

White light Emission From an Upconverted Emission with an Organic Triplet Sensitizer

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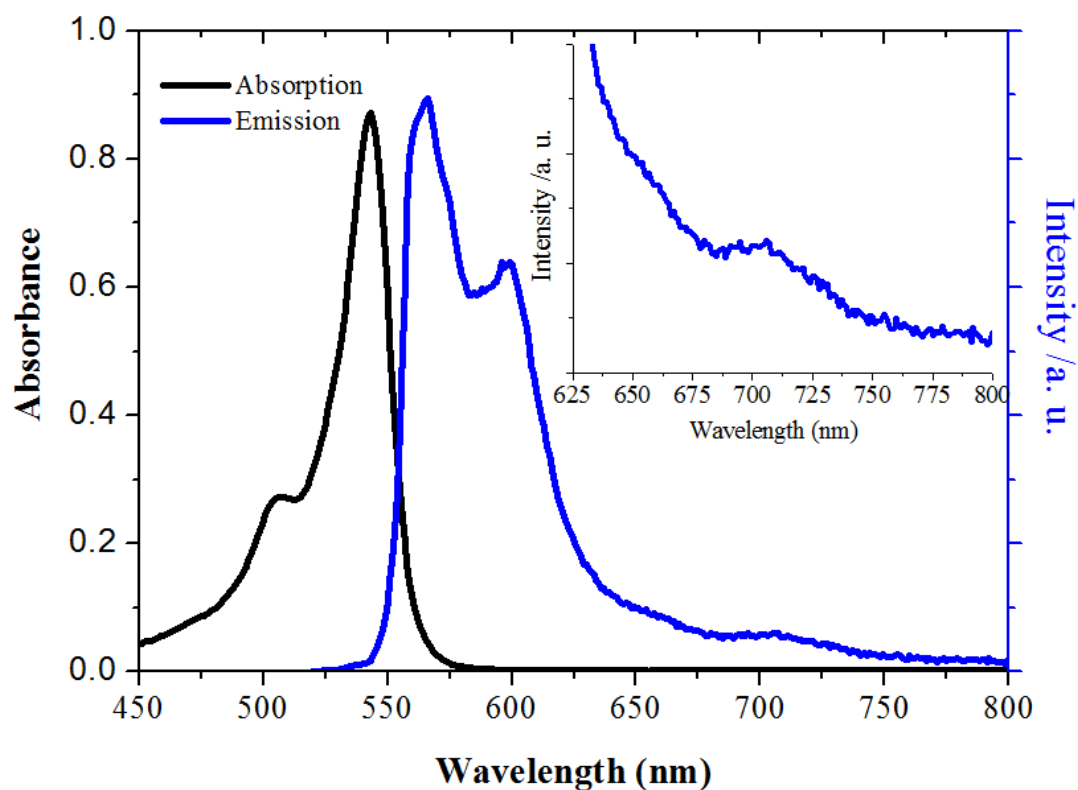


Figure S1. Absorption and emission spectra of TIHF in 77K butyronitrile solution ($[TIHF] = 1.36 \times 10^{-5}$ M) excited at 510 nm. The long wavelength tails from 675 nm to 750 nm are the phosphorescence, which is also shown in the inset.

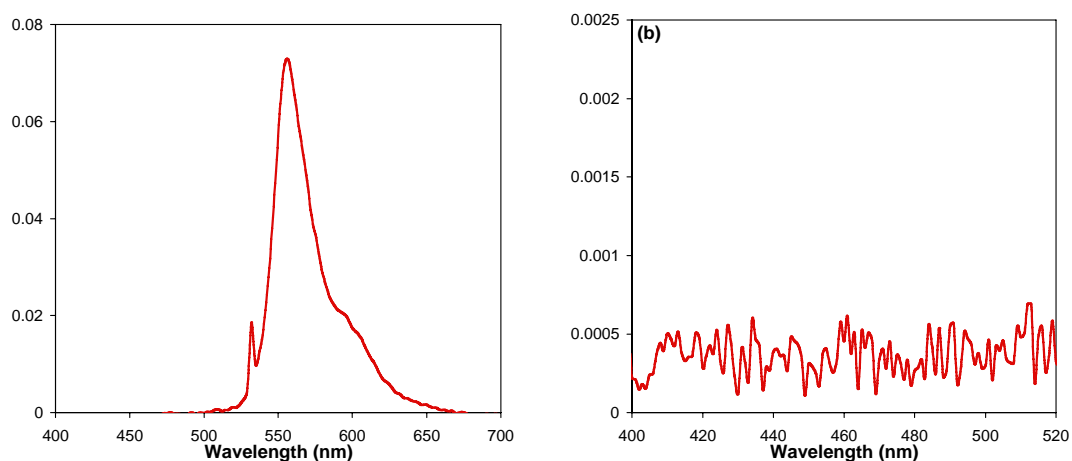


Fig S2. (a) Photoluminescence spectrum of TIHF (1.4×10^{-5} M) in 2:1 THF/MeOH solutions with a second harmonic output of 532 nm from a Nd:YAG laser. (b) Photoluminescence spectrum of DPA (1.4×10^{-2} M) in 2:1 THF/MeOH solutions with a second harmonic output of 532 nm from a Nd:YAG laser.

