Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Exciplex Formation between a Pair of Synthesized AIEgens Leads to White Light Generation: A Spectroscopic Exploration

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Contents

1. Characterization of BIMP

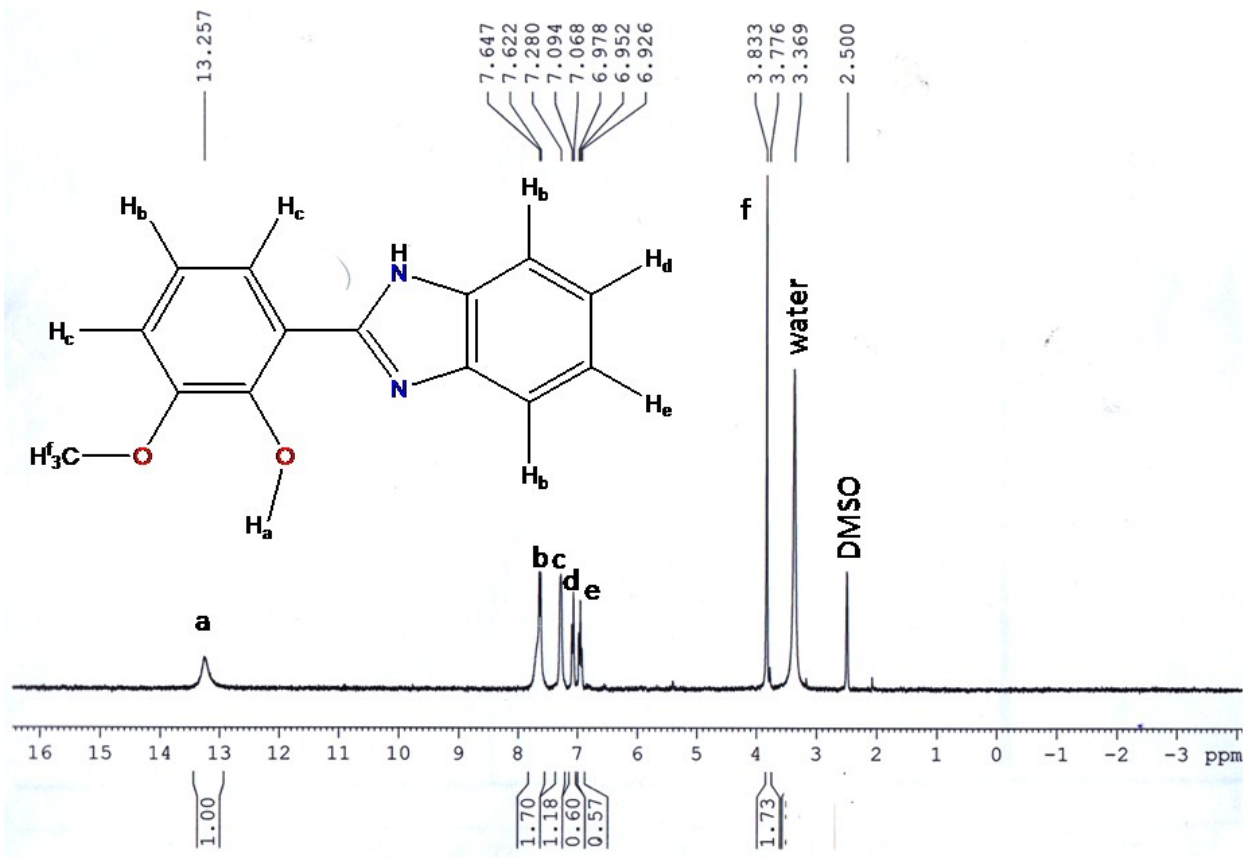

Fig. S1 ^{1}H NMR spectrum of **BIMP** in DMSO-d_6.

