Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Electronic supplementary information

Excited-state dynamics of heteroleptic copper(I) photosensitizers and their electrochemically reduced forms containing a dipyridophenazine moiety – a spectroelectrochemical transient absorption study

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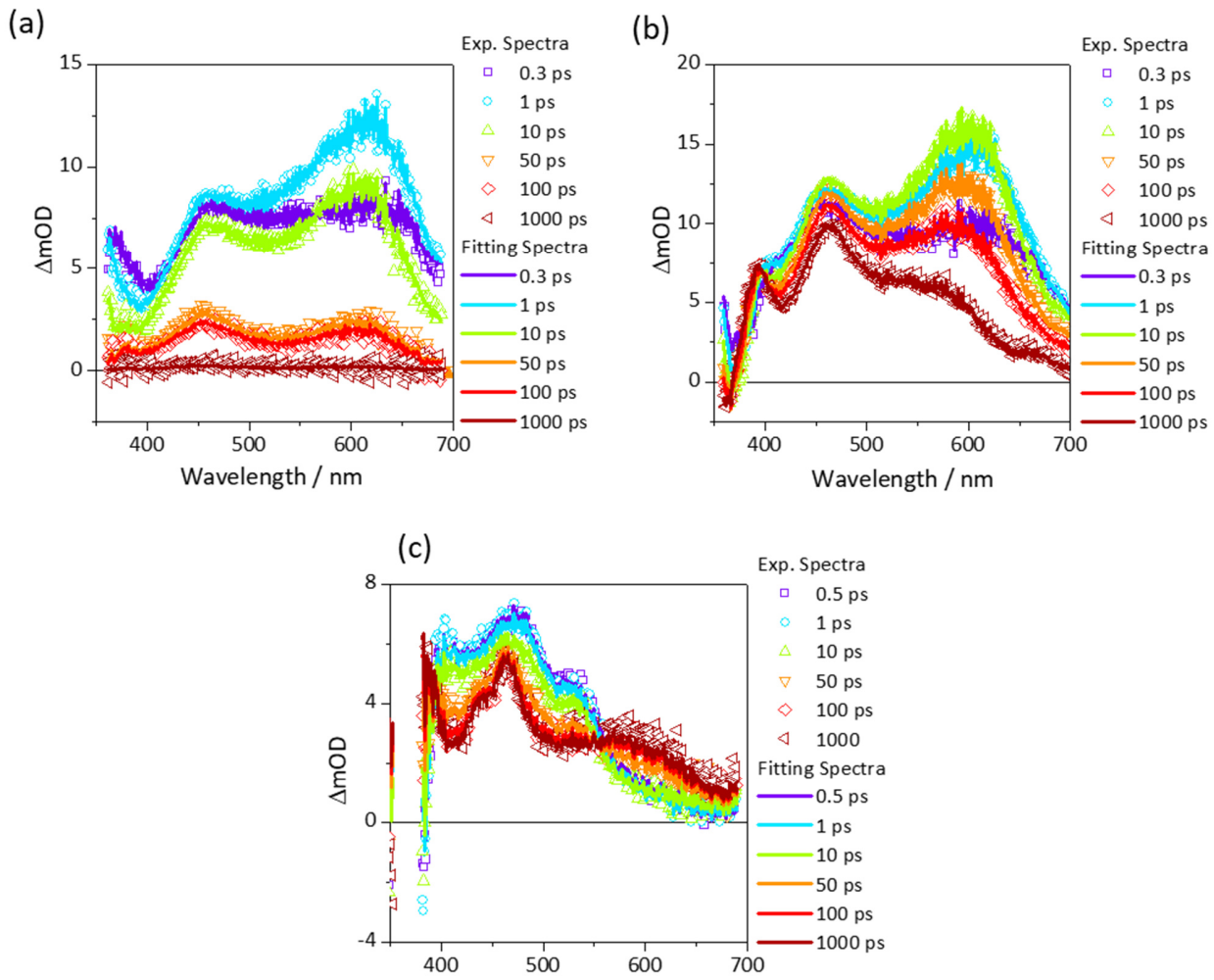

Figure S1: Experimental and global fitted TA spectra at selected delay times for **1** (a) and **2** (b) with excitation at 355 nm, and dppz (c) with excitation at 365 nm in ACN solution. The corresponding fitting parameters are presented in Figure 3B, 3D and 3F.