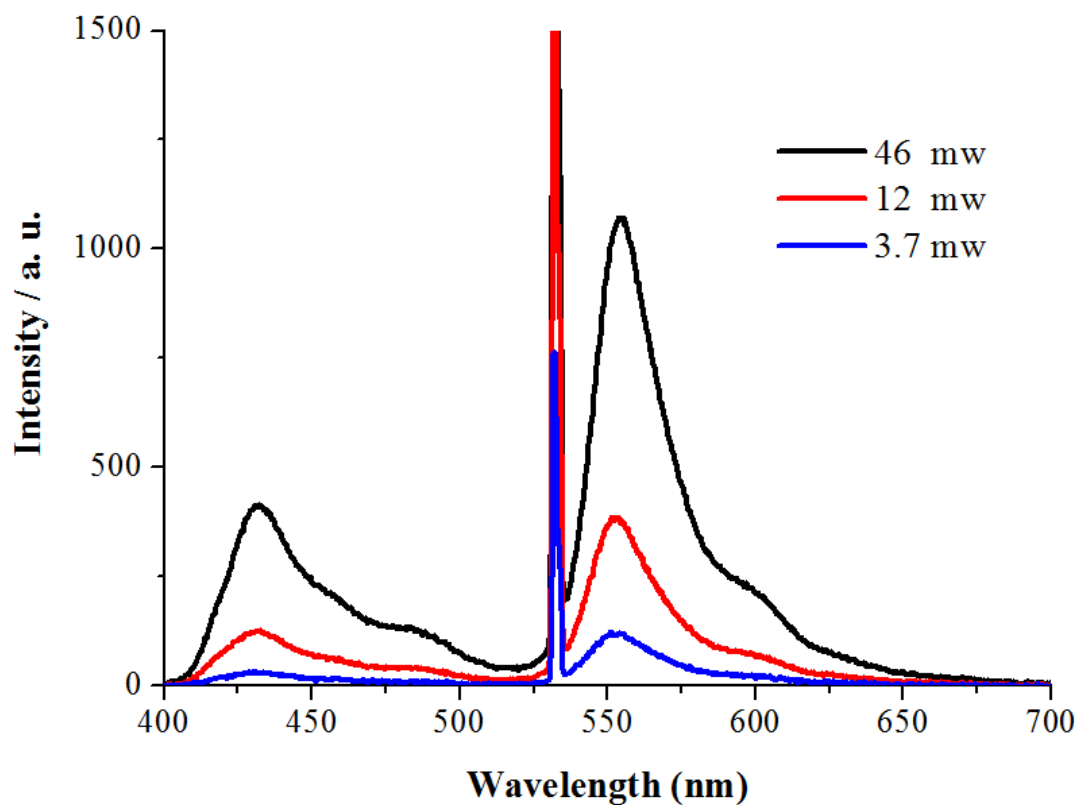


Fig S3. Emission spectra of DPA and TIHF mixture in THF/MeOH solution ($[TIHF] = 1.4 \times 10^{-5} \text{ M}$, $[DPA] = 1.4 \times 10^{-2} \text{ M}$) excited at 532 nm with three different laser powers. The background scattering from the incident 532 nm light source were removed. These spectra were used to calculate the CIE coordinates shown in Fig 5 of the main text.

