

## Supporting Information

### Heterostructured nanocomposite tin phthalocyanine@mesoporous ceria

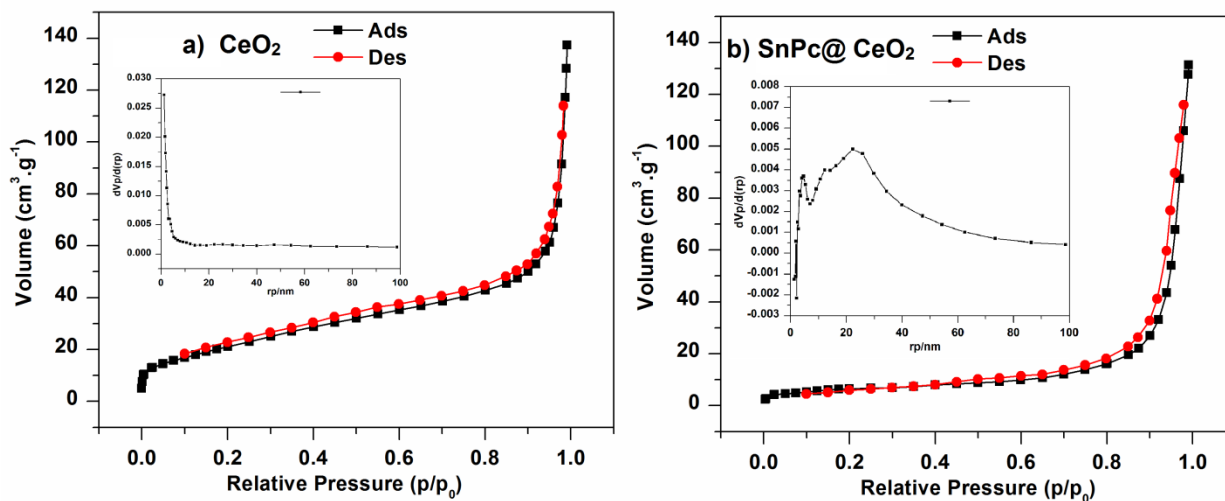
### (SnPc@CeO<sub>2</sub>) for photoreduction of CO<sub>2</sub> in visible light

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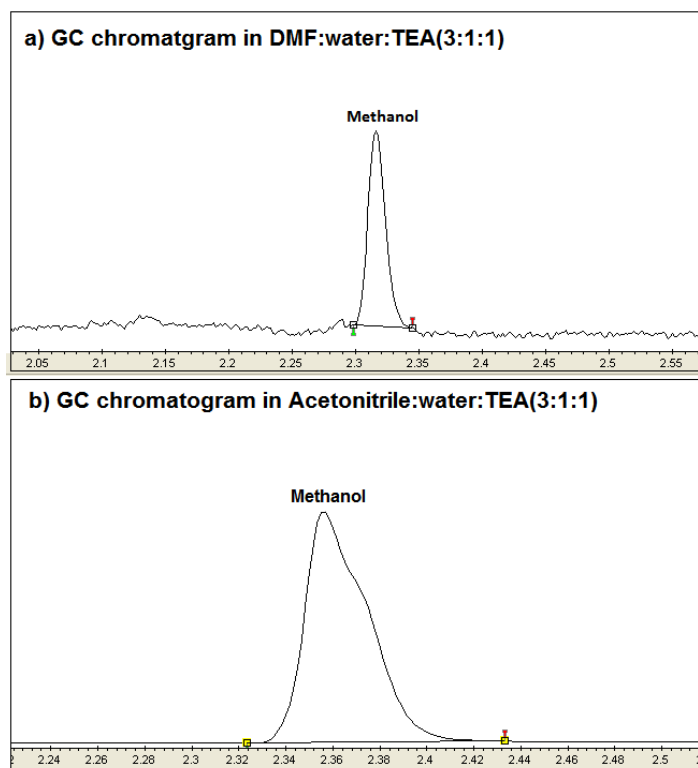
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**Fig. S1** N<sub>2</sub> adsorption-desorption isotherm and pore size distribution of (a) meso-CeO<sub>2</sub> and (b)

SnPc@CeO<sub>2</sub>



**Fig. S2** GC-FID signal of reaction product by using SnPc@CeO<sub>2</sub> after 24 hour of visible light irradiation a) in DMF b) in acetonitrile

