Supporting Information

Hydrothermal synthesis and formation mechanism of photocatalytically active $SrTiO_3$ nanocrystals using anatase TiO_2 with different facets as a precursor

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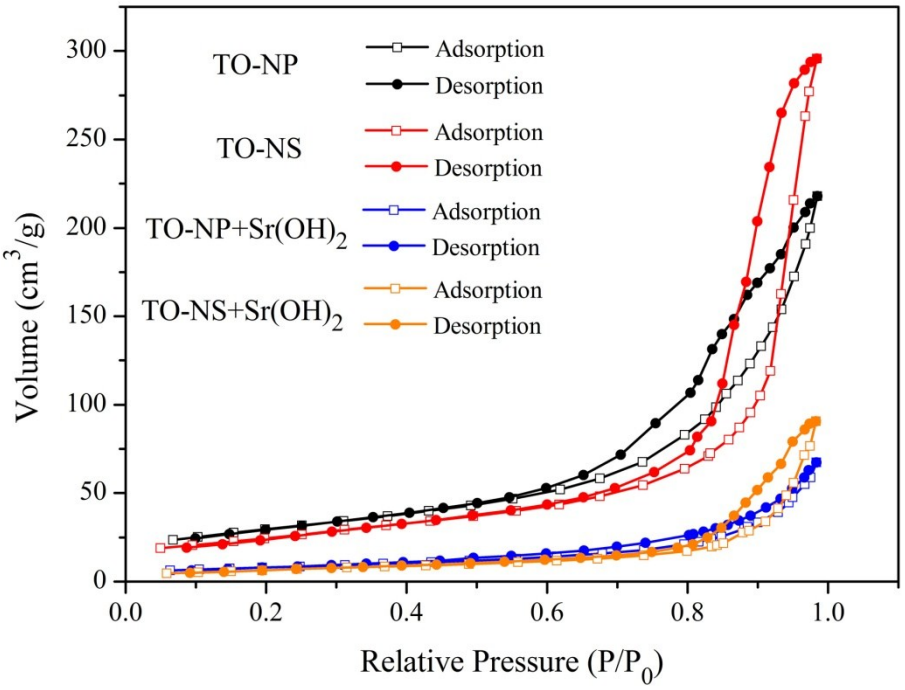

Figure S1. Nitrogen adsorption-desorption curves of TiO_2 precursors and the corresponding $SrTiO_3$ products

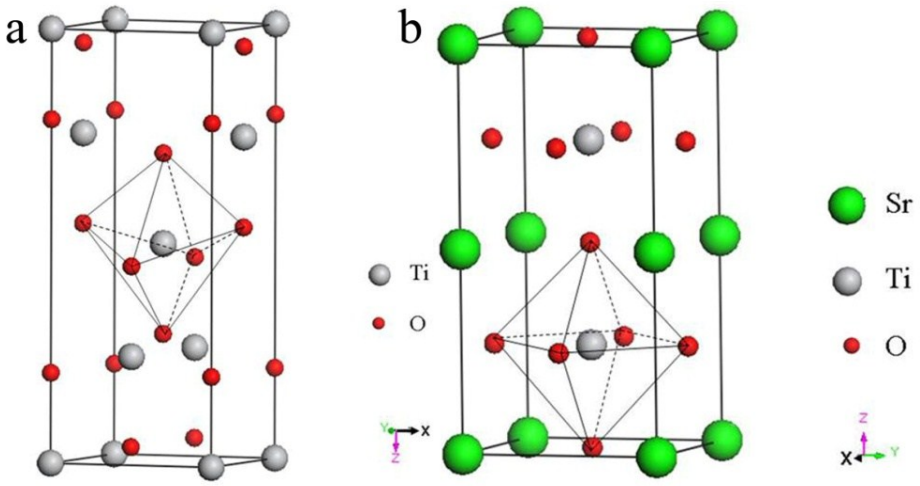

Figure S2. Schematic crystal structures of (a) anatase TiO_2 and (b) $SrTiO_3$

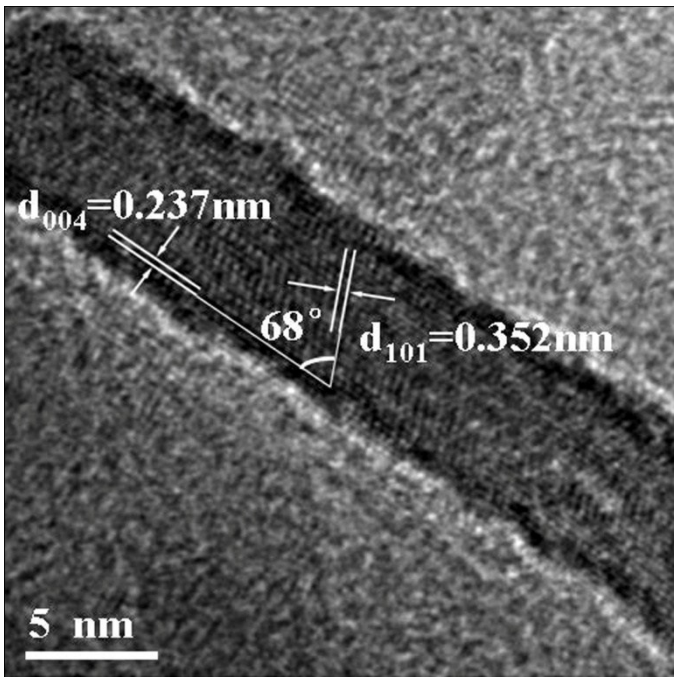

Figure S3. Cross section HRTEM image of the TO-NS precursor.