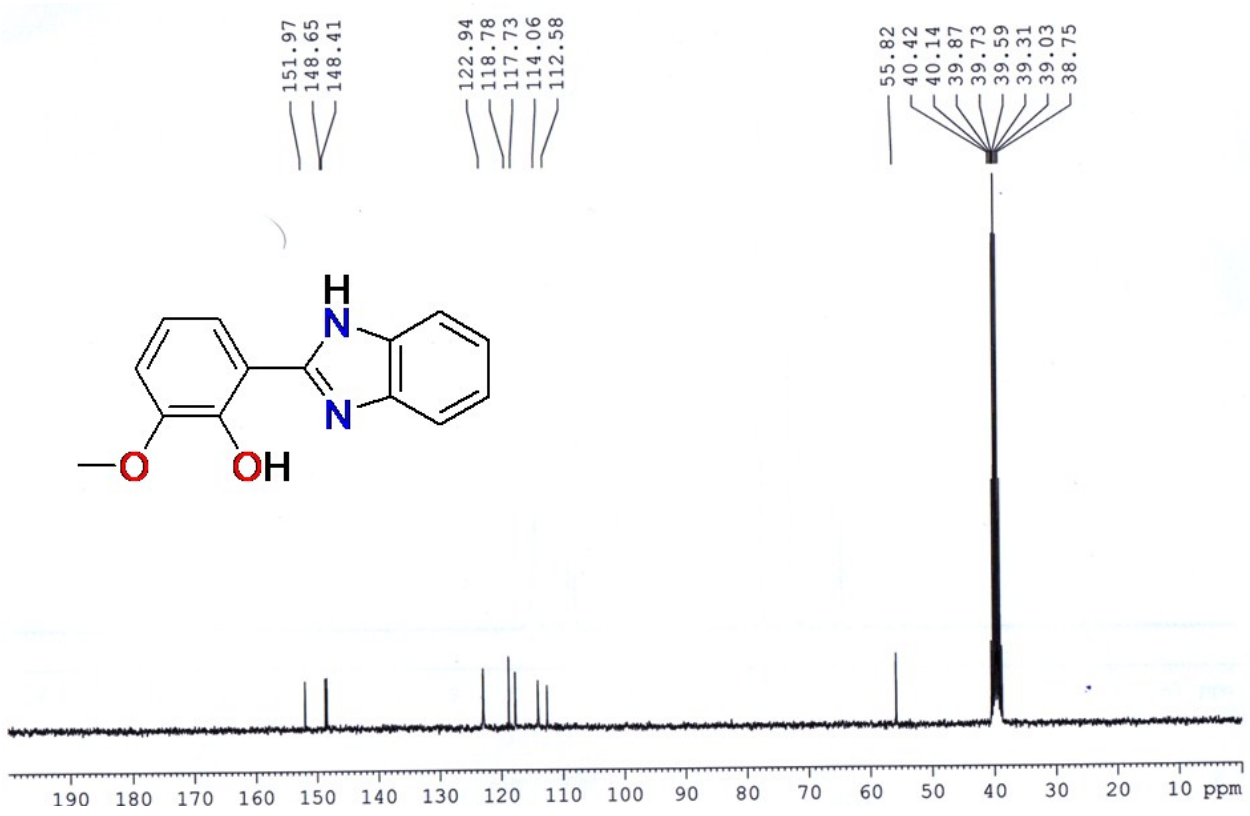

Fig. S2 ^{13}C NMR spectrum of **BIMP** in DMSO-d_6.

