

SUPPORTING INFORMATION

Table S1 Photovoltaic performance of the DSSC devices* made from various *meso*-TiO₂ powders at AM1.5 and irradiance of 100 mW/cm²

| Surfactant | SC/TIPR (molar ratio) | Sample name | Amount of adsorbed dye ×10 ⁻⁷ (mol.cm ⁻²) | J _{sc} (mA.cm ⁻²) | V _{oc} (mV) | FF (%) | η (%) |
|------------|-----------------------------|----------------|---|---|-------------------------|-----------|----------|
| OTAB | 1/1 | O1 | 5.7 | 11.95±0.1 | 680±2 | 64.73±0.8 | 5.26±0.1 |
| | 1/3 | O3 | 6.3 | 12.35±0.2 | 688±3 | 68.89±0.2 | 5.85±0.1 |
| | 1/7 | O7 | 7.3 | 13.33±0.2 | 721±3 | 69.0±0.5 | 6.63±0.1 |
| | 1/9 | O9 | 7.5 | 13.29±0.2 | 724±2 | 69.1±0.6 | 6.65±0.1 |
| DOTAB | 1/1 | D1 | 6.1 | 12.22±0.3 | 690±2 | 65.01±0.6 | 5.58±0.1 |
| | 1/3 | D3 | 6.7 | 12.80±0.2 | 694±2 | 68.85±0.3 | 6.12±0.2 |
| | 1/7 | D7 | 7.8 | 13.64±0.1 | 729±1 | 71.14±0.4 | 7.07±0.1 |
| | 1/9 | D9 | 7.9 | 13.72±0.1 | 730±1 | 71.10±0.5 | 7.12±0.1 |

*The listed data are the average value of two independent measurements under same condition.

