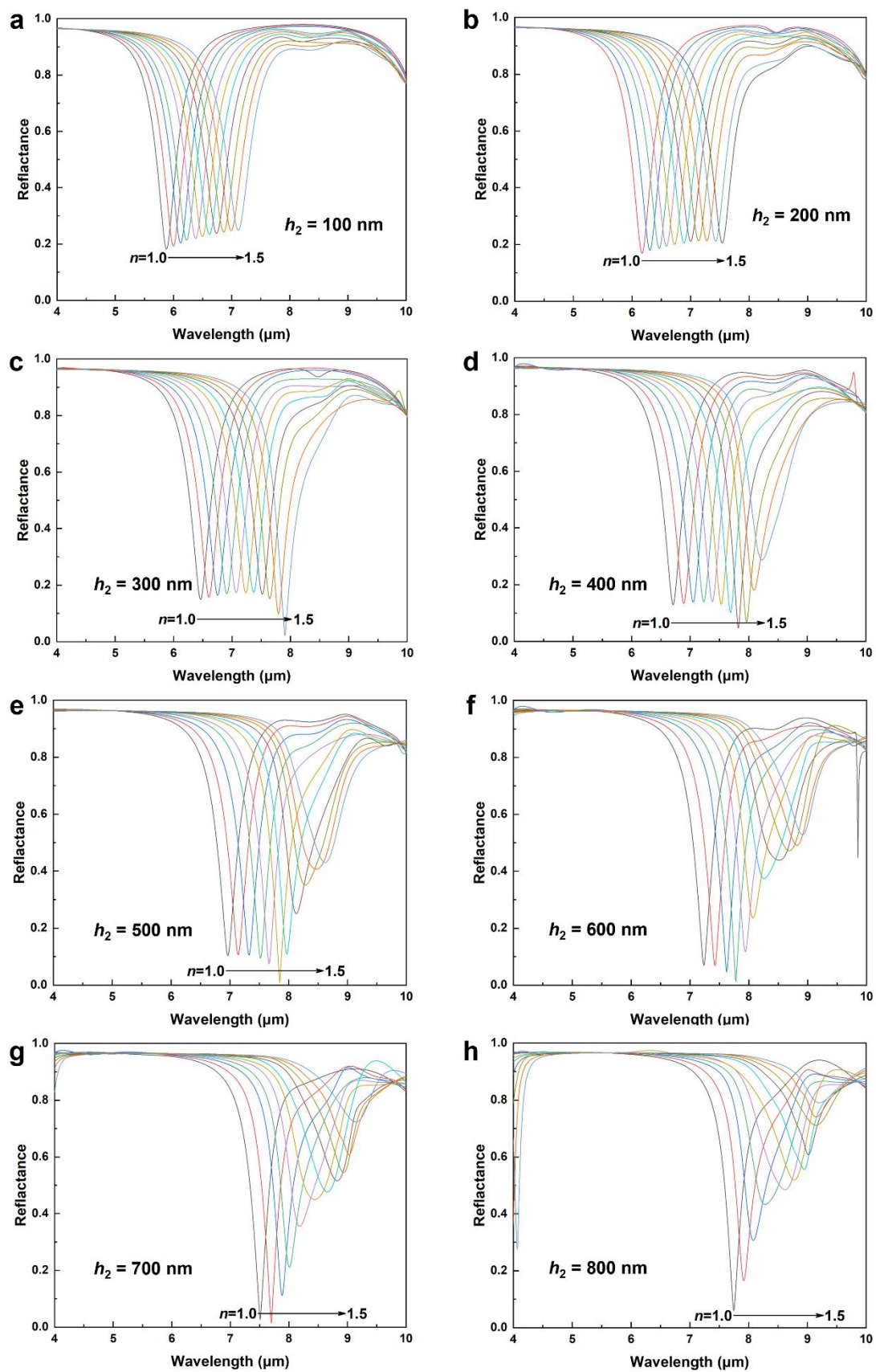


Figure S4. Simulated reflectance for 2.5D metasurfaces with h_2 values from 100 nm to 800 nm.

