

Electronic Supplementary Information

Novel metal-organic gel based electrolyte for efficient quasi-solid-state dye-sensitized solar cells

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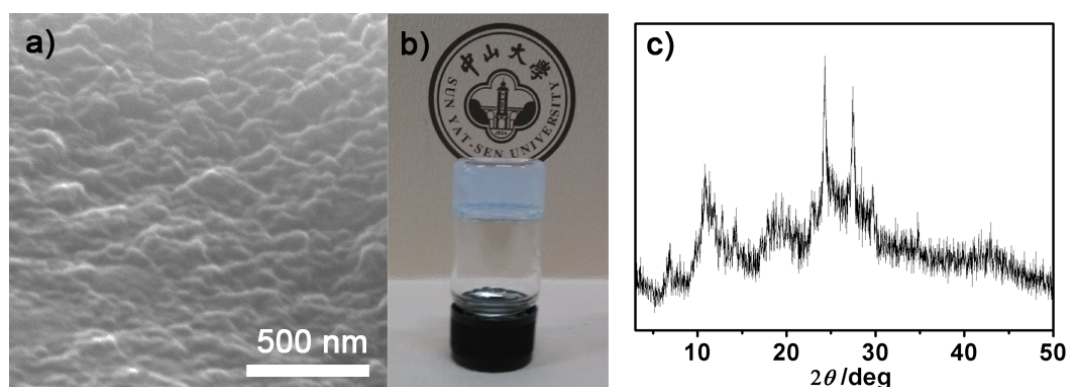


Fig. S1 (a) SEM image of MOG matrix dried by subcritical CO₂ extraction, with a Al³⁺ concentration of 0.2 M, Al³⁺:H₃BTC=1:1; (b) Digital photograph of as-prepared gel; (c) PXRD pattern of as-prepared aerogel, showing a possible crystal structure of MIL-100(Al).

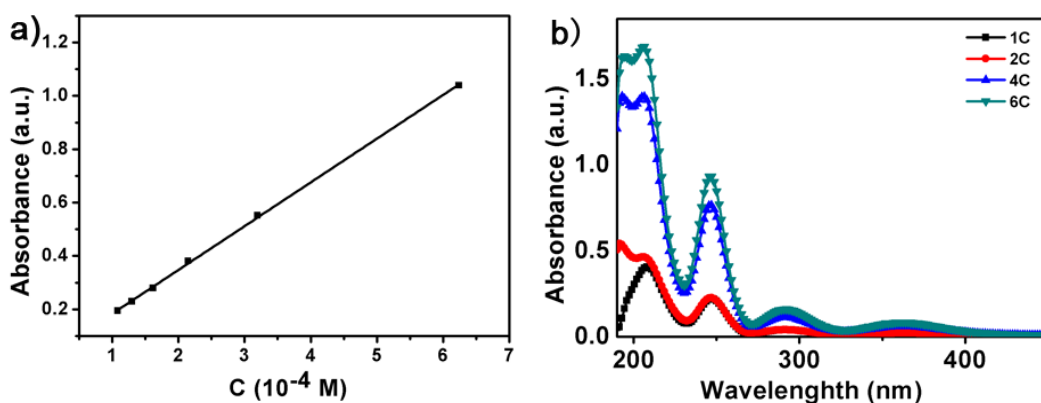


Fig. S2 (a) The standard curve obtained according to absorption peak at 255 nm, the equation was $y=0.16403x+0.01957$ ($R^2=0.99945$); b) UV-vis absorption spectrums of residual liquid electrolytes, which were diluted to proper concentration for accurate measurements.

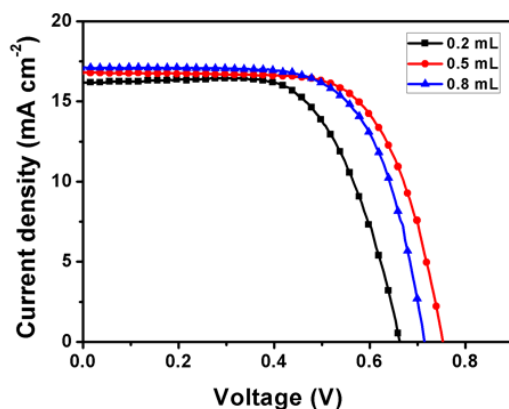


Fig. S3 $J-V$ characteristics of DSSCs based on MOGE prepared by swelling gels in liquid precursor with different volume. The concentration of liquid precursor was kept at 4C.

Table S1 Photovoltaic parameters of MOGE based DSSCs prepared by swelling gels in different amount of precursor with concentration of 4C, and the corresponding concentration of active ingredients in different MOGEs. The cell performances were measured under AM 1.5 G one sun illumination (100 mW cm^{-2}).

	J_{sc} [mA cm^{-2}]	V_{oc} [mV]	η [%]	FF	I [mol L^{-1}]	TBP [mol L^{-1}]
0.2 mL	16.18	663	7.00	0.65	0.302	0.175
0.5 mL	16.80	753	8.66	0.68	0.591	0.338
0.8 mL	17.11	715	8.29	0.68	0.959	0.402