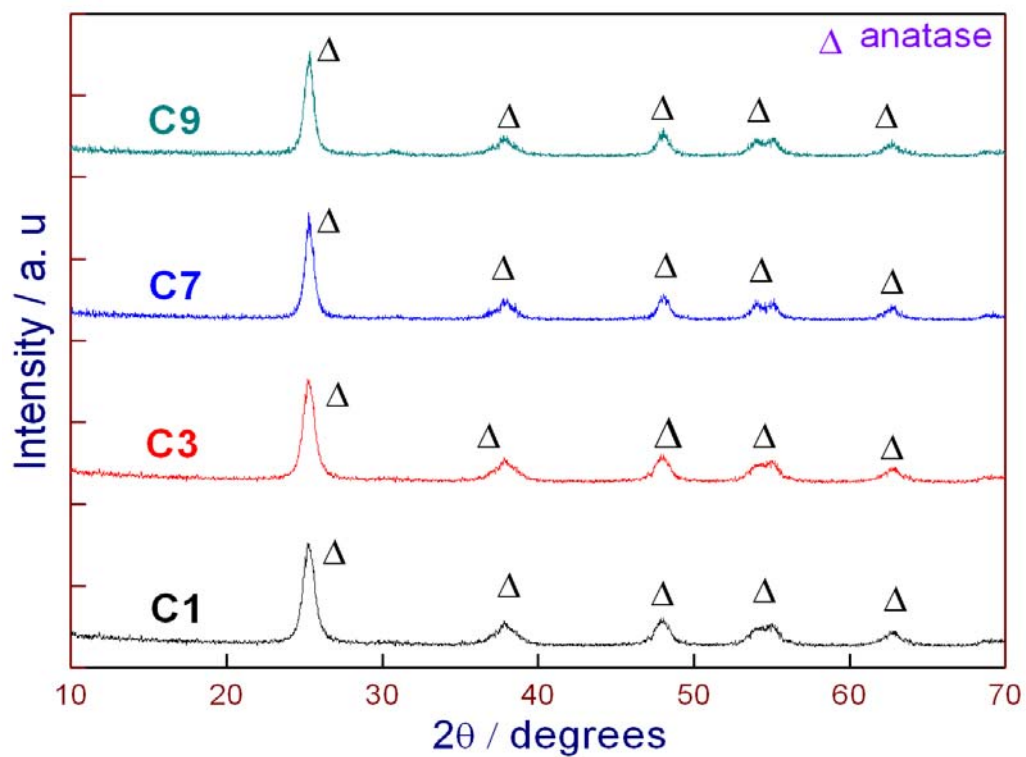


Fig. S1 PXR D spectrum of various *meso*-TiO₂ samples synthesized using CTAB

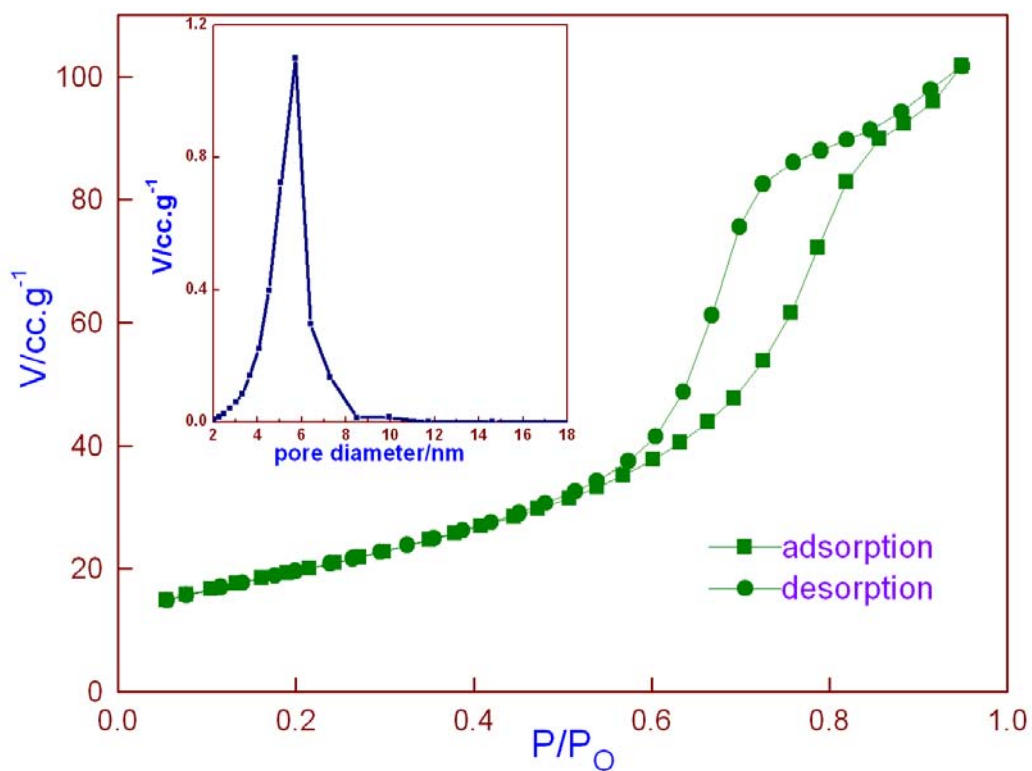


Fig. S2 N_2 adsorption and desorption isotherms of samples O5 with corresponding BJH pore size distribution as an inset

