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Supplemental Information

Extended Electron-Transfer in Animal Cryptochromes Mediated by a Tetrad of Aromatic Amino Acids

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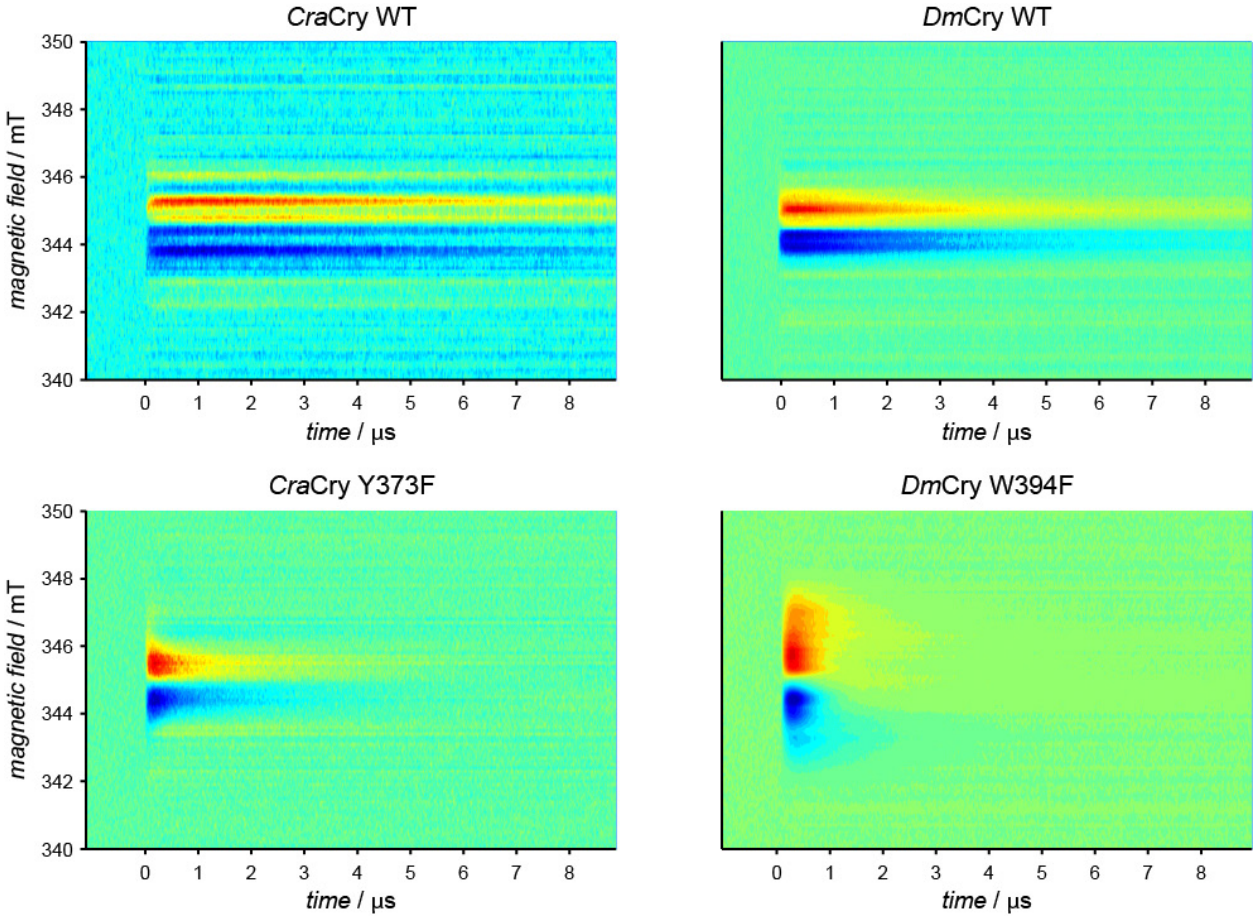
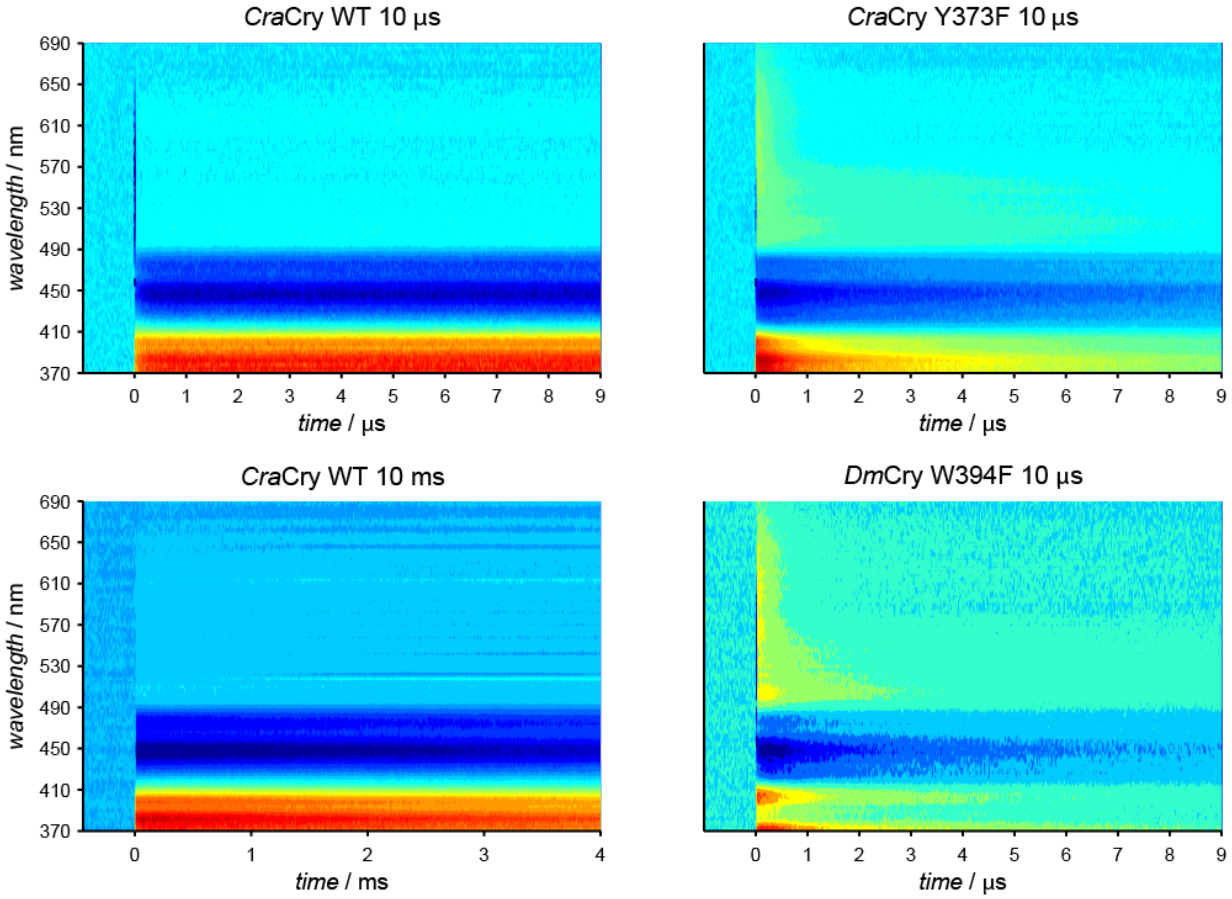
Extended Electron-Transfer Pathways in Animal Cryptochromes Mediated by a Tetrad of Aromatic Amino Acids

