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**Supporting Information** 

## Invisible Photonic Prints Shown by UV Illumination: Combining the Photoluminescent and Noniridescent Structural Colors

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Figure S1 PL intensity of the  $Y_2O_3$ : Eu particles with different size, (a) 166 nm, (b) 205 nm, and (c) 244 nm.



Figure S2. SEM images of Y<sub>2</sub>O<sub>3</sub>: Eu particles calcined at (a) 400 °C, (b) 600 °C, (c) 800 °C, (d) 1000 °C, and the corresponding XRD pattern (e) and photoluminescence spectra (f).



Figure S3. Reflectance of the APCs films assembled from  $Y_2O_3$ : Eu particles of different sizes, (a) 166 nm, (b) 205 nm, (c) 244 nm.



Figure S4. (a) Digital photos, (b) reflection spectra, and (c) SEM image of the APC film assembled from the  $Y_2O_3$  particles of 150 nm. The diameter of the cycle in (a) is 1 cm.