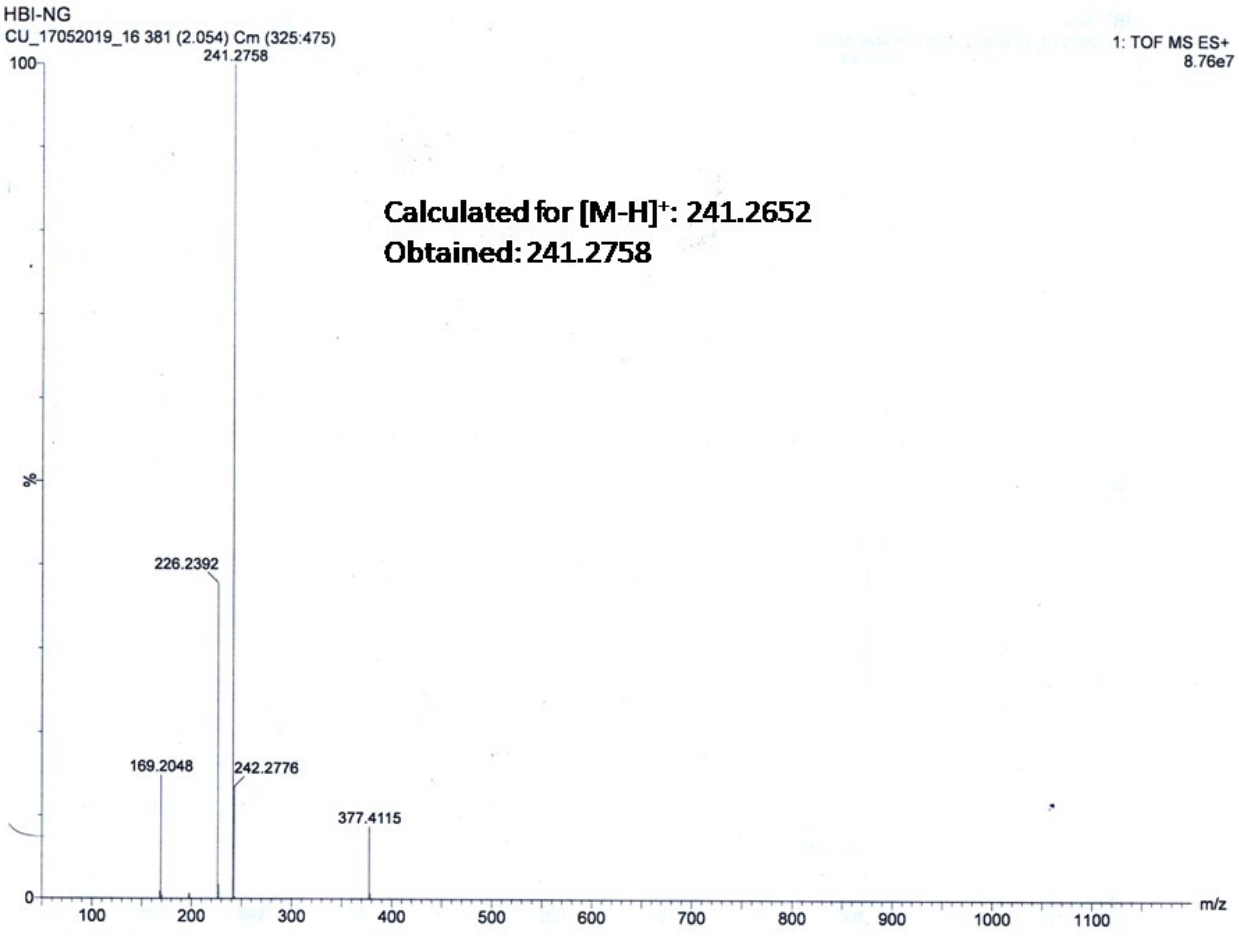

Fig. S3 ESI-MS profile of **BIMP**.