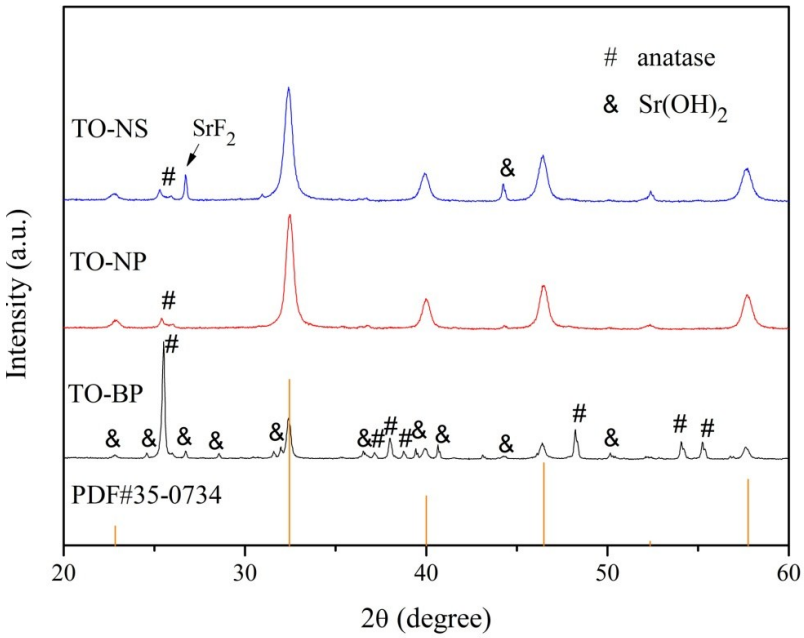

Figure S4. The XRD patterns of the products after 10 min of quenching experiments at 140 ^{o}C prepared from different anatase TiO_2 precursors

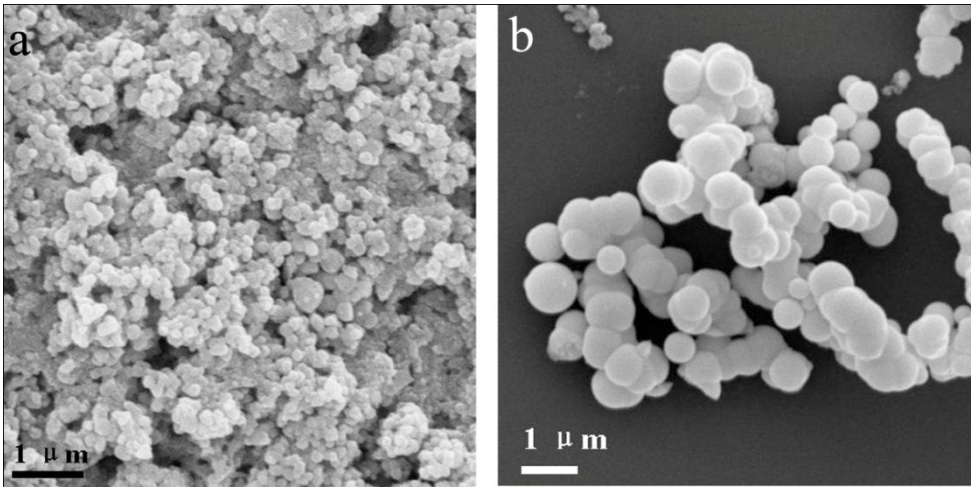

Figure S5. (a) SEM image of TiO_2 particles with bigger size; (b) SEM image of the corresponding products.

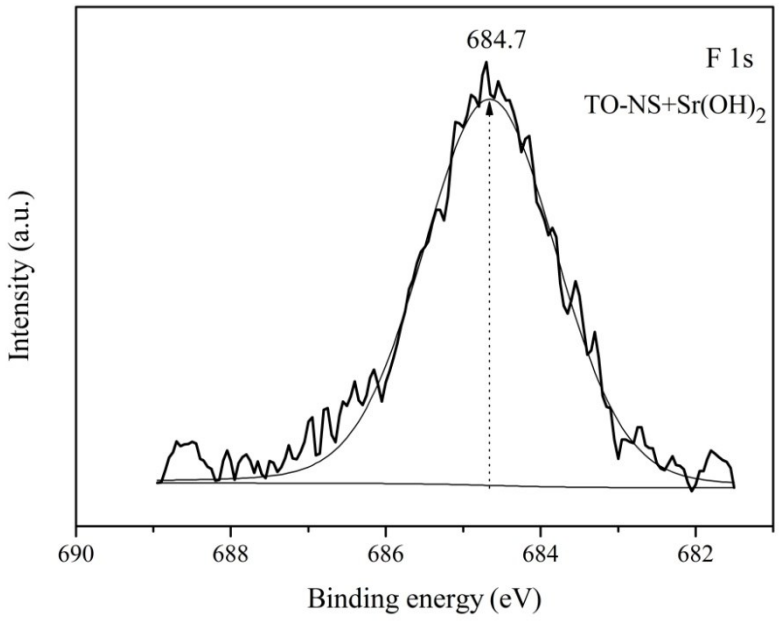

Figure S6. F 1s XPS spectra of $SrTiO_3$ prepared from TO-NS