Electronic Supplementary Information

Anion-correlated conduction band edge shifts and charge transfer kinetics in dye-sensitized solar cells with ionic liquid electrolytes

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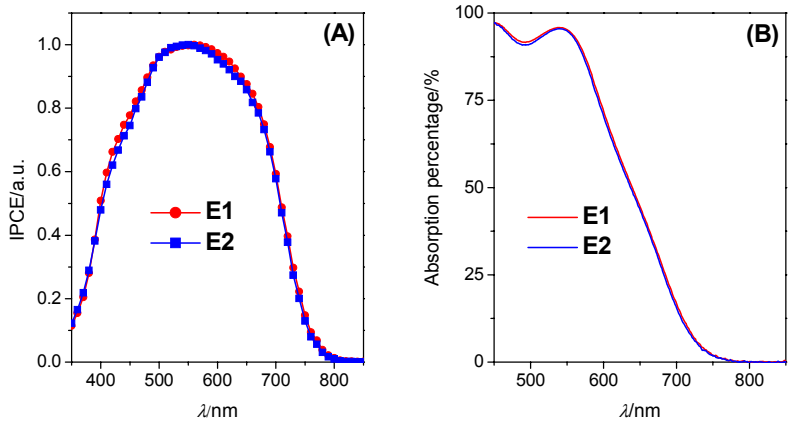

Fig. S1 (**A**) Normalized photocurrent action spectra. (**B**) Absorption of a 7-µm-thick, C106-coated titania film immersed in electrolytes E1 or E2. The absorptions from the FTO matrix, titania and electrolyte have been subtracted for clarity of presentation.

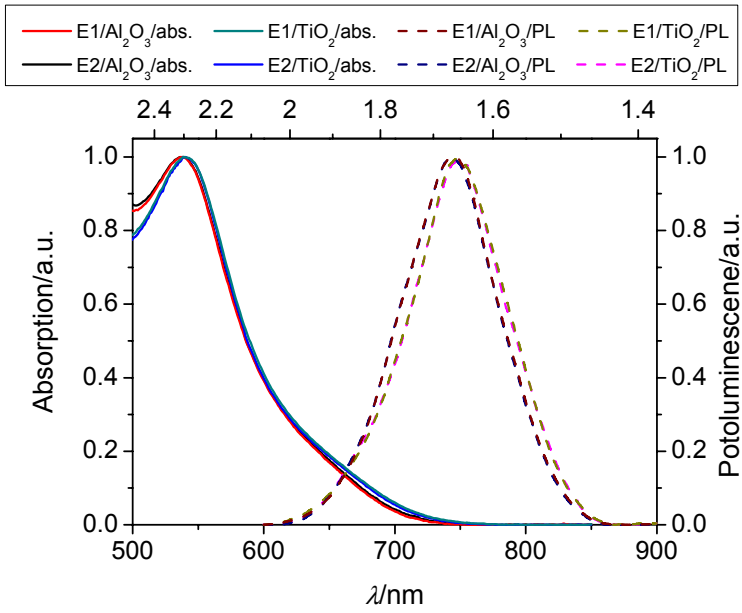

Fig. S2 Normalized absorptions and emissions of C106-based cells made with electrolytes E1 and E2. Excitation wavelength: 488 nm.

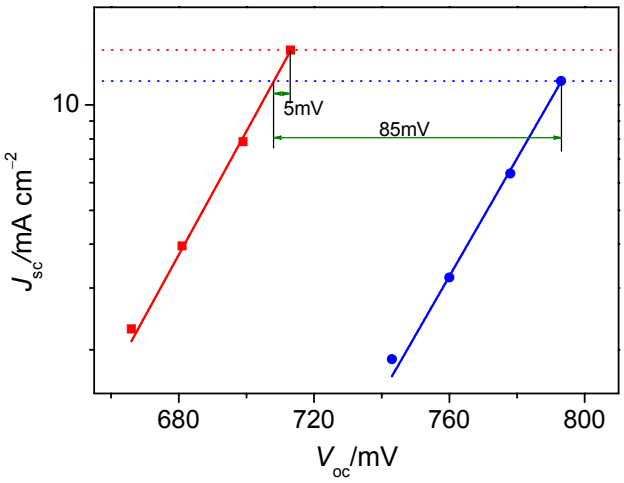

Fig. S3 Plots of J_{sc} *versus* V_{oc} obtained at different light intensities. The solid lines are fittings in terms of a proper function. The red and blue dot lines represent the J_{sc} values of cells with E1 (14.34 mA cm^{-2}) and E2 (11.70 mA cm^{-2}), respectively.

Table S1. Parameters fitted from R_t and R_{ct}.

electrolyte	$E_c - E_{F,redox}$/eV	γ	K/cm^{-3} s^{-1}	k_0/cm$^{-3(1-\gamma)}$ s^{-1}
E1	1.013	0.80	6.94×10^{9}	7.30×10^{6}
E2	1.101	0.84	2.54×10^{8}	3.35×10^{6}