2. Characterization of ECPA

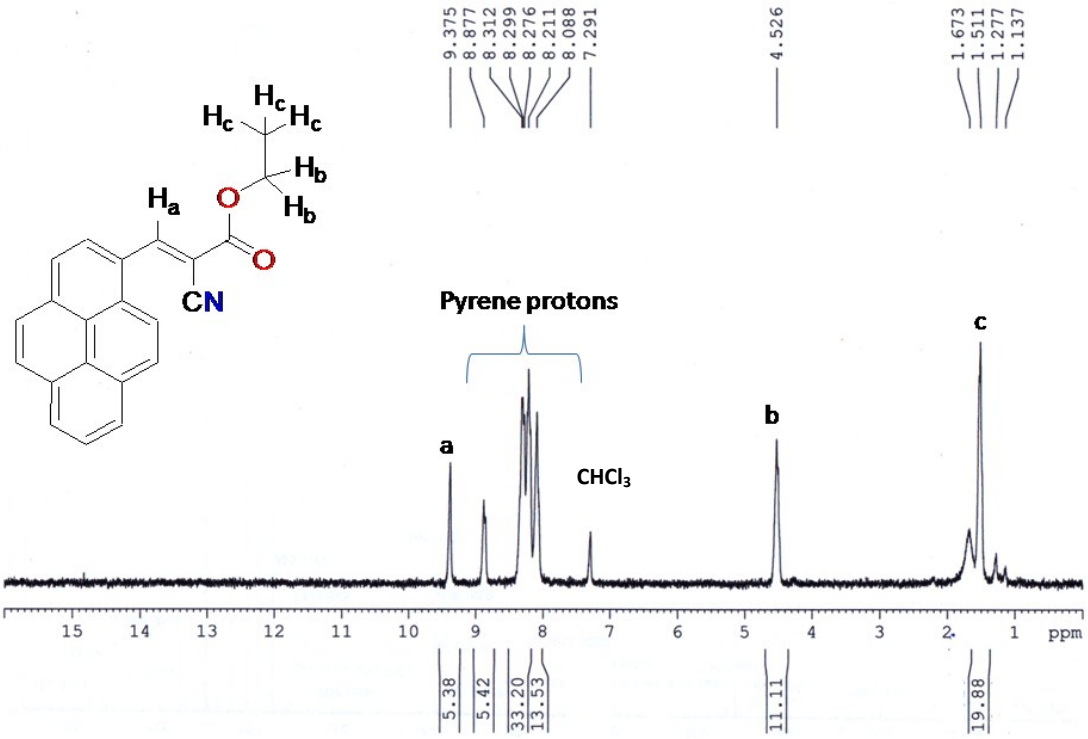

Fig. S4 ^{1}H NMR spectrum of **ECPA** in $CDCl_3$.

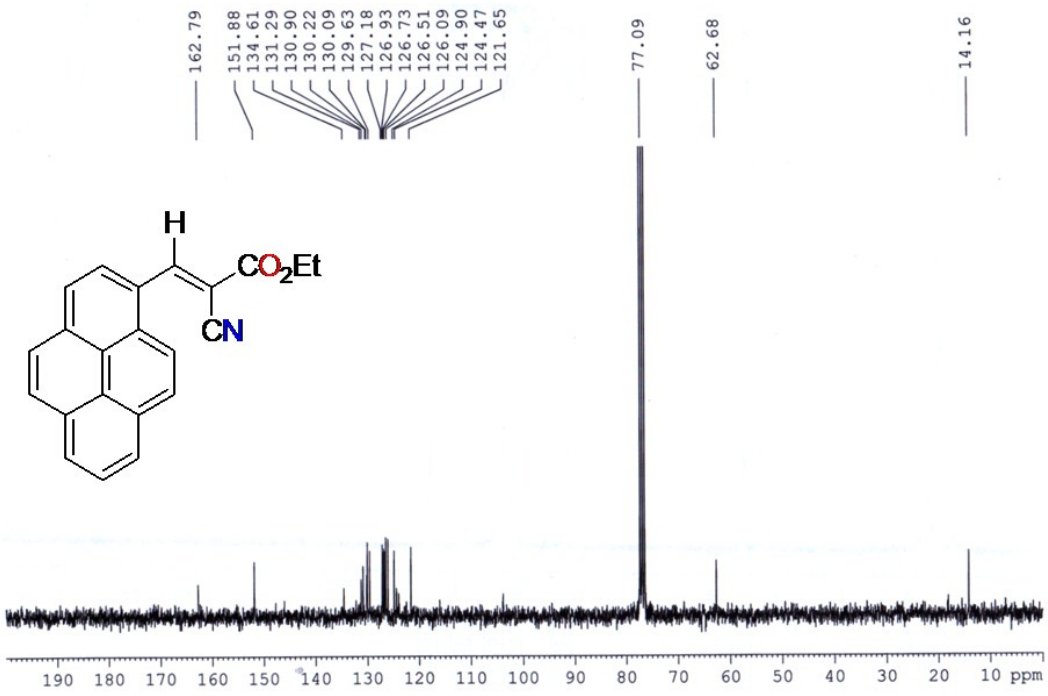

Fig. S5 ^{13}C NMR spectrum of ECPA.

