Electronic Supplementary Information for

Direct White-light-emitting Room-temperature Phosphorescent Thin Films with Tunable Two-color Polarized Emission through Orientational Layer-by-layer Assembly

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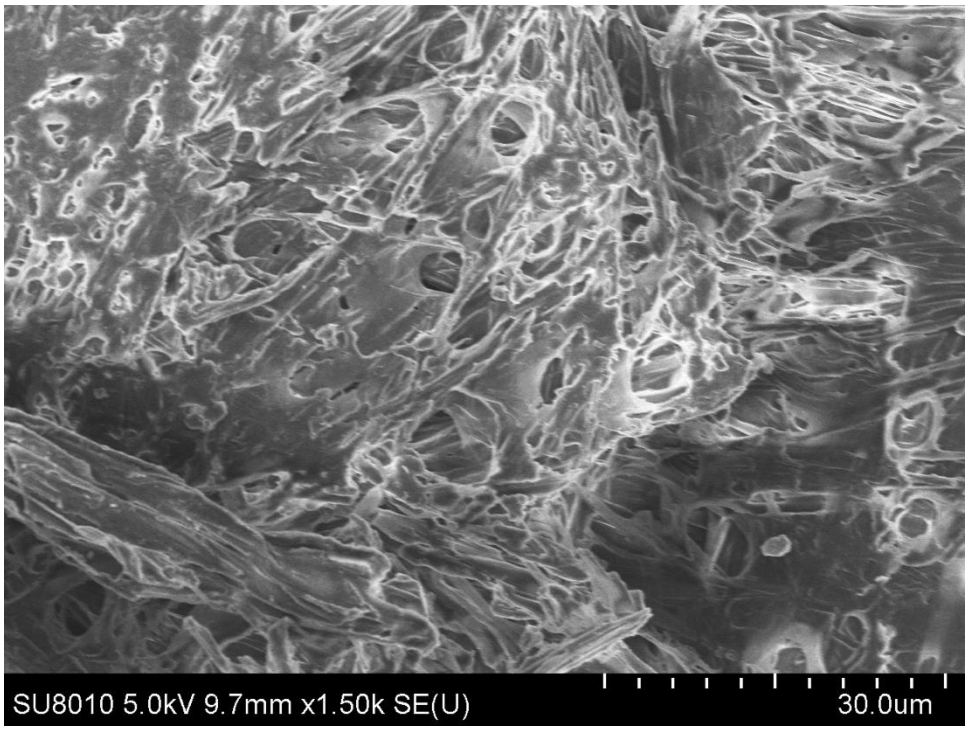

Figure S1. The top view SEM profiles of the spin-coating DBT/PVA film.

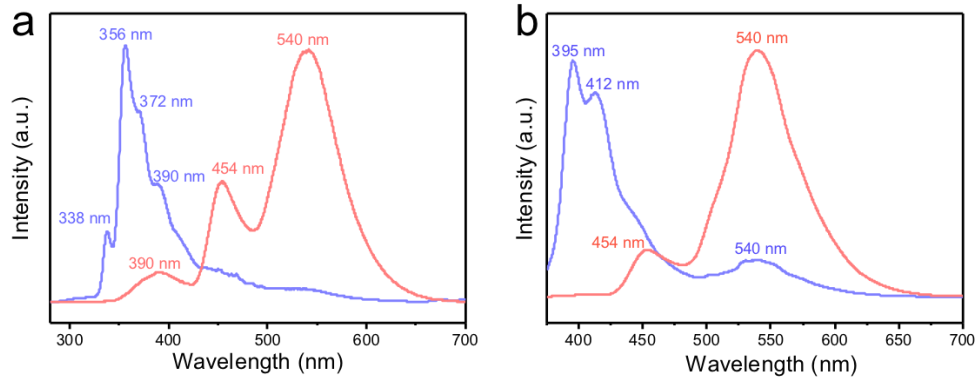

Figure S2. Photoluminescence emission fluorescence (purple lines) and photoluminescence emission RTP (red lines) of the pure DBT under and upon removal (a) 254 nm and (365 nm) UV light, respectively.