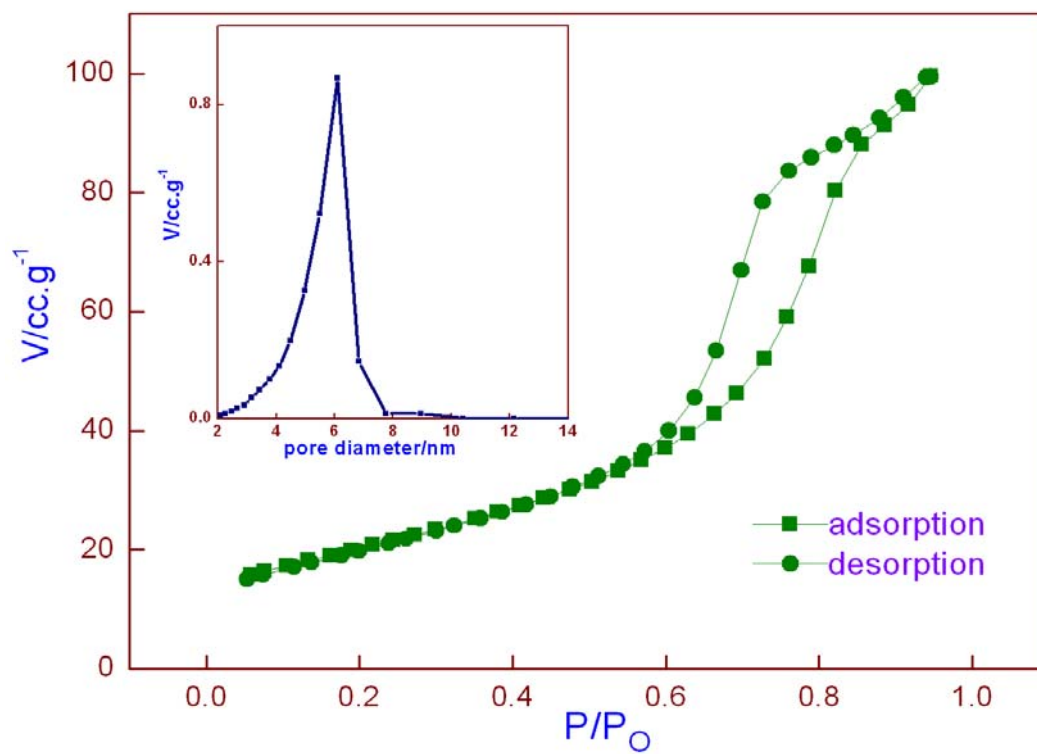


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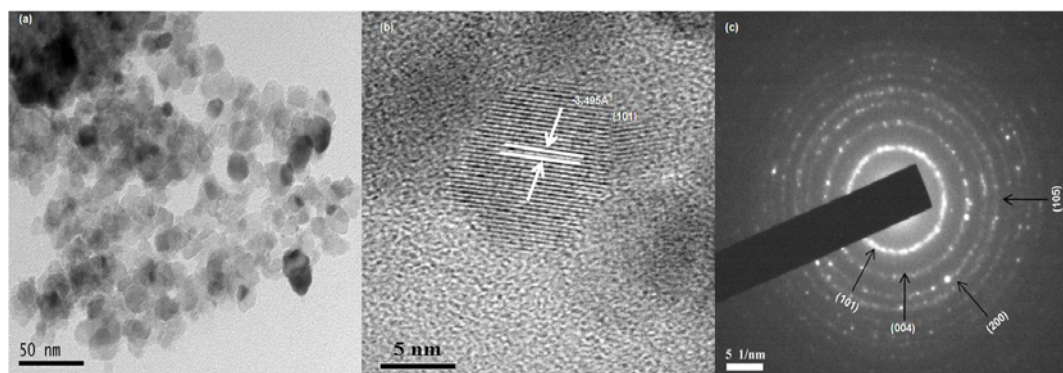


Fig. S4 (a) TEM, (b) HRTEM and (c) SAED images of *meso*-TiO₂ (O5)

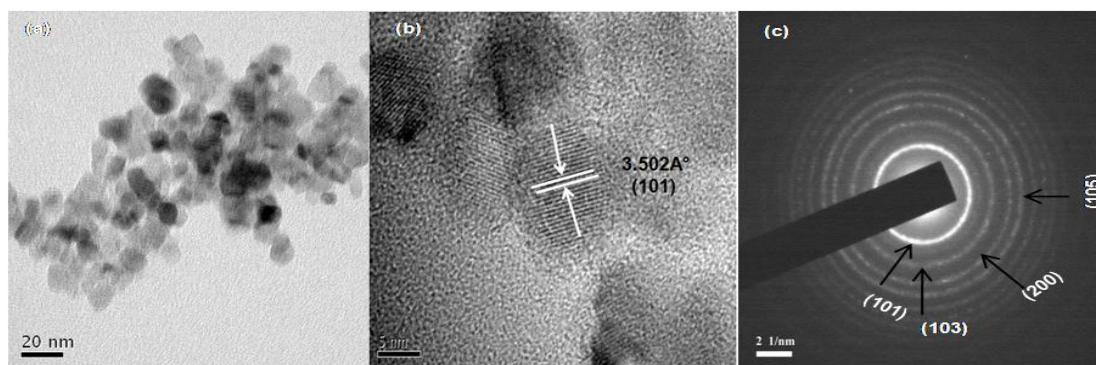


Fig. S5 (a) TEM, (b) HRTEM and (c) SAED images of *meso*-TiO₂ (D5)