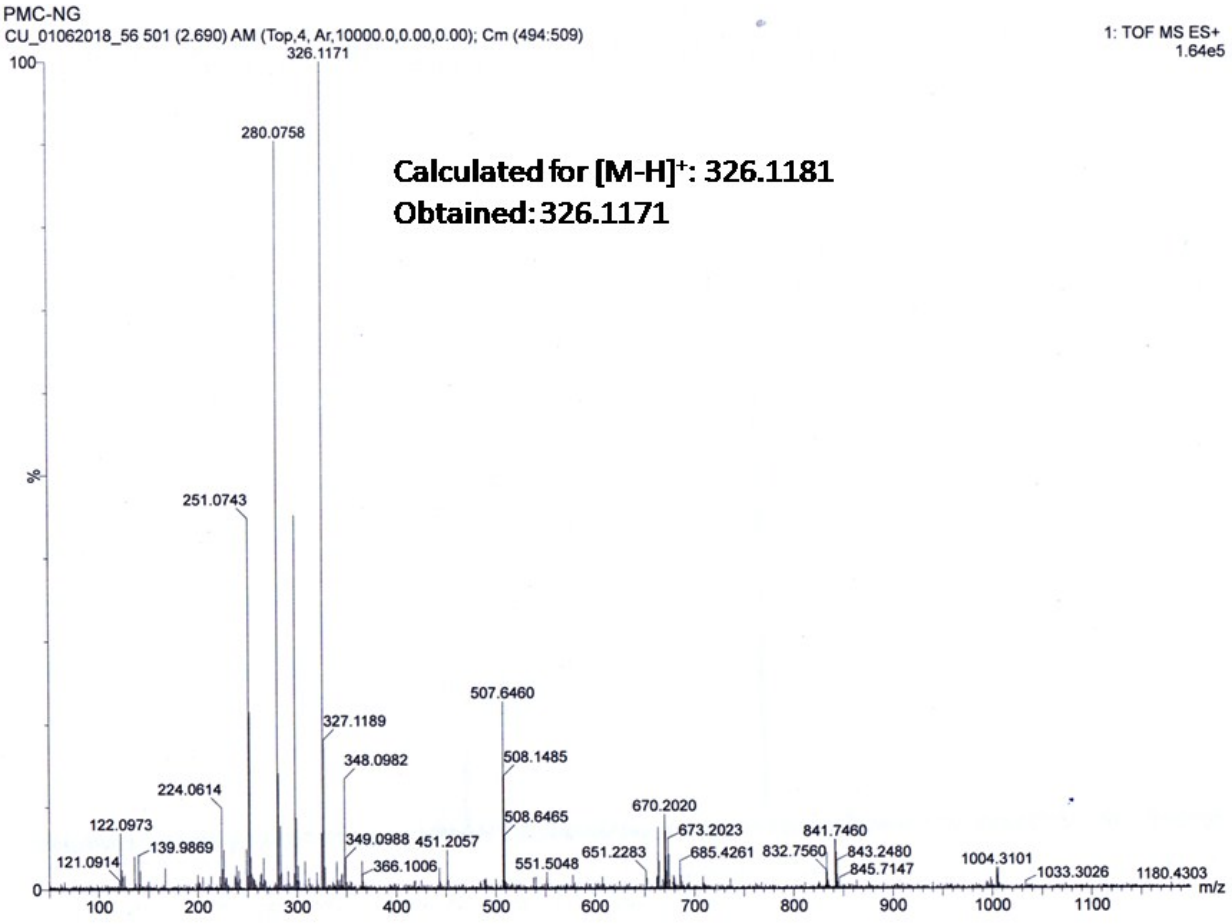

Fig. S6 ESIMS profile of **ECPA**.