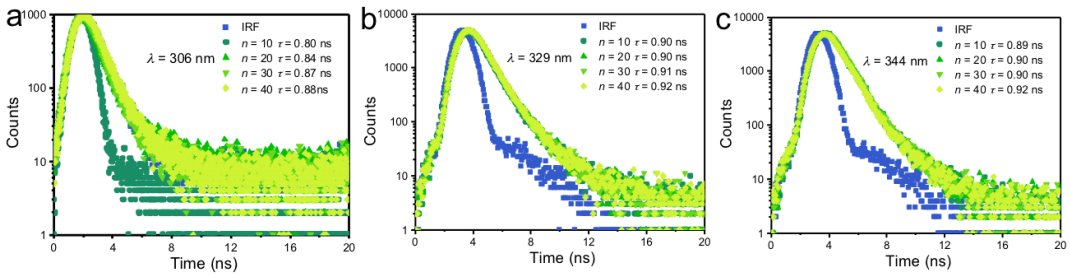

Figure S3. Time-resolved measurement of (a) 306 nm, (b) 329 nm and (c) 344 nm emissions from $(DBT/PVA)_n$ films. Lifetimes are indicated.

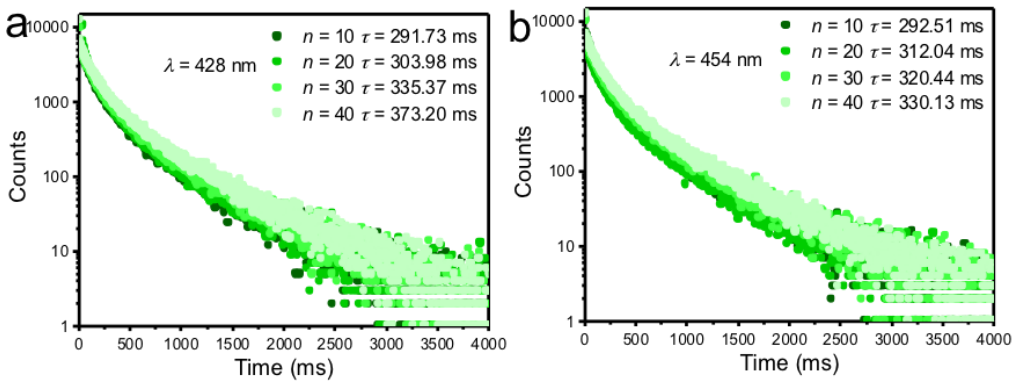

Figure S4. Time-resolved measurement of (a) 428 nm and (b) 454 nm emissions from $(DBT/PVA)_n$ films. Lifetimes are indicated.

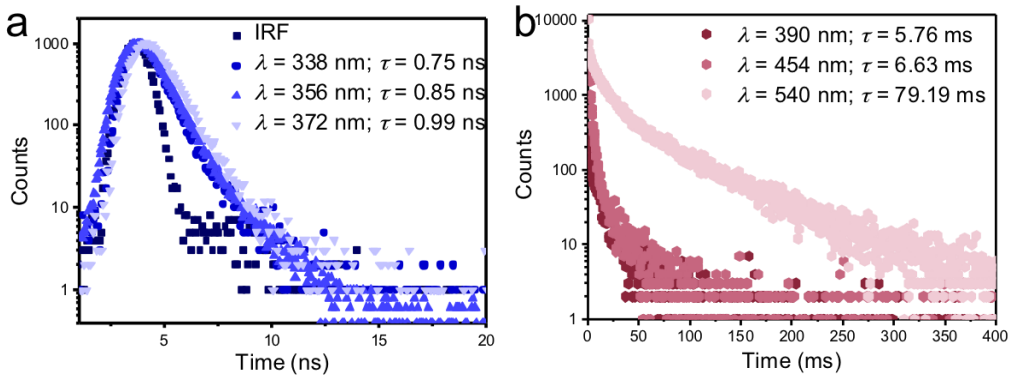

Figure S5. Time-resolved measurement of (a) 338 nm, 356 nm and 372 nm, (b) 390 nm, 454 nm and 540 nm emissions from pure DBT under 254 nm UV light. Lifetimes are indicated.

