

## Supporting Information

# Fully-printable Hole-conductor-free Mesoscopic Perovskite Solar Cells Based on Mesoporous Anatase Single Crystals

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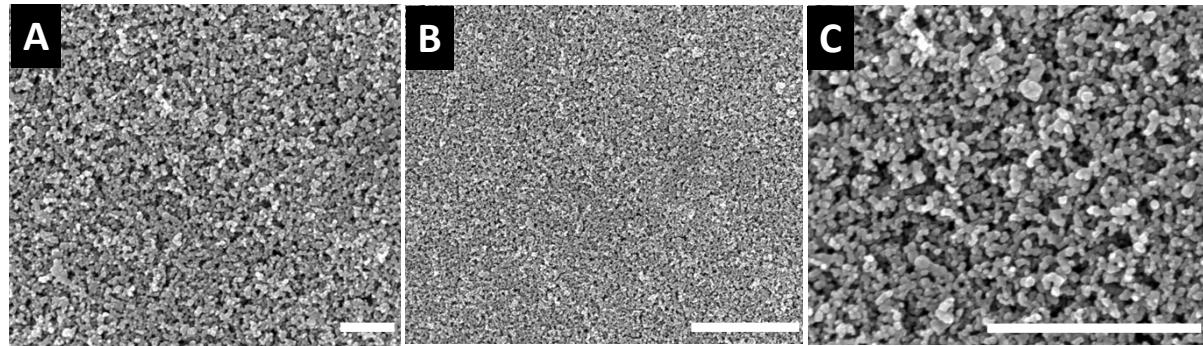
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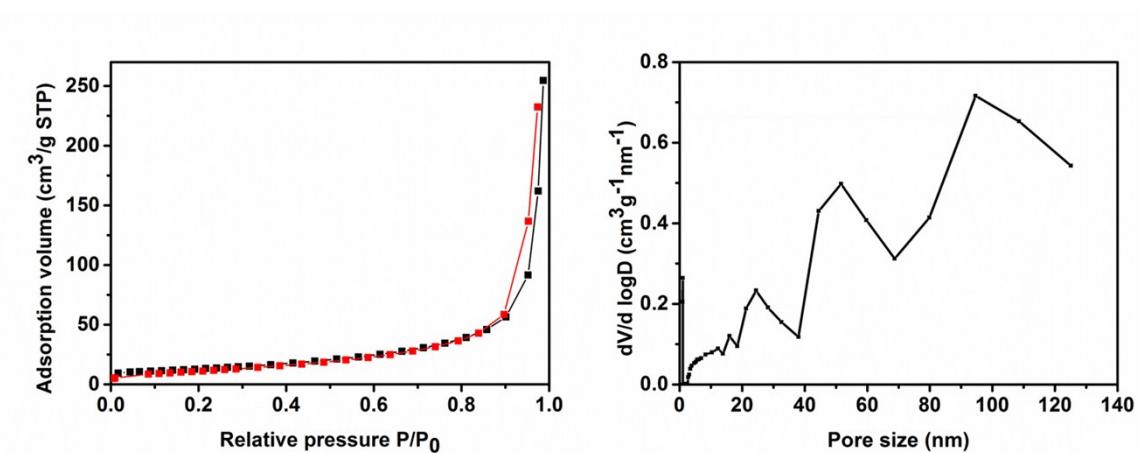
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**Table S1.** Summary of photovoltaic parameters of MPSCs based on M-TiO<sub>2</sub> and P25 films

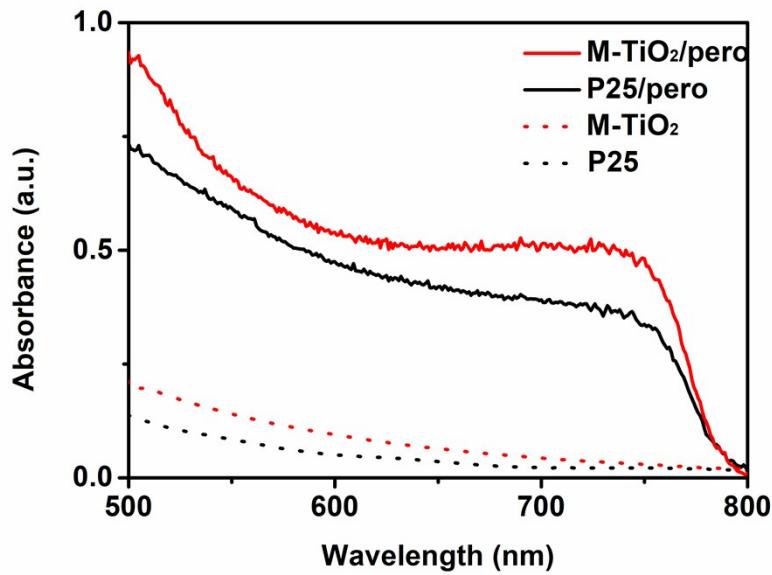
<b>Device</b>	$V_{oc}$ / V	$J_{sc}$ / mA/cm <sup>2</sup>	<b>FF</b>	$\eta$ / %
<b>M-TiO<sub>2</sub></b>	0.859±0.011	22.67±0.52	0.66±0.01	12.96±0.26
<b>P25</b>	0.854±0.009	19.07±1.07	0.62±0.01	10.06±0.48