3. ORTEP diagram of BIMP

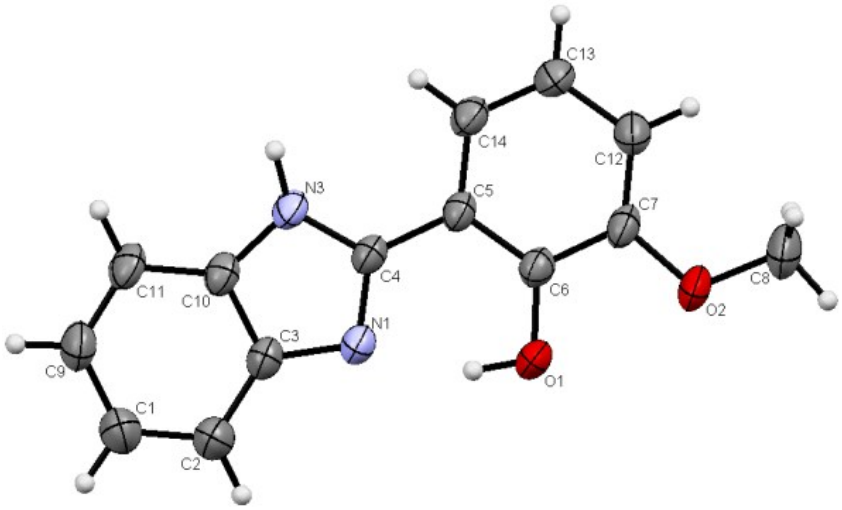

Fig. S7 ORTEP diagram of **BIMP** at 50% probablility. The Hydrogen atoms are not labeled for clarity.

4. Effect of base on absorption and emission profiles of BIMP

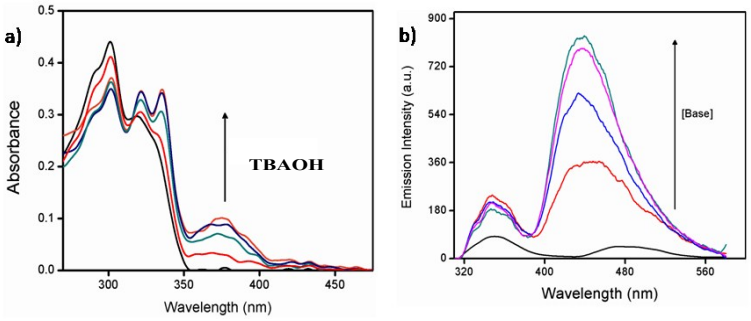

Fig. S8 Effect of addition of base (0-1 μM) on the (a) Absorption and (b) Emission profile of **BIMP** in acetonitrile.

5. Emission profiles of BIMP in various solvents when excited at 300 nm

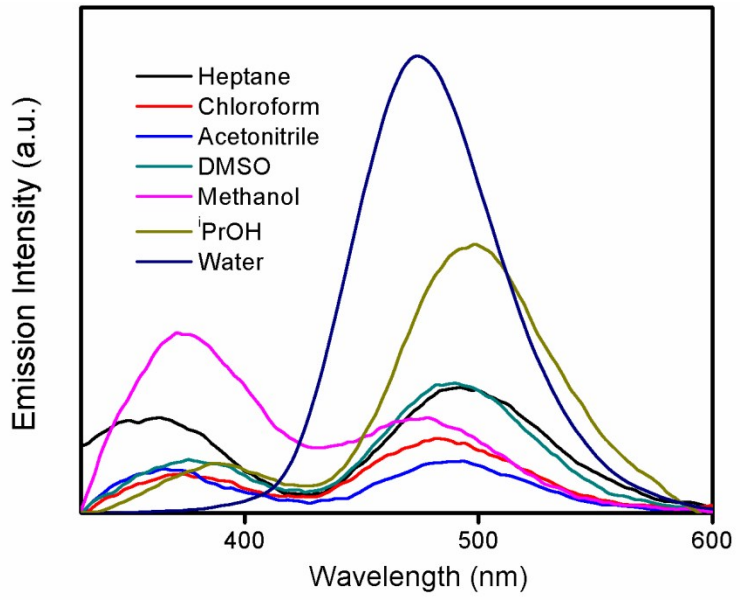

Fig. S9. Emission profiles of **BIMP** in various solvents (λ_{ex}=300 nm).

6. Calculation of quantum yields

The quantum yields (Φ) of **ECPA** and **BIMP** were calculated using the following equation:

$\Phi_S = \Phi_R \times \frac{Abs_R}{Abs_S} \times \frac{A_S}{A_R} \times \frac{\eta_S^2}{\eta_R^2}$, where S denotes sample and R denotes reference. A denotes the area under the emission spectra and η denotes refractive index. The standards were chosen using standard manual (Reference S1). For **BIMP**, the standard was chosen to be Anthracene and for **ECPA** it was Coumarin 153.