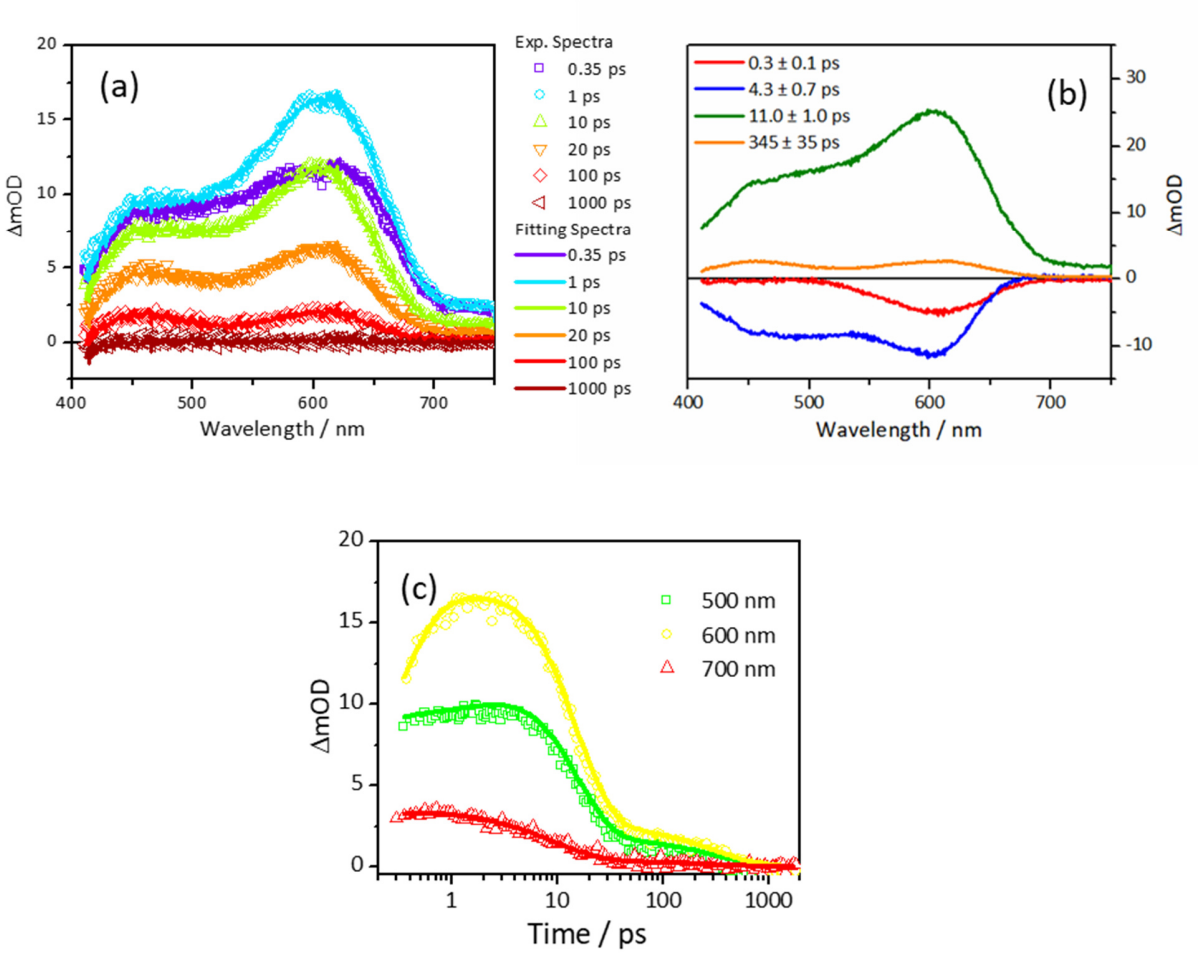

Figure S2. (a) TA spectra at selected delay times of **1** in ACN excited at 400 nm. (b) Decay associated spectra together with the corresponding time constants obtained from global fitting of the TA spectra. The experimental (scatter) and global fitted (solid line) transient kinetics at selected wavelengths are plotted in (c).

