

Construction of Size-Controllable Hierarchical Nanoporous TiO₂ Ring Arrays and Their Modifications

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Electronic Supplementary Information

The polystyrene sphere (PS) colloidal monolayer, shown in Fig. S1, was synthesized by spin-coating on glass.

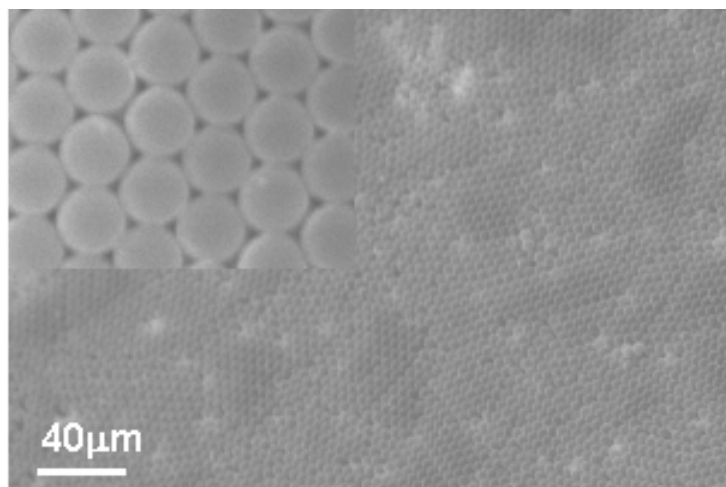


Fig. S1. SEM image of 4.5 μm PS colloidal monolayer. The inset is an enlarged image

The annealed colloidal monolayer was used as a template to fabricate TiO₂ ring arrays. The ring size was controlled by the annealing time and the precursor concentration in large area. Fig. S3 is a large area (90 μm X 60 μm) SEM image of the rings.

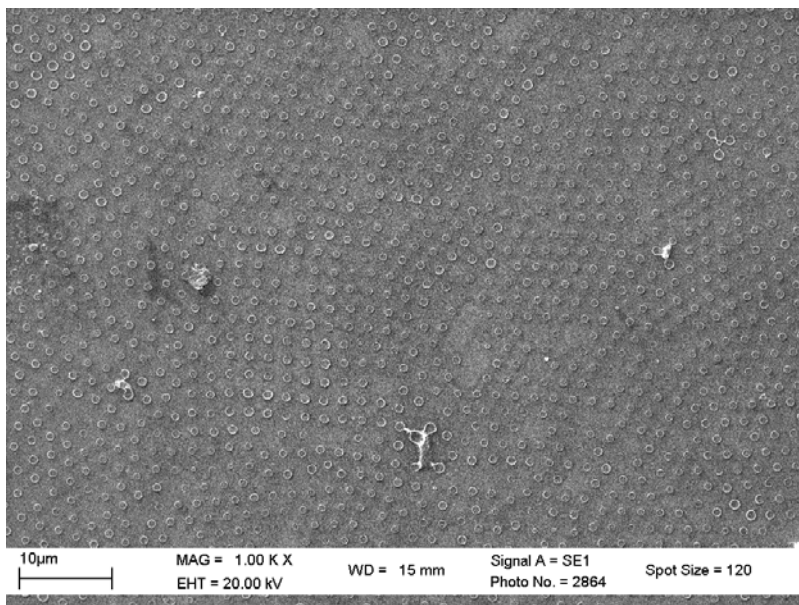


Fig. S2 Large area ring array fabricated under the same conditions as that of Fig. 5B.

After a two-step heat treatment at 120°C and 400°C, the rings were composed of mostly anatase TiO_2 with trace amounts of rutile and brookite.

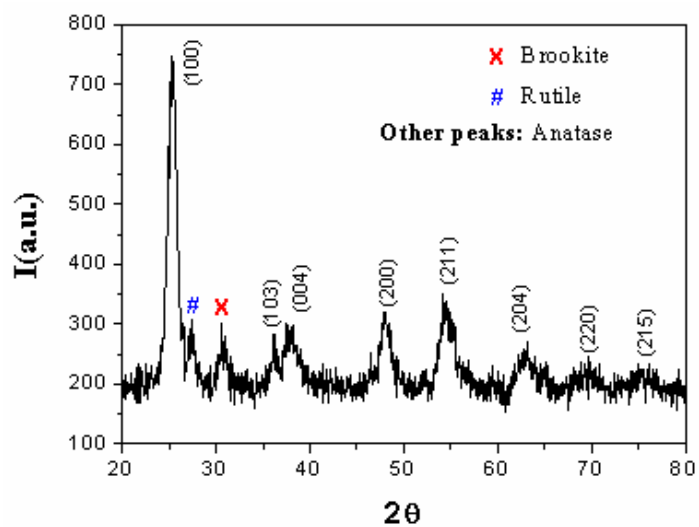


Fig. S3. XRD pattern.