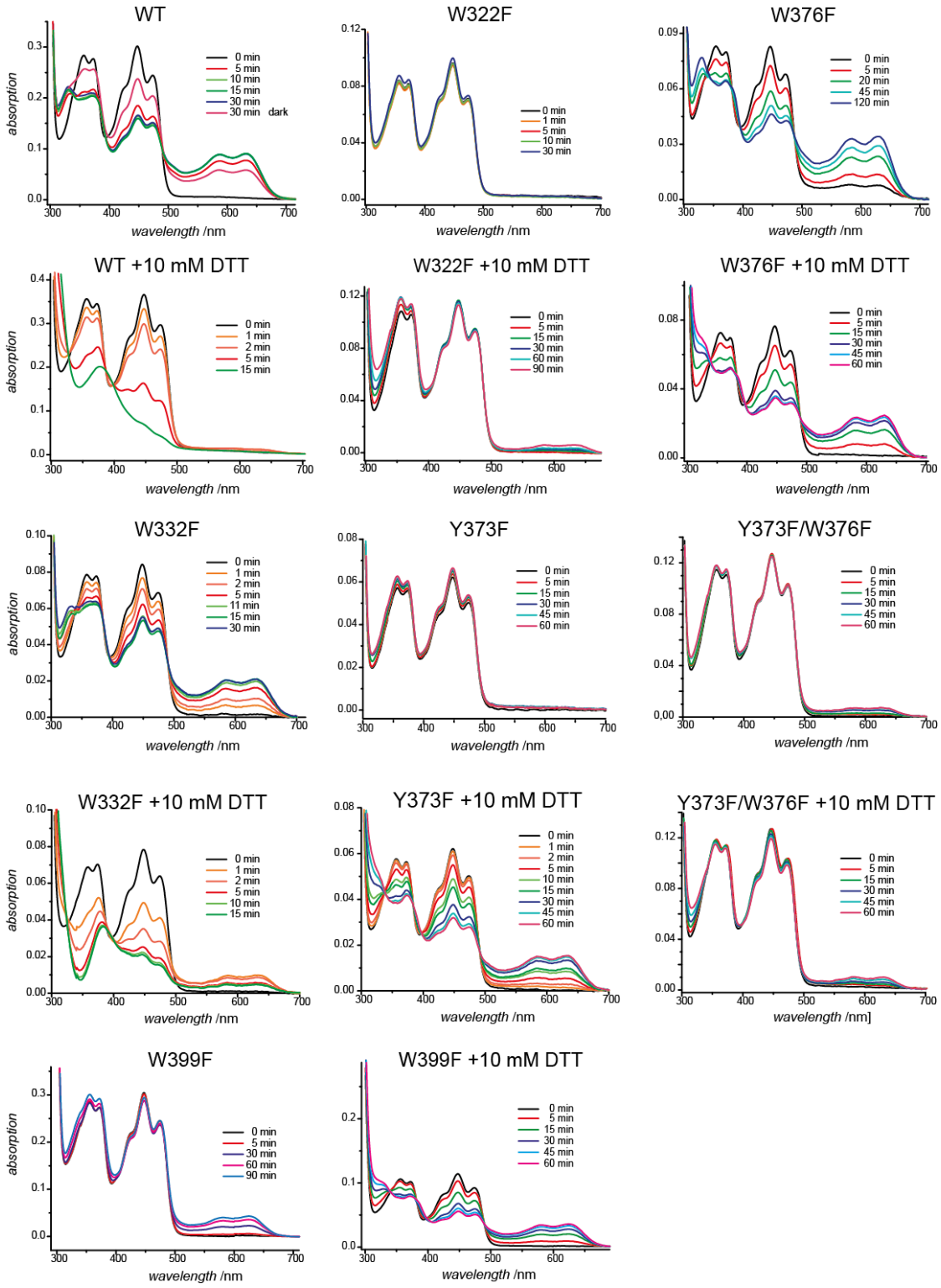
-Supporting Information-



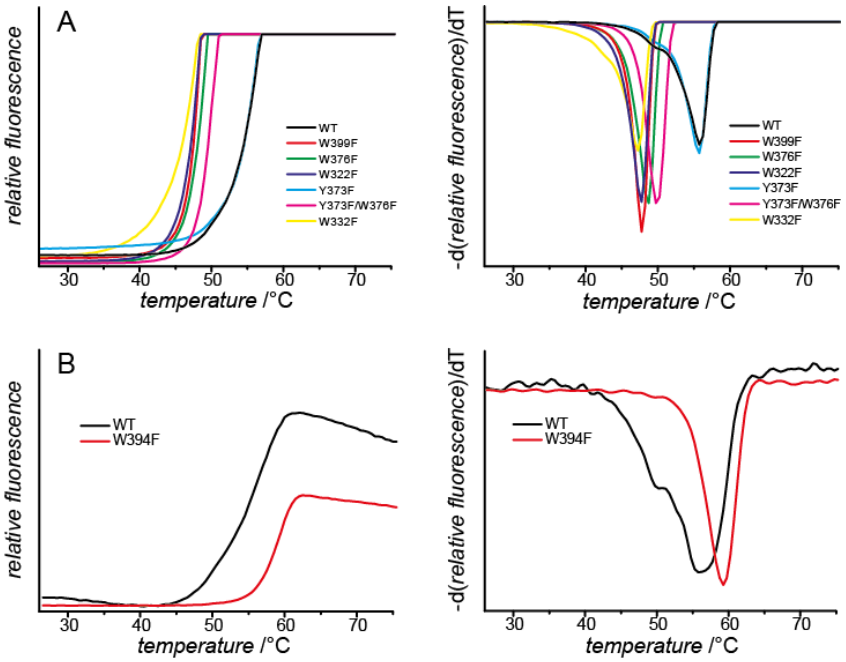
Supporting Figure 1: Complete trEPR data set of *Cra*Cry WT, *Cra*Cry Y373F, *Dm*Cry WT and *Dm*Cry W394F measured at 270 K.
Each time profile is the average of 100 acquisitions recorded with a laser pulse repetition rate of 1 Hz, a microwave frequency of 9.68 GHz, and a power of 2 mW at a detection bandwidth of 25 MHz. A: enhanced absorption; E: emission.



Supporting Figure 2: Transient optical spectroscopy of *Cra*Cry WT, *Cra*Cry Y373F, and *Dm*Cry W394F. Full 2-dimensional plots recorded at different time windows (from 10 µs up to 10 ms) with a laser pulse power of 4 mJ and a repetition rate of 6.67 mHz. Three accumulations have been averaged.



Supporting Figure 3: Blue-light induced spectral changes in the optical absorptions of WT and mutant *Cra*Crys in the absence and presence of DTT as reduction agent. All measurements were performed under aerobic conditions.



Supporting Figure 4: Thermo fluorescence measurements of *Cra*Cry (A) and *Dm*Cry (B) together with its derivation. For excitation a wavelength range between 470 and 480 nm was chosen and for detection of the FAD fluorescence a green emission filter (510–515 nm) was used. For controlled melting of the protein, the temperature was increased from 25–99 °C in 0.5 °C steps.