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Supplementary Materials for

Direct observation of intersystem crossing in a thermally activated delayed fluorescence copper complex in the solid state

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The PDF file includes:

Supplementary Materials

Time-Resolved Spectra

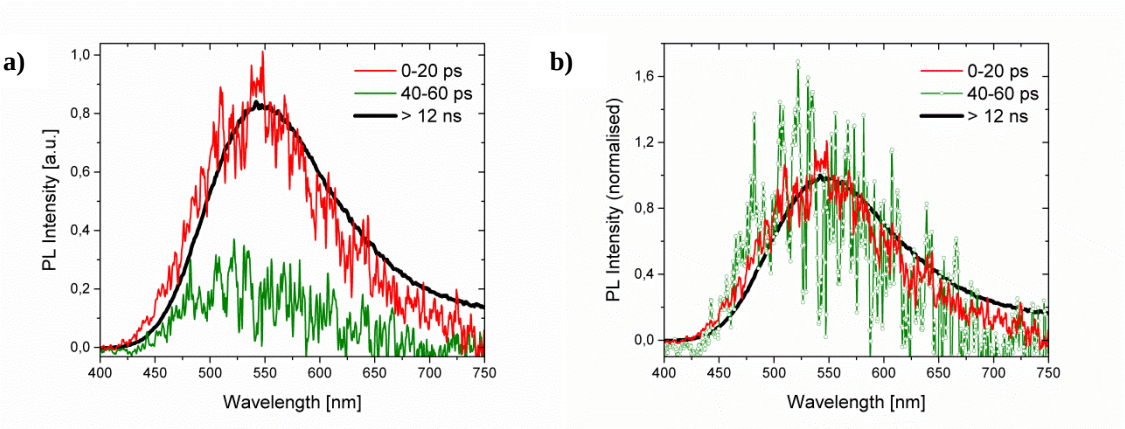

Fig. S1. Time-resolved PL spectra at different delay times in the neat film. a) Time-resolved PL spectra at different delay times after excitation with a laser pulse. The accumulated background of the long-lived (> 12 ns) fluorescence was subtracted from the spectra before analysis. As prompt fluorescence in copper(I) complexes is very weak, signals had to be averaged over 20 ps, e.g. 0–20 ps, 40–60 ps. A fast intensity decrease can be observed in the time-window of 150 ps after excitation. b) Time-resolved PL spectra normalized to their time integral. PL spectra do not change within the time-window of 150 ps.

Transient Absorption

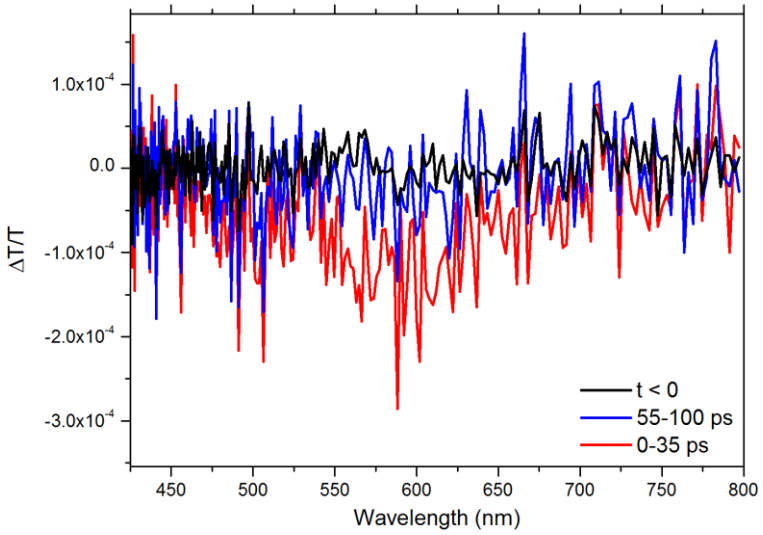

Fig. S2. Broadband transient absorption kinetics in the wavelength region 400 to 800 nm with delay times of 35 and 100 ps after the pump pulse (400 nm) with long-lived background subtraction. Due to substantial spectral overlap of long-lived delayed fluorescence (positive signal) with excited state absorption (negative signal), transient absorption signals were averaged across multiple scans. Excited state absorption is observed from 530–700 nm.