Supporting Information

Alkyl Chain Barriers for Kinetic Optimization in Dye-Sensitized Solar Cells

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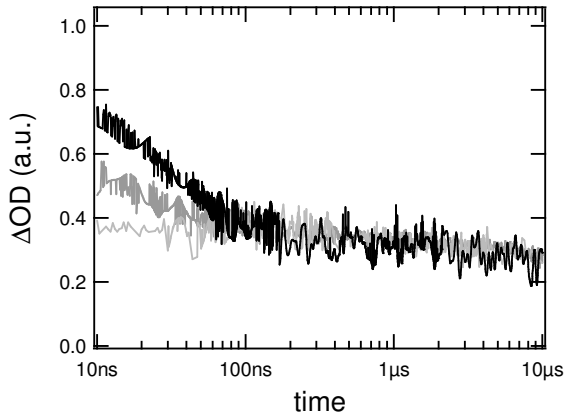

Figure s1. Transient absorption data monitoring regeneration of the dye ground state of the **C9** (light gray), **C13** (dark gray) and **C18** (black) dye at 800 nm in complete solid-state device configuration, following 532 nm excitation. The hole conductor matrix was applied by spin-coating from a chlorobenzene solution containing 0.17 M spiro-OMeTAD, 25 mM Li^+, 0.13 M tBP and 0.3 mM Sb dopant. For the purpose of comparison, the transients have all been normalized to their slow (> 200 ns) tails.

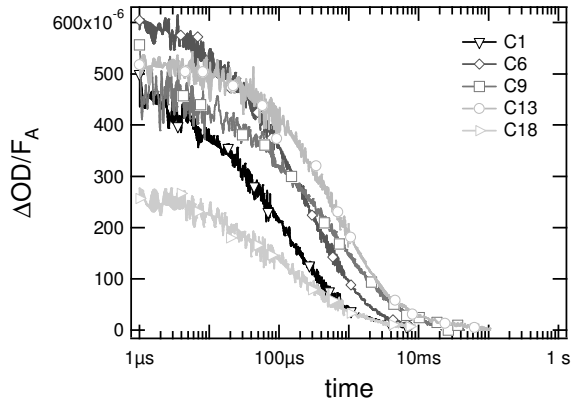

Figure s2. Non-normalized transients of Figure 4, monitoring recombination with dye cations (*CR1*) at 800 nm in TiO_2 films sensitized by the **C1**-**C18** dye series covered in inert solvent. F_A represents the fraction of incident photons absorbed by the film.

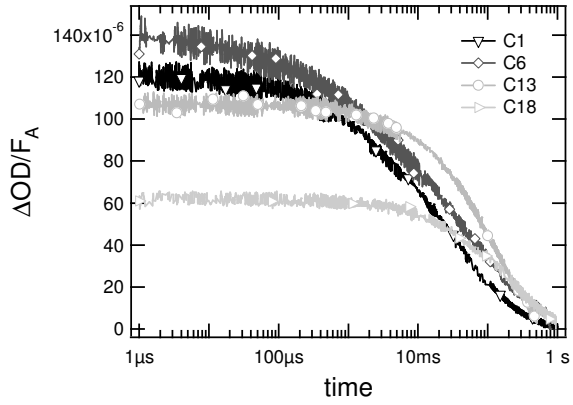

Figure s3. Non-normalized transients of Figure 5, monitoring electron recombination to the I^-/I_3^- redox electrolyte at 1000 nm in complete liquid-electrolyte DSSCs employing the **C1**-**C18** sensitizer dye series. F_A represents the fraction of incident photons absorbed by the film.