## **Electronic Supplementary Information**

## A stable and efficient quasi-solid-state dye-sensitized solar cell with a low molecular weight organic gelator

Qingjiang Yu,<sup>a</sup> Cuiling Yu,<sup>\*b</sup> Fengyun Guo,<sup>a</sup> Jinzhong Wang,<sup>a</sup> Shujie Jiao,<sup>a</sup> Shiyong Gao,<sup>a</sup> Hongtao Li<sup>a</sup>

and Liancheng Zhao<sup>a</sup>

<sup>a</sup>Department of Optoelectronic Information Materials and Quantum Devices, School of Materials Science and Engineering, Harbin Institute of Technology, Harbin, 150001, China. <sup>b</sup>Department of Physics, Harbin Institute of Technology, Harbin, 150001, China.

## Electronic Supplementary Material (ESI) for Energy & Environmental Science This journal is The Royal Society of Chemistry 2012





**Fig. S1.** Molecular structures of the (A) organic gelator and (B) C105 sensitizer. (C) Photograph of the liquid and gel electrolytes (from left to right). With the addition of the organic gelator (3 wt%), cyclohexanecarboxylic acid-[4-(3-octadecylureido)phenyl]amide, the liquid electrolyte forms a stable gel electrolyte.

Electronic Supplementary Material (ESI) for Energy & Environmental Science This journal is O The Royal Society of Chemistry 2012

electrolyte	$E_{\rm c}$ – $E_{\rm F,redox}/{\rm eV}$	$n_{\rm c}/{\rm cm}^{-3}$	β	$U_{0\rm k}/{ m cm^{-3}~s^{-1}}$
liquid	1.228	2.759×10 <sup>13</sup>	0.703	$1.465 \times 10^{25}$
gel	1.226	$1.943 \times 10^{13}$	0.742	$4.917 \times 10^{25}$

 Table S1 Parameters derived from electrical impedance analysis.



**Fig. S2** Detailed photovoltaic parameters measured under the irradiance of the 100 mW cm<sup>-2</sup> simulated AM1.5G sunlight for a cell with the liquid electrolyte during successive full sunlight soaking at 60 °C.