

Supporting Information

Hierarchical NiO/CMK-3 Photocathode for a *p*-Type Dye-Sensitized Solar Cell with Improved Photoelectrochemical Performance and Fast Hole Transfer

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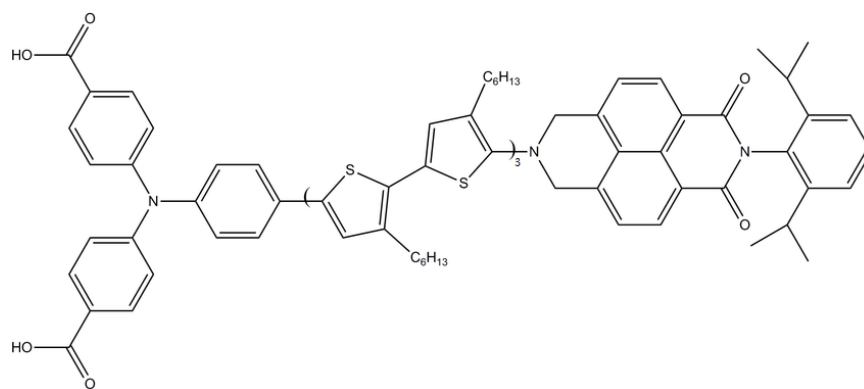


Figure S1. The structure of the PMI-6T-TPA sensitizer.

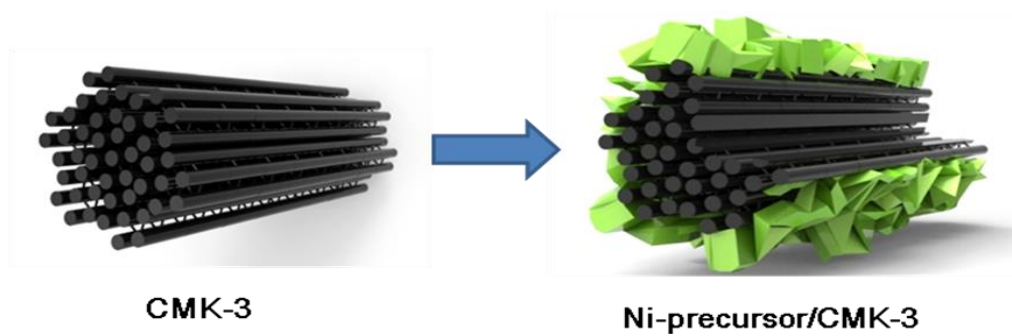


Figure S2. Schematic illustration of the synthetic process of the Ni-Precursor/CMK-3.

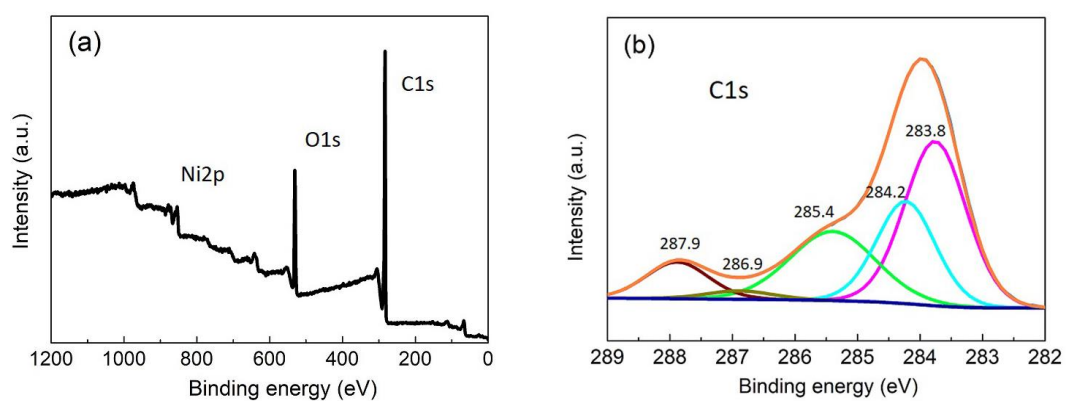


Figure S3. (a) XPS survey scan of NiO/CMK-3 composite; (b) C1s XPS spectrum of NiO/CMK-3 composite.

