Photoinduced electron and hole transfers in carbazole dendrimers with heteroleptic Ir-complex cores

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Figures

**Fig. S1.** Emission spectra of G0, G1 and G2 in CH2Cl2. Excitation wavelength is 380 nm.

**Fig. S2.** Transient absorption spectra of G2 in CH2Cl2 at various time delays. Excitation wavelength is 400 nm. Inset figure indicates the decay profiles monitored at 420 and 780 nm, respectively.

**Fig. S3.** Transient absorption spectra of G1 in CH2Cl2 at various time delays. Excitation wavelength is 330 nm. Inset figure indicates the decay profiles monitored at 430 and 630 nm, respectively.

**Fig. S4.** Transient absorption spectra of G2 in CH2Cl2 at various time delays. Excitation wavelength is 330 nm. Inset figure indicates the decay profiles monitored at 450 and 630 nm, respectively.
CV measurement

The cyclic voltammetry experiments were performed using an electrochemical analyzer (Bioanalytical System Inc., BAS 100). The three-electrode cell system used comprised a glassy carbon electrode as the working electrode, and a platinum wire and Ag/AgNO₃ as a counter and reference electrodes, respectively. The potential values were measured relative to an internal ferrocenium/ferrocene reference (Fc⁺/Fc). Freshly distilled, N₂-purged CH₂Cl₂ was used as the solvent with 0.1 M tetrabutylammonium tetrafluoroborate electrolyte as the supporting electrolyte.

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Fig. S5. Cyclic voltammograms for 0.5 mM CH₂Cl₂ solution of G₀ and G₁ containing 0.1 M TBAPF taken at a scan rate of 0.1 V/s.

Fig. S6. (a) and (b) are simulated DAS of G₂ with the associated exponential time constants resulting from a global fit of the TA data. (b) and (d) show SAS population change for intermediates of G₁ (INT) of G₁ (INT 1, navy blue; INT 2, orange). (a), (c) and (b), (d) obtained upon excitation with 290 nm and 400 nm, respectively.