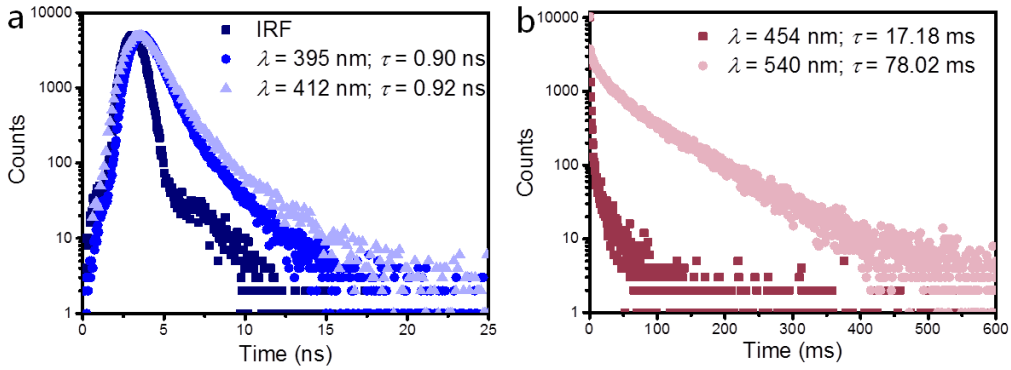

Figure S6. Time-resolved measurement of (a) 395 nm and 412 nm, (b) 454 nm and 540 nm emissions from pure DBT under 365 nm UV light. Lifetimes are indicated.

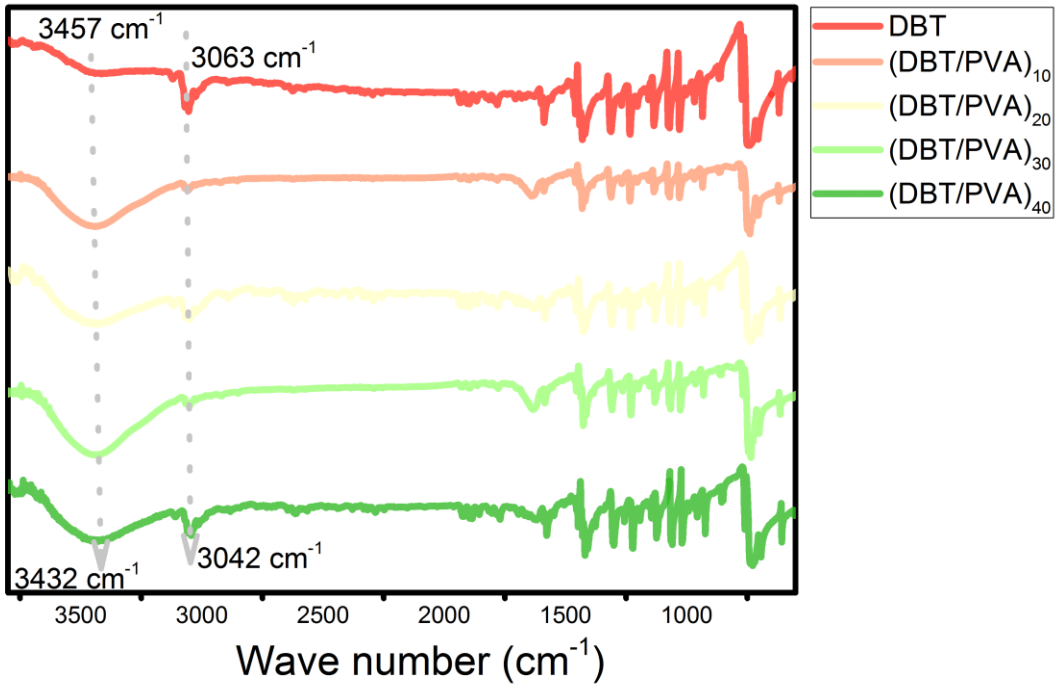

Figure S7. FT-IR spectra of the pure DBT and DBT/PVA films.