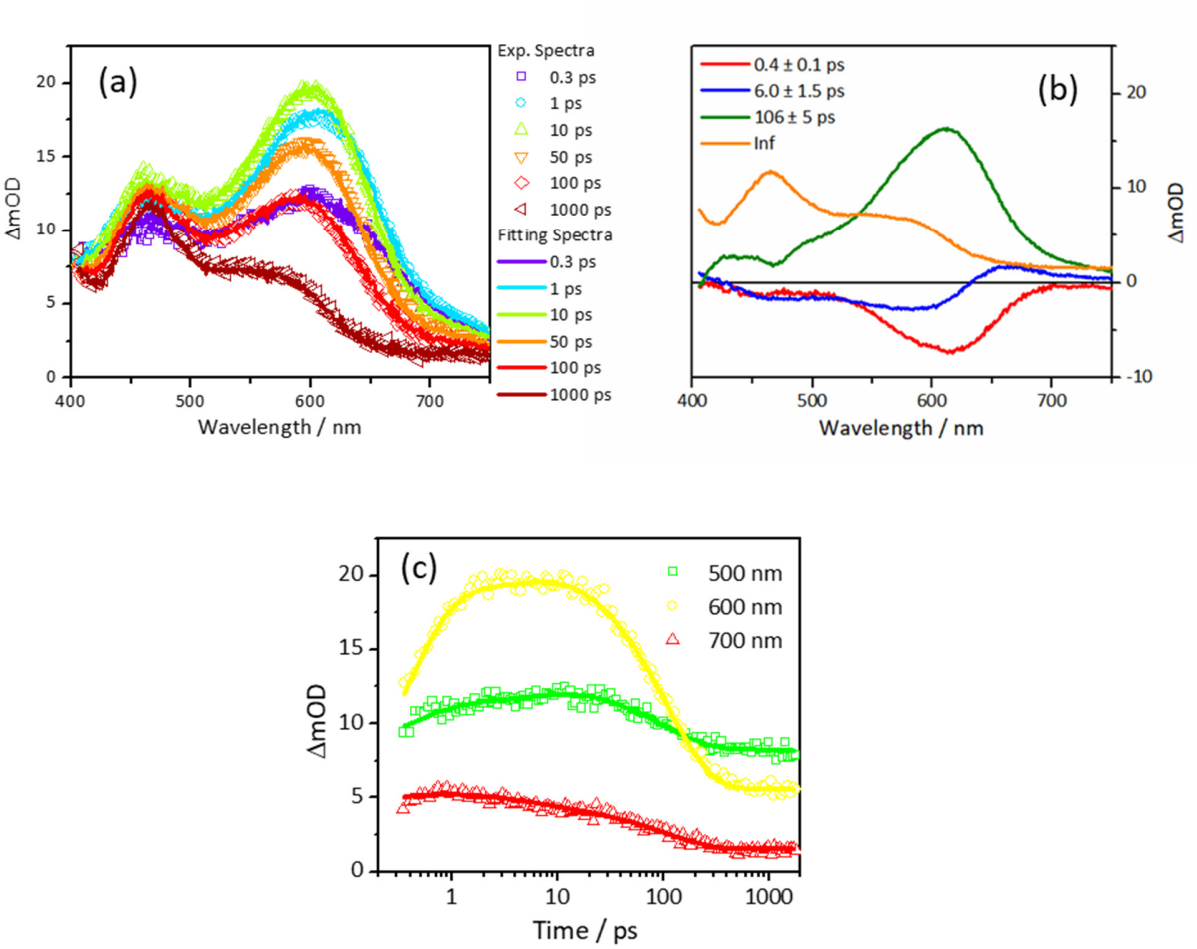

Figure S3. (a) TA spectra at selected delay times of **2** in ACN excited at 400 nm. (b) Decay associated spectra together with the corresponding time constants obtained from global fitting of the TA spectra (b). The long-lived component (Inf) does not decay within the detected time window (1.8 ns). The experimental (scatter) and global fitted (solid line) transient kinetics at selected wavelengths are plotted in (c).

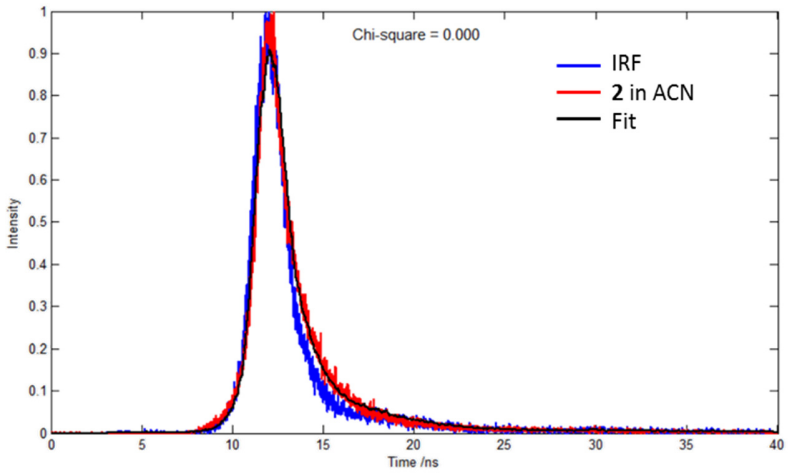

Figure S4. The time-correlated single photon counting data of **2** in ACN, the solution was bubbled with N_2 for 20 min prior to the measurement. The luminescence lifetime of **2** in ACN is 17.0 ns.