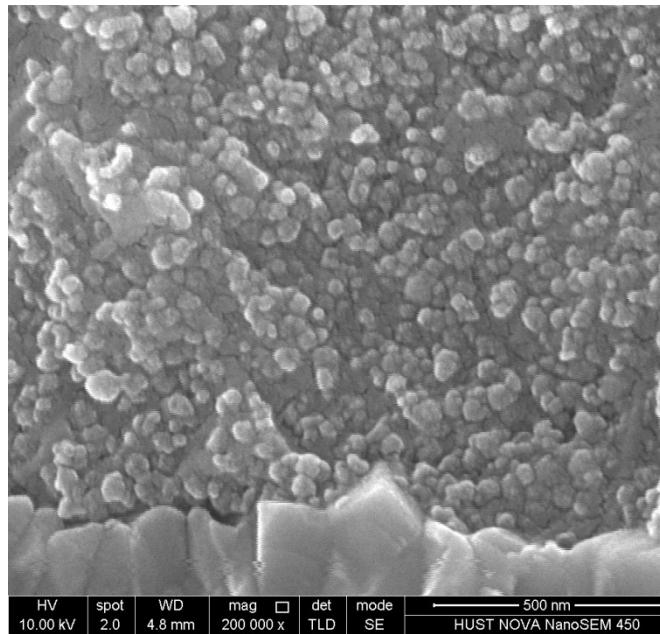
**Figure S1** SEM images of the P25 nanoparticles. (scale bar 1μm)



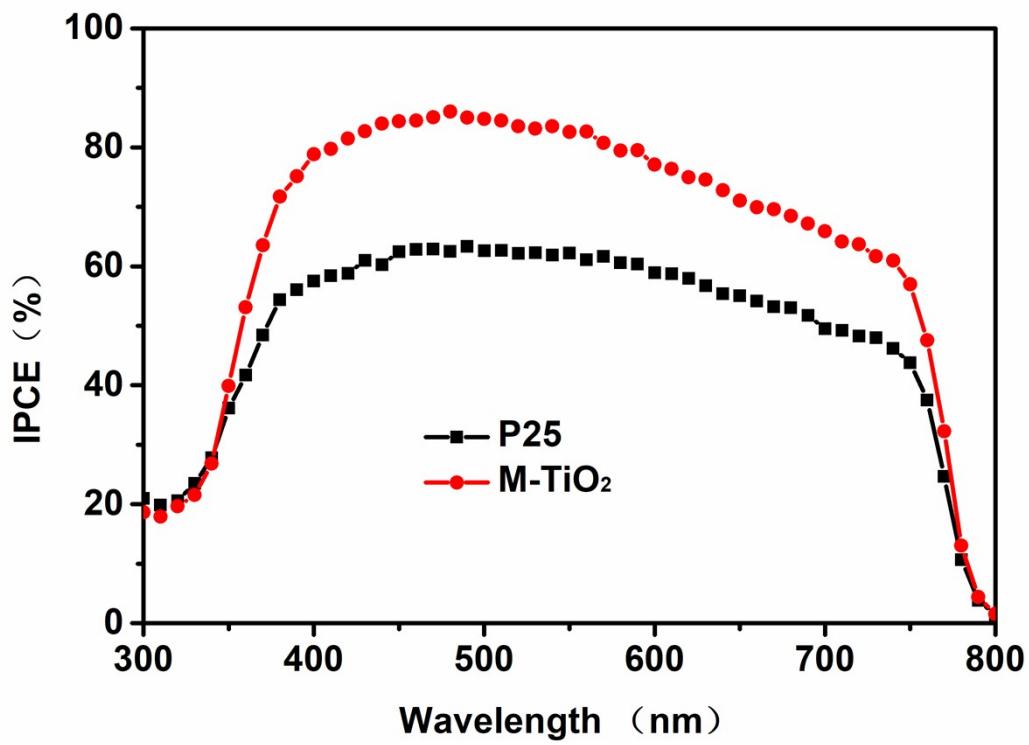
**Figure S2** Nitrogen adsorption-desorption isotherms and pore size distributions (inset) of the P25 nanoparticles



**Figure S3** Absorption spectrum of P25 and M-TiO<sub>2</sub> film and perovskite-coated P25 and M-TiO<sub>2</sub> film on FTO glass.



**Figure S4** Enlarged cross-sectional FESEM image of M-TiO<sub>2</sub>/perovskite layer



**Figure S5** IPCE spectra of the fully printable MPSC based on M-TiO<sub>2</sub> and P25 ETM