

# Supplementary Information

## Energy Transfer Processes in Tb(III)-Dibenzoylmethanate Complexes with Phosphine Oxide Ligands

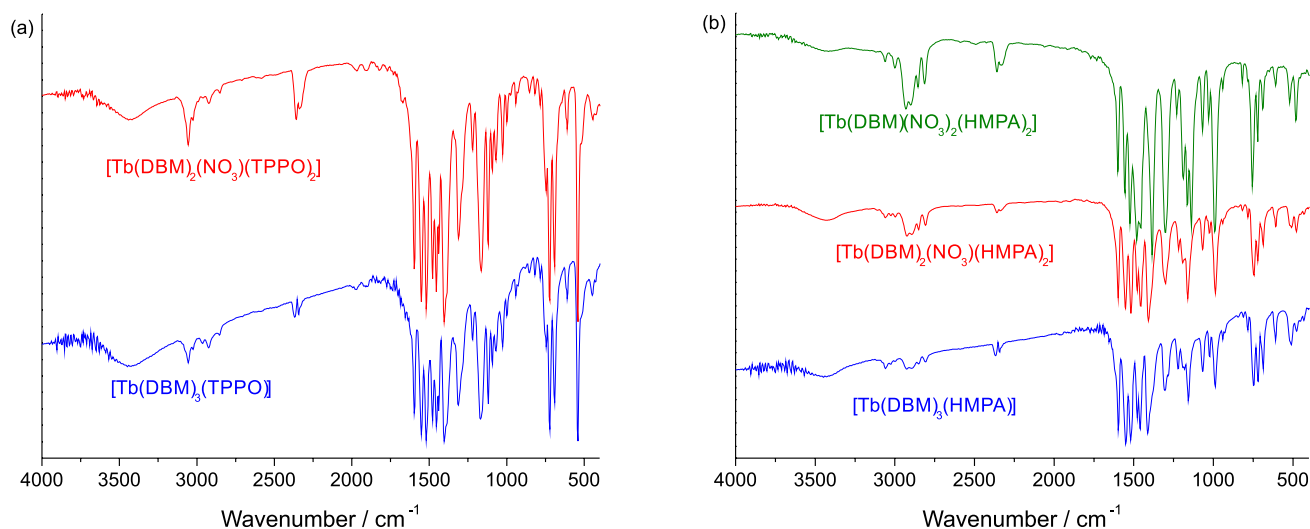
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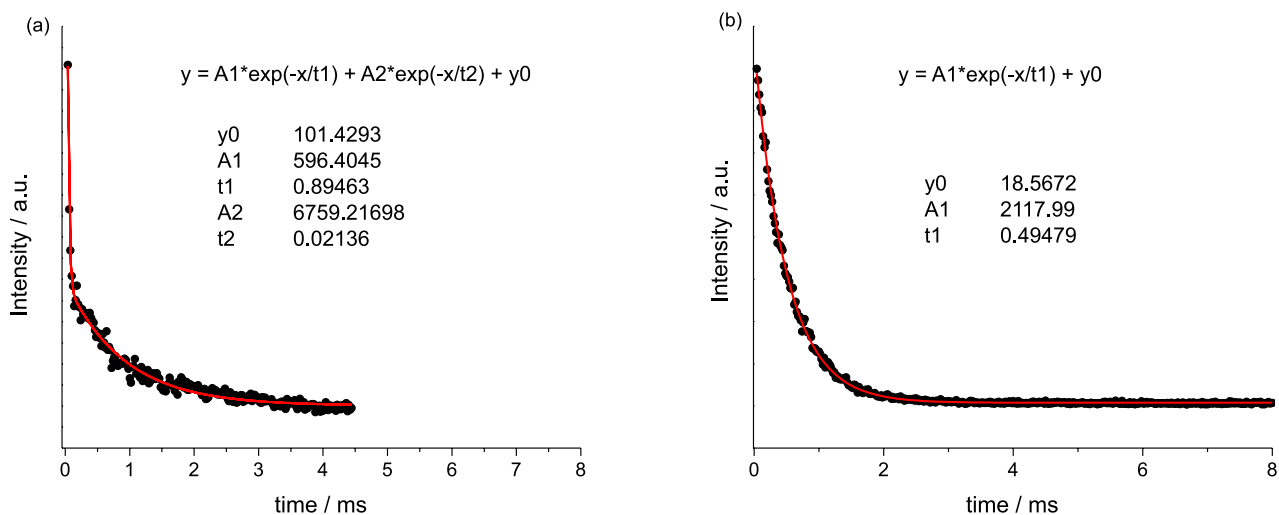
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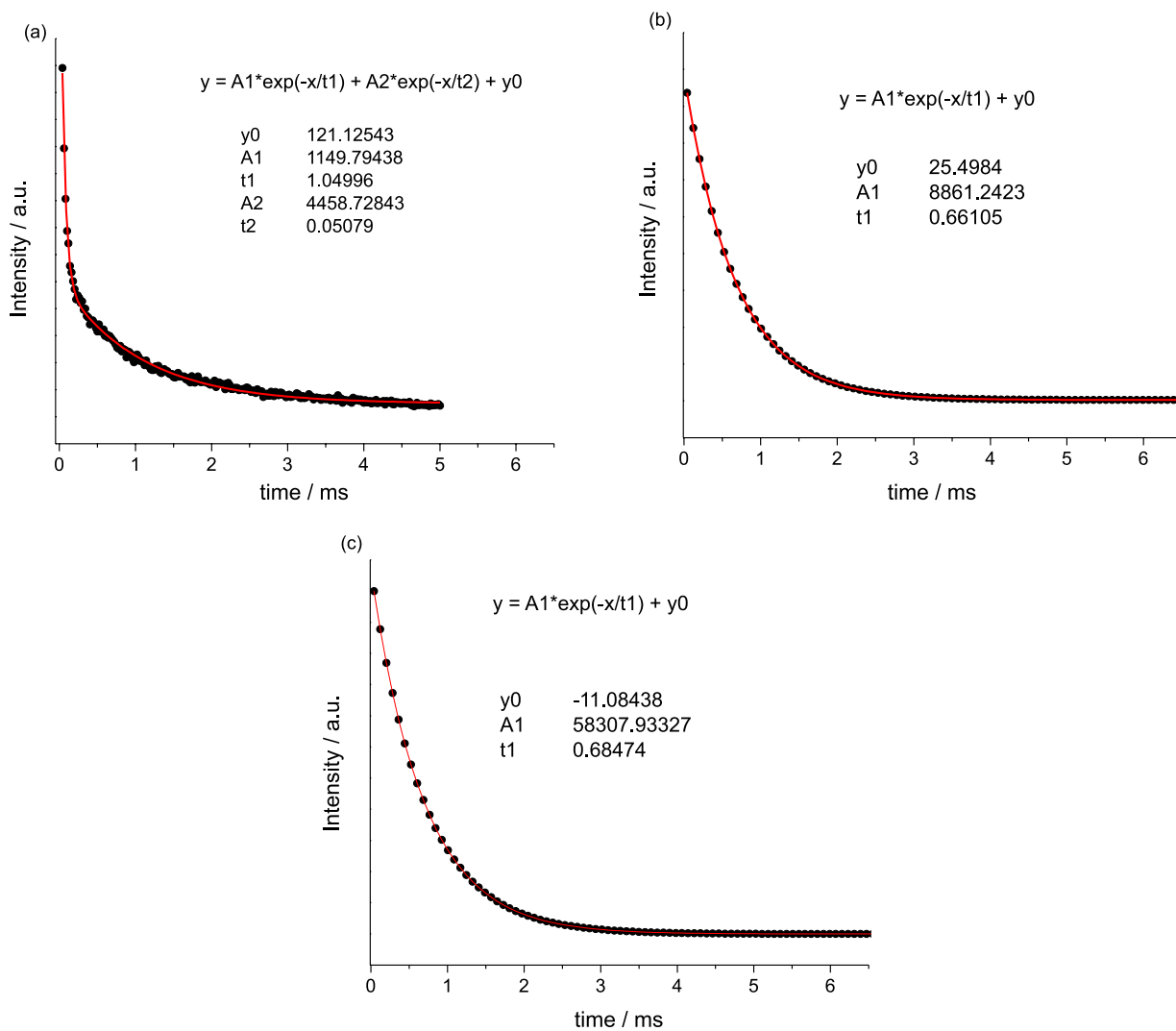