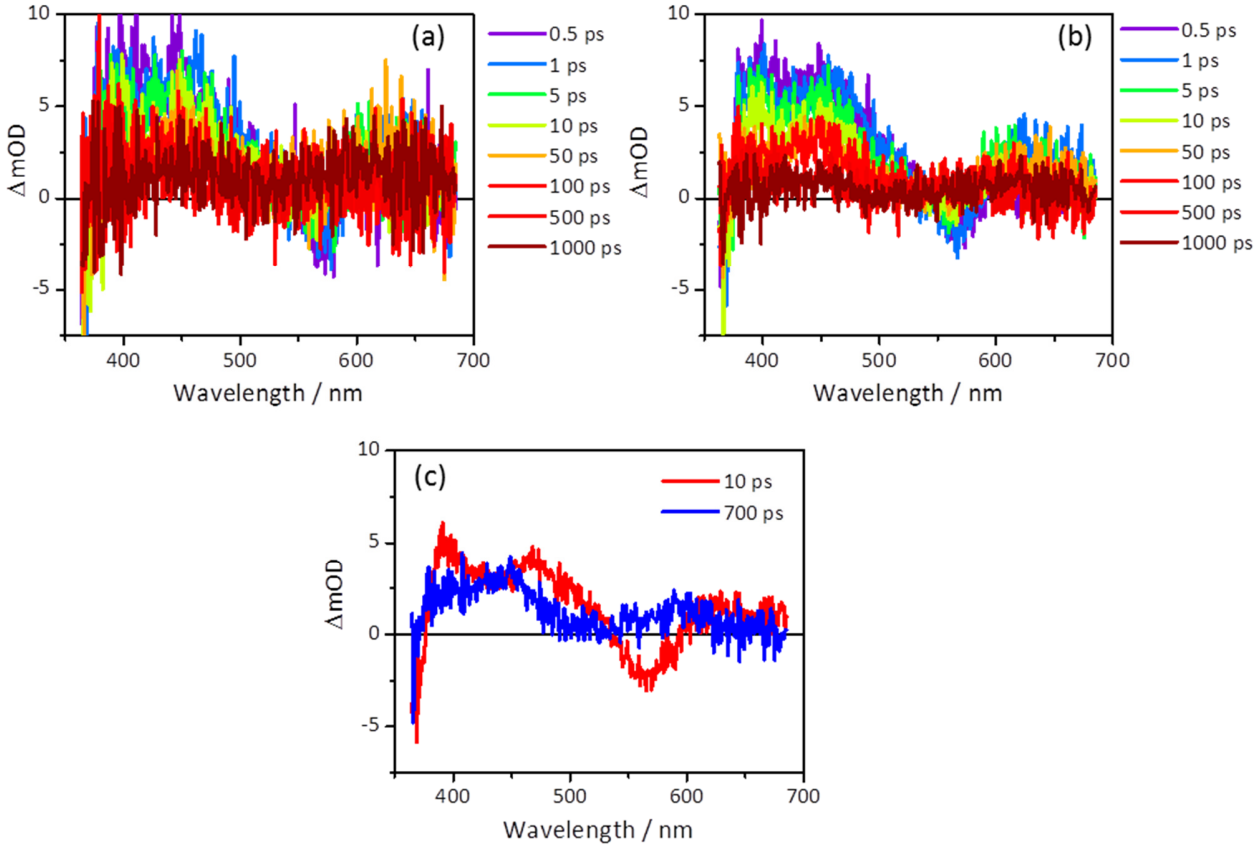

Figure S5. TA spectra at selected delay times (a) and the decay-associated spectra (c) for electrochemically generated singly reduced $\mathbf{1}^-$ in ACN/0.1 M $TBABF_4$, upon excitation at 355 nm. The applied reduction potential is −1.50 V vs. Fc^+/Fc, respectively. As observed in (a), the data obtained are quiet noisy, thus the averaged TA spectra at the delay time (t ± 20%) are plotted in (b).