7. DLS profiles of BIMP in water and acetonitrile

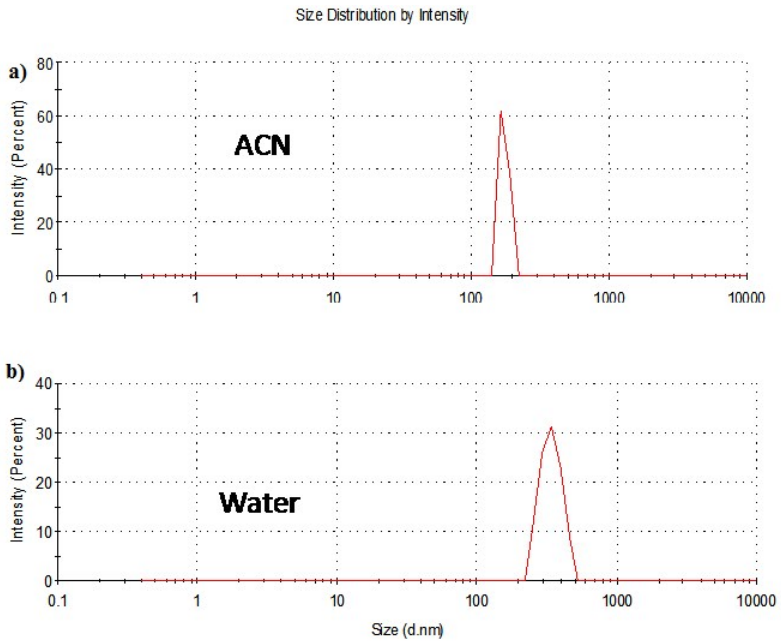

Fig. S10 DLS profiles of **BIMP** in (a) acetonitrile and (b) water.

8. DLS profiles of ECPA in water and acetonitrile

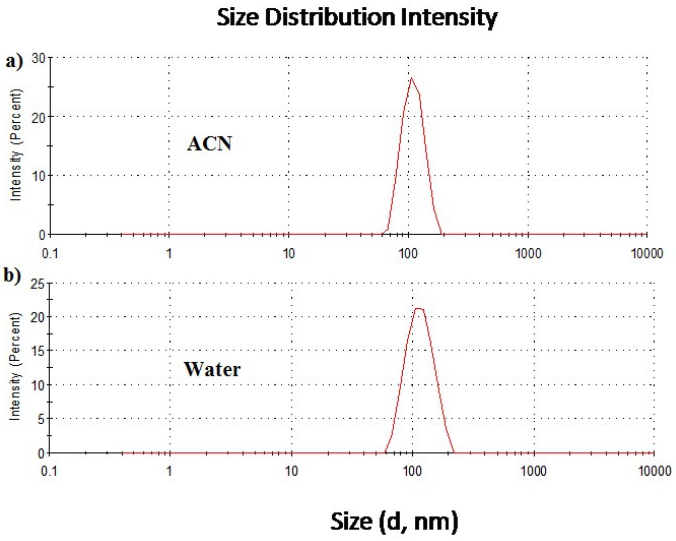

Fig. S11 DLS profiles of **ECPA** in (a) acetonitrile and (b) water.

9. Overlap of Emission and absorption profiles of BIMP and ECPA

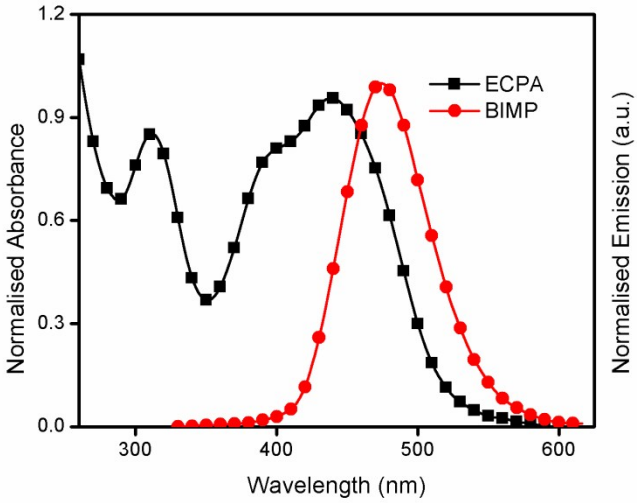

Fig. S12 Overlap of emission profile of **BIMP** with absorption profile of **ECPA**.