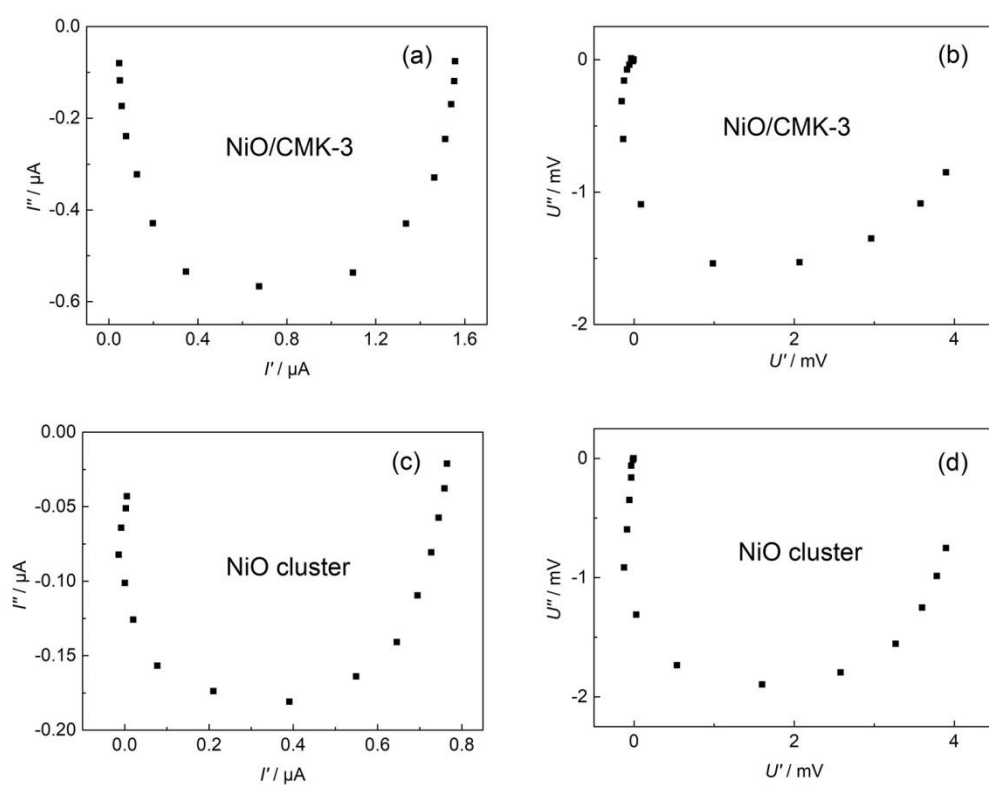


Figure S4. Short-circuit IMPS response (a), (c) and IMVS response (b), (d) for NiO/CMK-3 and NiO cluster, respectively.

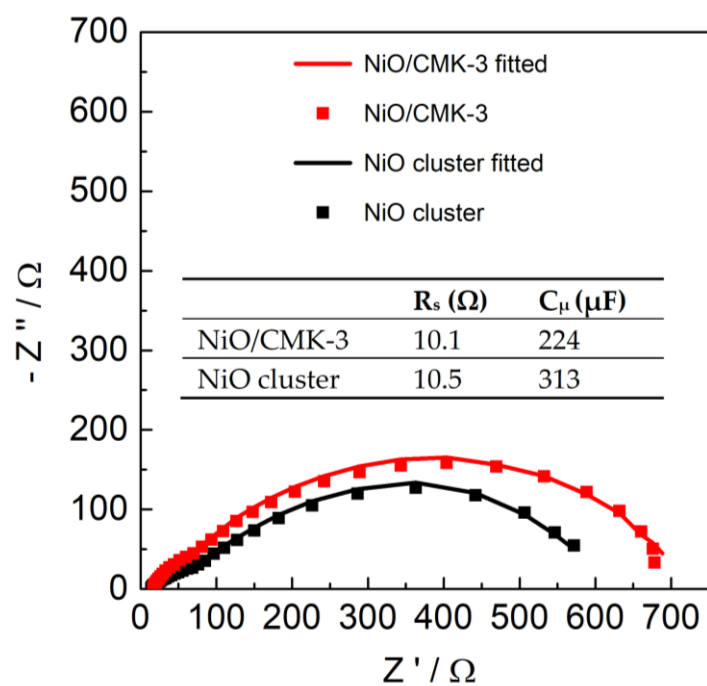


Figure S5. Fitted EIS plot of p-DSSCs made of two nanomaterials and the insert is calculated parameters.

Table S1. The fitting errors of corresponding EIS parameters.

Sample	$R_{pt} (\%)$	$R_t (\%)$	$R_{rec} (\%)$	$R_s (\%)$	$C_\mu (\%)$
NiO/CMK-3	0.17	3.94	5.02	0.21	4.79
NiO cluster	1.46	0.73	2.86	0.47	5.24