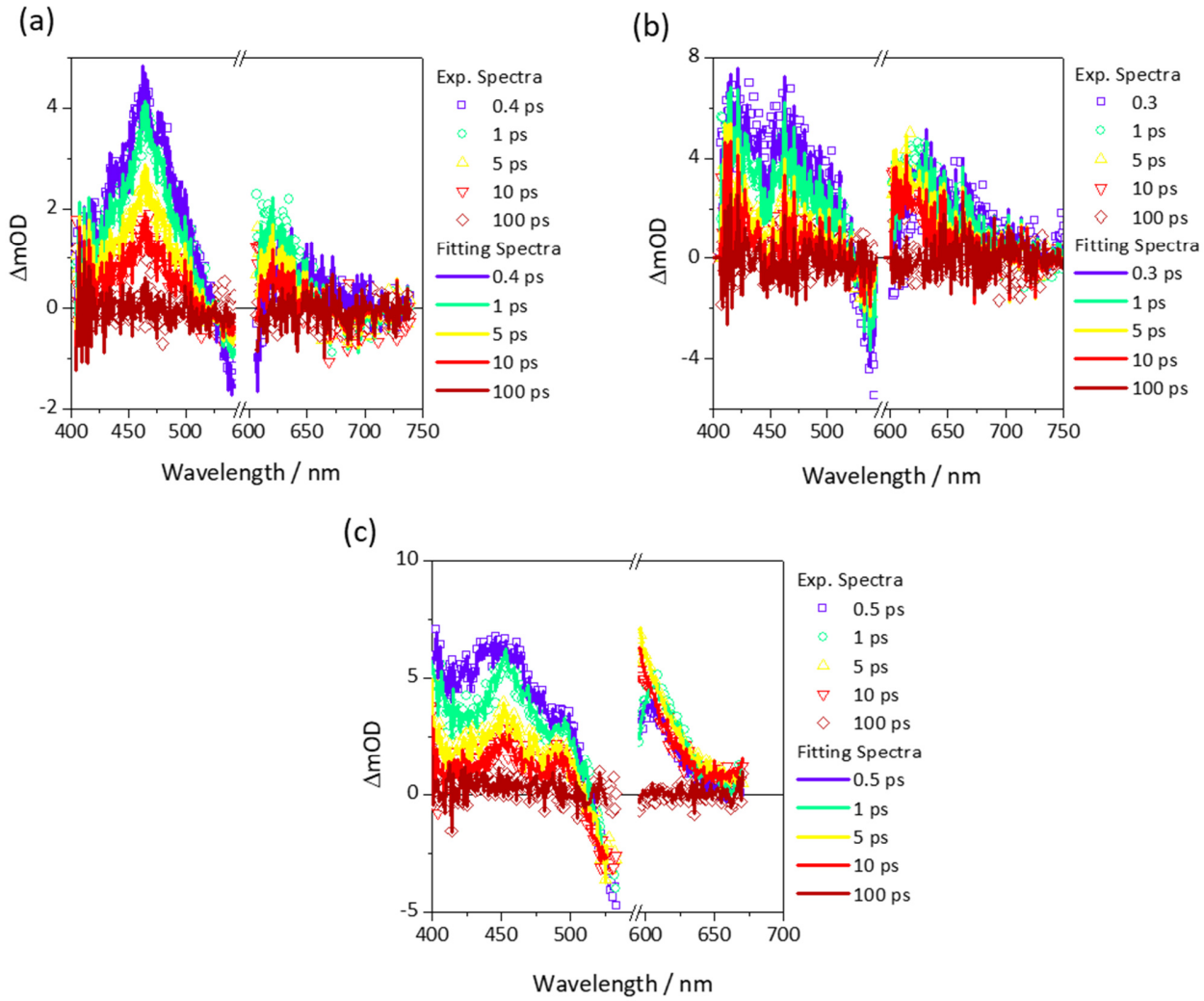

Figure S6: Experimental and global fitted TA spectra at selected delay times for $\mathbf{1}^-$ (a) and $\mathbf{2}^-$ (b) with excitation at 580 nm, and dppz$^{\bullet-}$ (c) with excitation at 566 nm in ACN/0.1 M $TBABF_4$ solution. The corresponding fitting parameters are presented in the Figures 5B, 5D and 5F in the main text.