

Supplementary Information:

Room temperature triplet state spectroscopy of organic semiconductors

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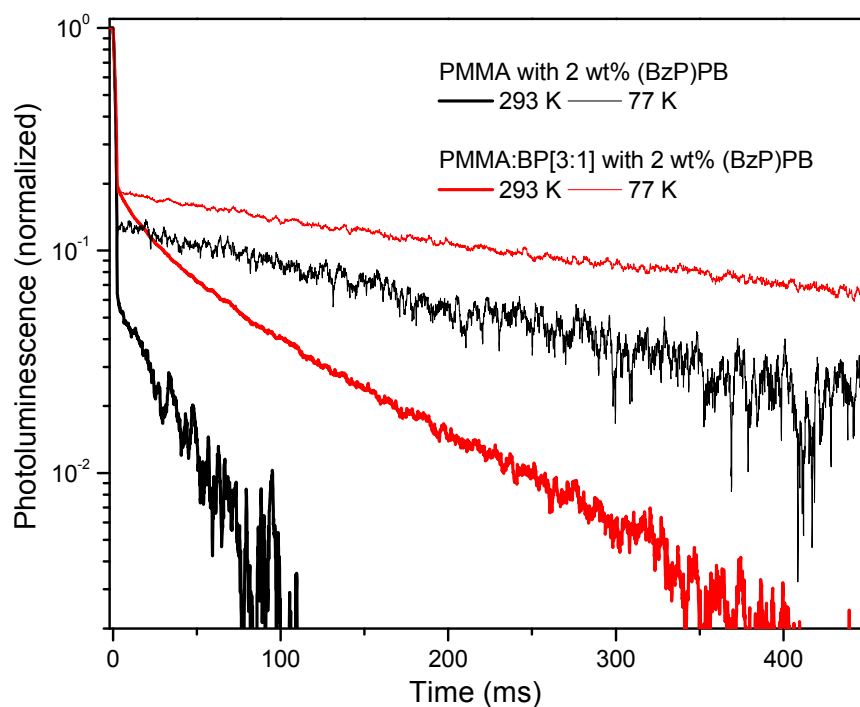


Figure S2 | Benzophenone (BP) as additive to enhance room temperature phosphorescence.

Compared are two host materials, i.e. either PMMA [Poly(methyl 2-methylpropenoate)] or a PMMA:BP[3:1] composite, doped with 2 wt% of (BzP)PB [N,N'-bis(4-benzoyl-phenyl)-N,N'-diphenyl-benzidine]. In contrast to the results in the main text, all samples here are prepared

from the high vapor pressure solvent chloroform. Transient PL experiments are performed at 77 and 293 K. At $t = 0$, the pump source, a 365 nm LED, is turned off. All data sets are normalized to the steady-state PL of (BzP)PB. The BP additive clearly enhances the delayed (BzP)PB emission at room temperature.

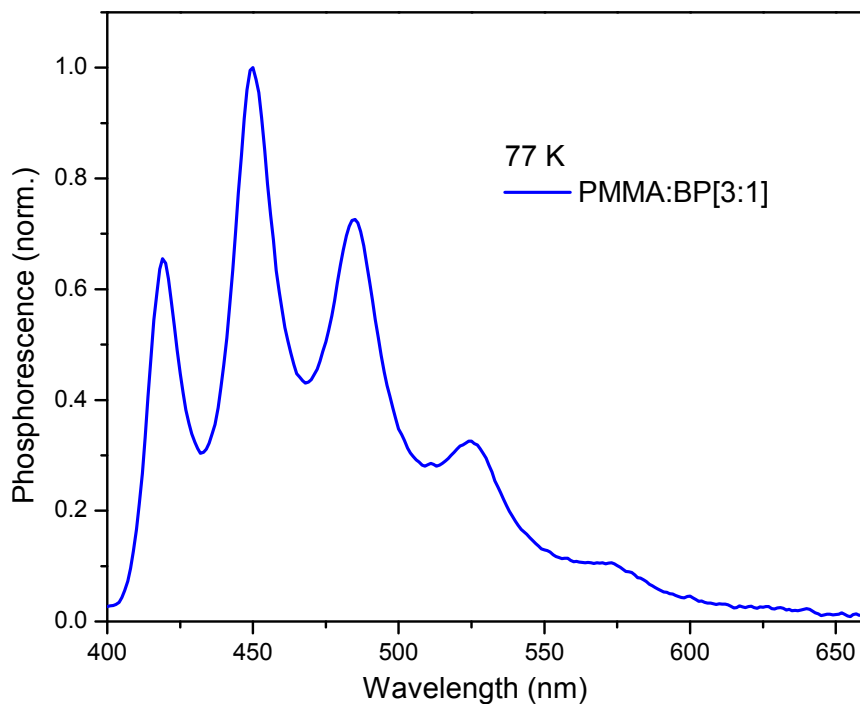


Figure S2 | Benzophenone (BP) phosphorescence. A PMMA:BP[3:1] sample was excited at 365 nm in a liquid nitrogen bath. Phosphorescence was obtained with its 0-0 vibronic transition at 2.94 eV.

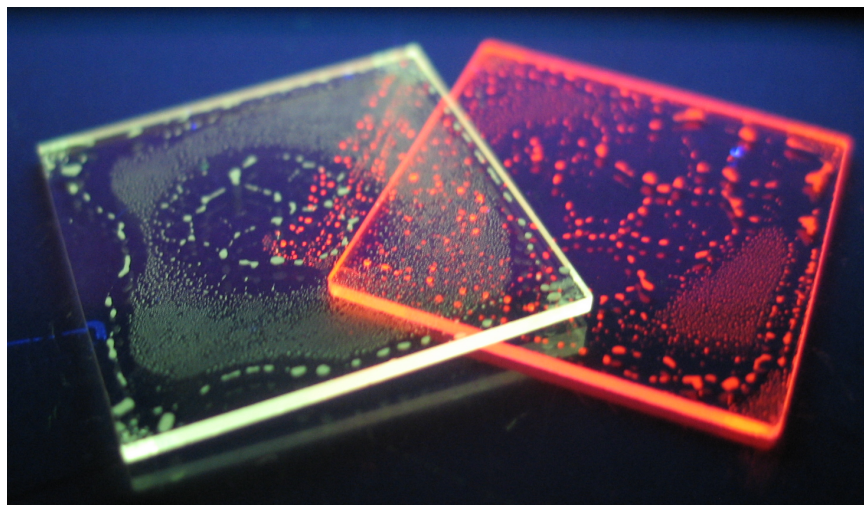


Figure S3 | Benzophenone as sole host material. Attempts to use benzophenone (BP) as single host material to function as effective triplet sensitizer failed, because no stable thin films could be obtained. Here, is doped with green (Alq_3 – tris(8-hydroxyquinolato)aluminium) and red (DCJTB – 4-(dicyanomethylene)-2-t-butyl-6-(1,1,7,7-tetramethyljulolidyl-9-enyl)-4H-pyran) dyes only for illustrative purposes.