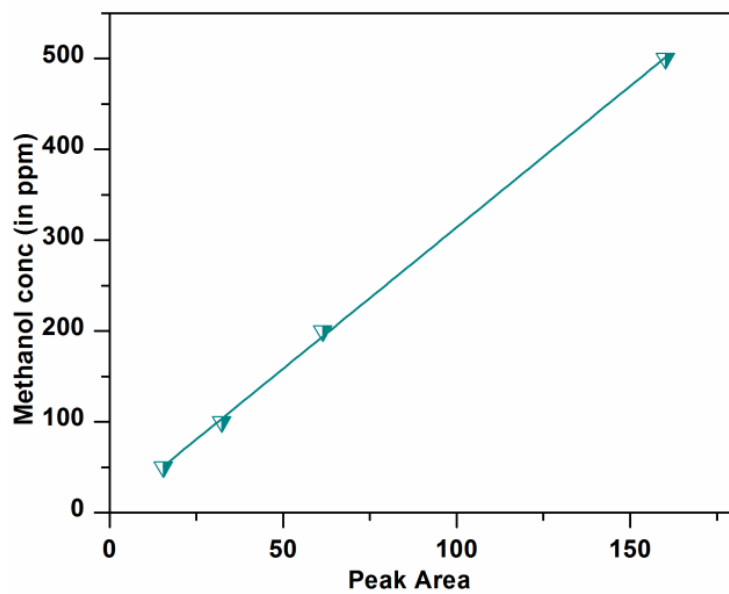


Fig. S3 Calibration Curve for Quantification of methanol.

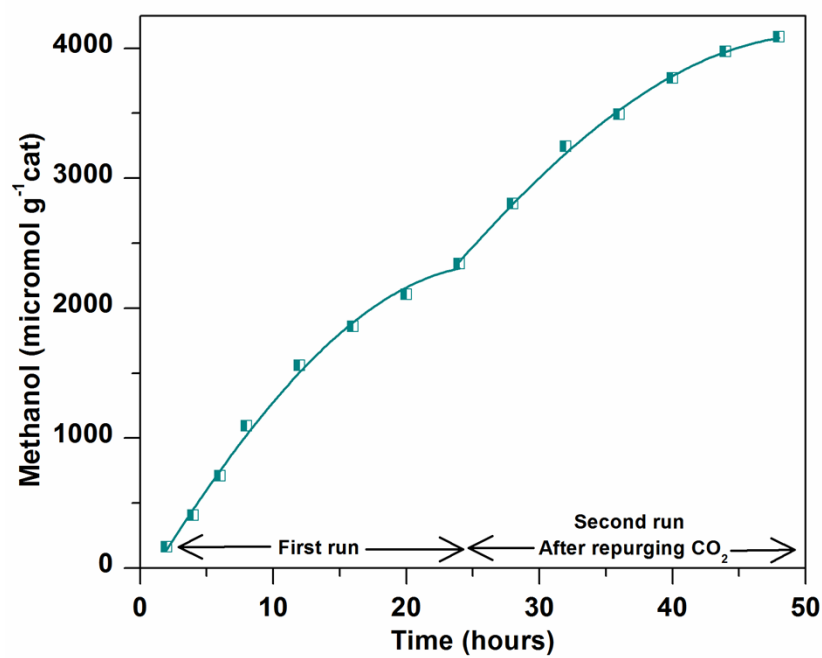
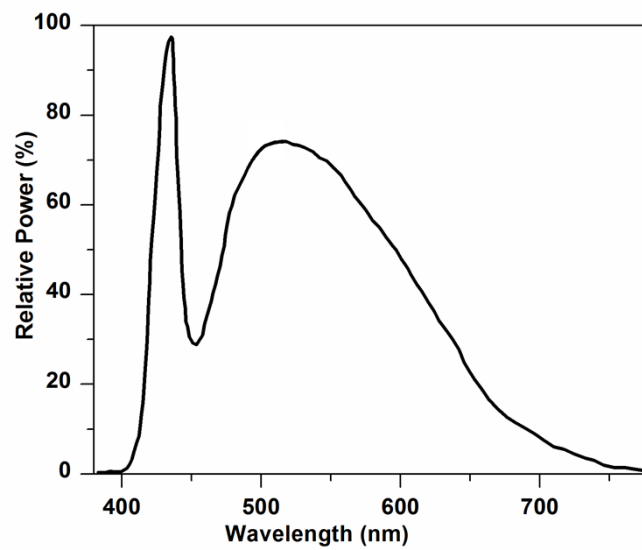


Fig. S4 Methanol yield after repurging CO<sub>2</sub>



**Fig. S5** Spectral power distribution of lamp