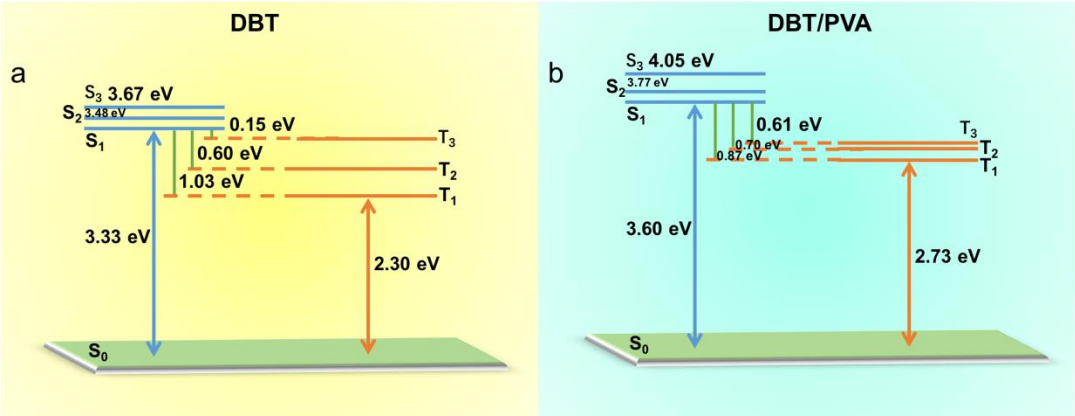

Figure S8: The energy levels of states for (a) pure DBT and (b) DBT/PVA film, respectively， under 254 nm UV light.

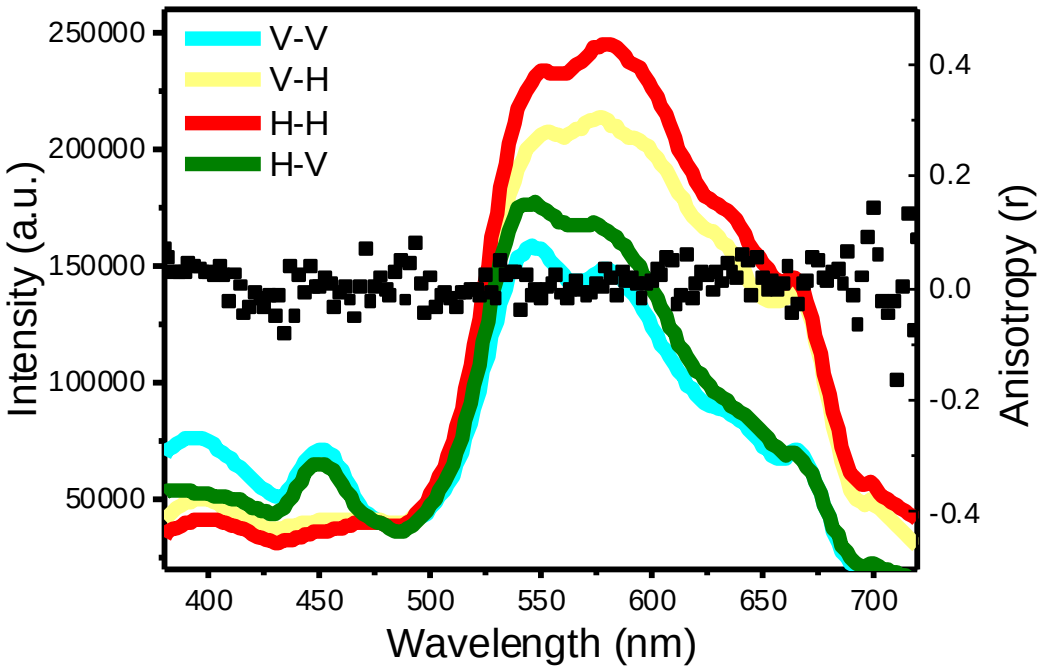

Figure S9: The polarized phosphorescence spectra of the spin-coating DBT/PVA film.