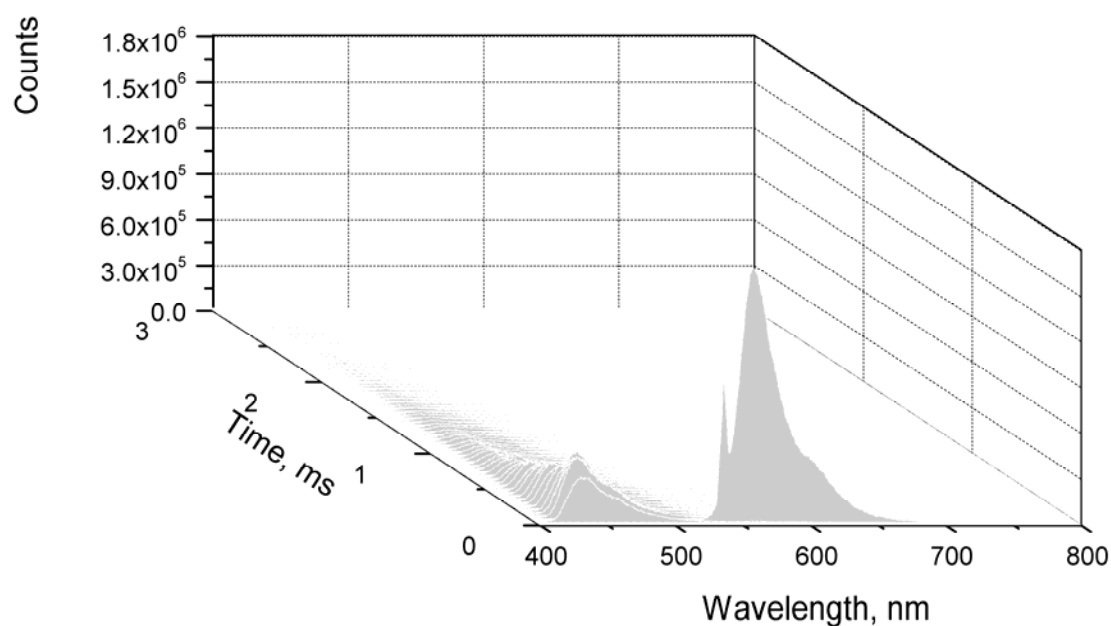


Fig S4. Time-resolved emission spectra of DPA and TIHF mixture in deaerated THF/MeOH solution ($[TIHF] = 1.4 \times 10^{-5} \text{ M}$, $[DPA] = 1.4 \times 10^{-2} \text{ M}$) following a 532 nm, 6 ns laser pulse.

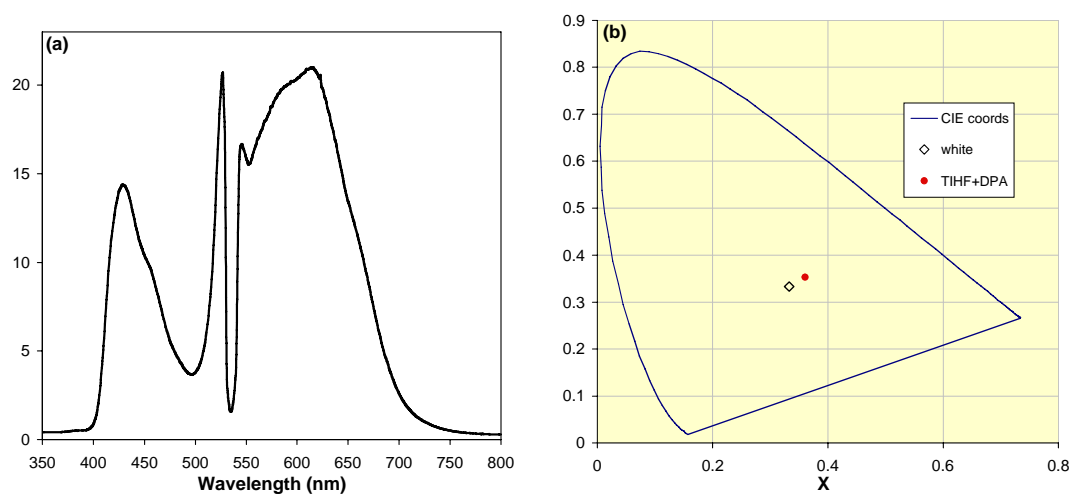


Fig S5. (a) Emission spectra of DPA and TIHF mixture in THF/MeOH solution ($[TIHF] = 1.4 \times 10^{-5} \text{ M}$, $[DPA] = 1.4 \times 10^{-2} \text{ M}$) excited at 539 nm with a Xe lamp. The spectral distortion at $\sim 640 \text{ nm}$ is due to the artefact of Wood's anomaly in the grating system. (b) The CIE coordinates calculated based on the emission spectrum shown in Fig S5(a).

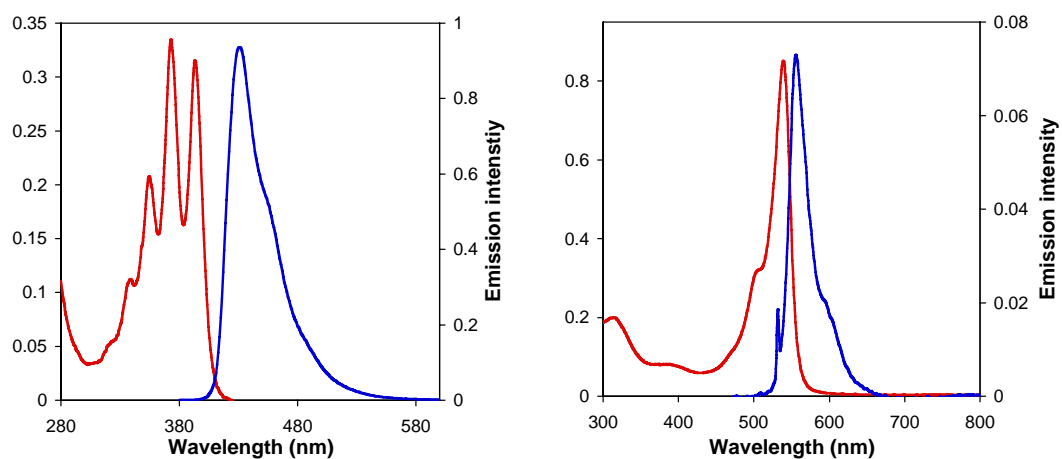


Fig S6. Absorption (red curve) and emission (blue curve) spectra of DPA (Figure left) and TIHF (Figure right) in THF/MeOH solution ($[DPA] = 1.4 \times 10^{-2} M$ and $[TIHF] = 1.4 \times 10^{-5} M$). The excitation wavelengths of DPA and TIHF were 350 nm and 532 nm, respectively.