10. Excitation profiles of BIMP-ECPA ensemble

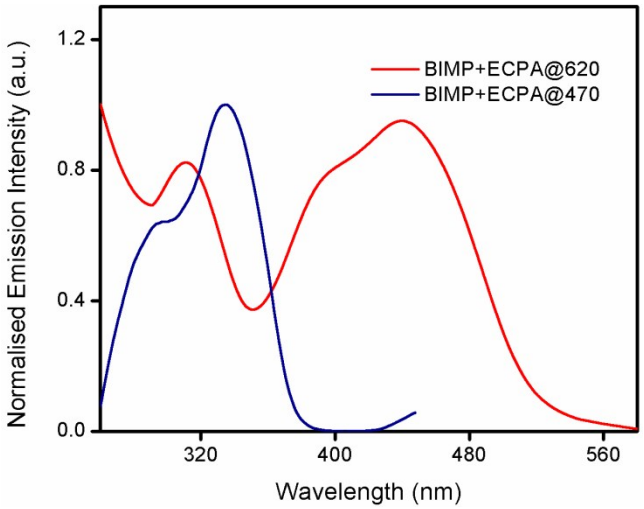

Fig. S13 Excitation profiles of **BIMP-ECPA** ensemble in water.

11. CIE Chromacity diagram for BIMP-ECPA mixture

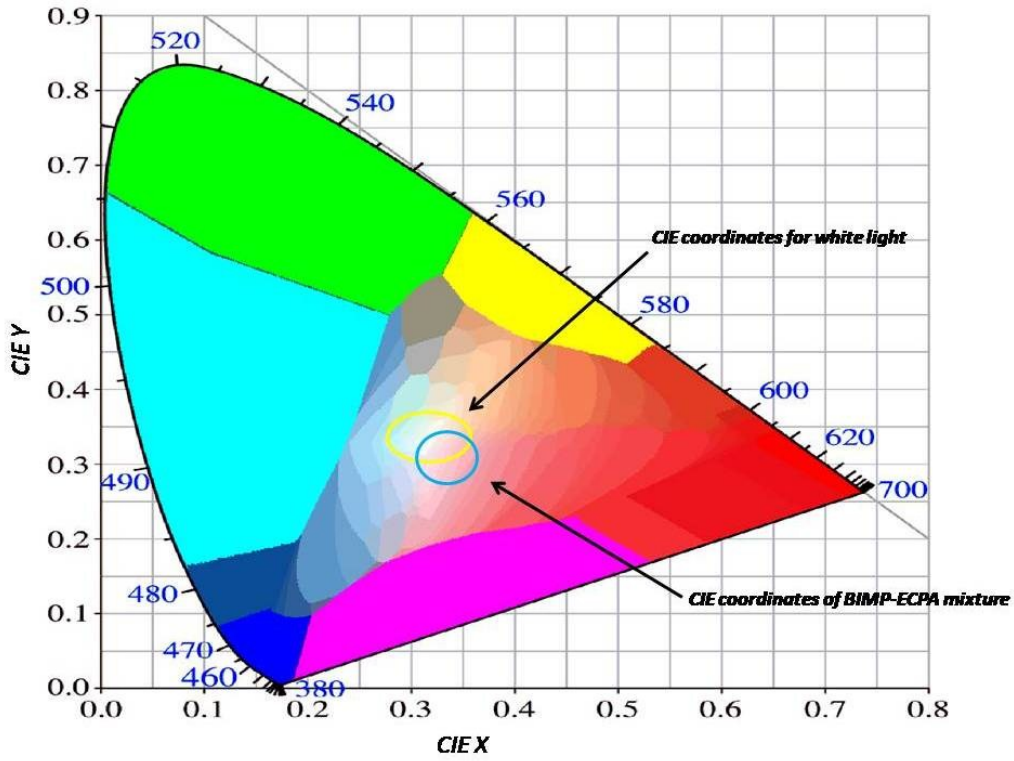

Fig. S14 CIE chromacity diagram of **BIMP-ECPA** mixture in water (λ_{ex}=330 nm).

12. References

S1. A. M. Brouwer, *Pure Appl. Chem.*, 2011, 83, 2213–2228.