**Figure S1.** FTIR spectra of the Tb<sup>3+</sup>-dibenzoylmethanate complexes: (a) [Tb(DBM)<sub>3</sub>(TPPO)<sub>2</sub>] and [Tb(DBM)<sub>2</sub>(NO<sub>3</sub>)(TPPO)<sub>2</sub>], (b) [Tb(DBM)<sub>3</sub>(HMPA)<sub>2</sub>], [Tb(DBM)<sub>2</sub>(NO<sub>3</sub>)(HMPA)<sub>2</sub>] and [Tb(DBM)(NO<sub>3</sub>)<sub>2</sub>(HMPA)<sub>2</sub>].

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**Figure S2.** Luminescence decay curves of the Tb<sup>3+</sup>-dibenzoylmethanate complexes: (a) [Tb(DBM)<sub>3</sub>(TPPO)<sub>2</sub>] and (b) [Tb(DBM)<sub>2</sub>(NO<sub>3</sub>)(TPPO)<sub>2</sub>], recorded at 77 K under excitation and emission at 370 and 545 nm, respectively.



**Figure S3.** Luminescence decay curves of the Tb<sup>3+</sup>-dibenzoylmethanate complexes, (a) [Tb(DBM)<sub>3</sub>(HMPA)<sub>2</sub>], (b) [Tb(DBM)<sub>2</sub>(NO<sub>3</sub>)(HMPA)<sub>2</sub>] and (c) [Tb(DBM)(NO<sub>3</sub>)<sub>2</sub>(HMPA)<sub>2</sub>], recorded at 77 K under excitation and emission at 370 and 545 nm, respectively.