Electronic Supplementary Material (ESI) for Inorganic Chemistry Frontiers.

Electronic Supplementary Information

Morphology-controlled self-assembled nanostructures of complementary metalloporphyrin triads through intermolecular coordination tuning and their photocatalytic degradation for Orange II

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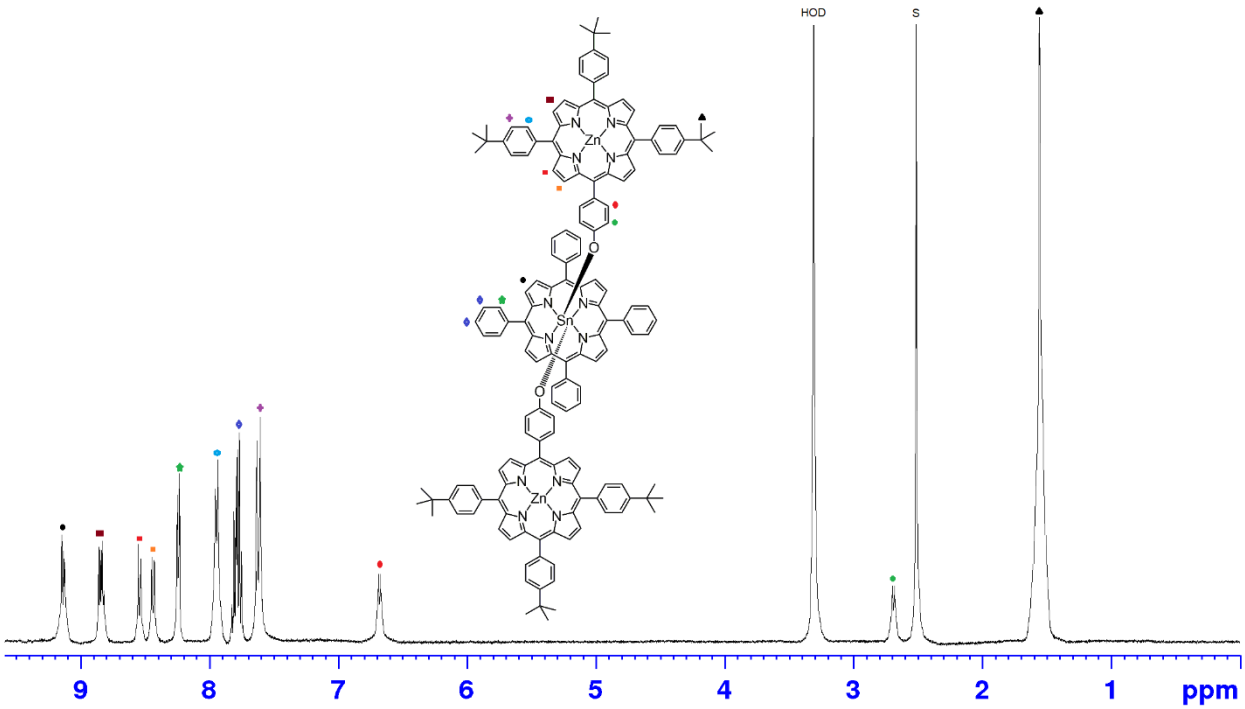

Fig. S1 ^{1}H NMR spectrum of triad **1** in DMSO-d_6.

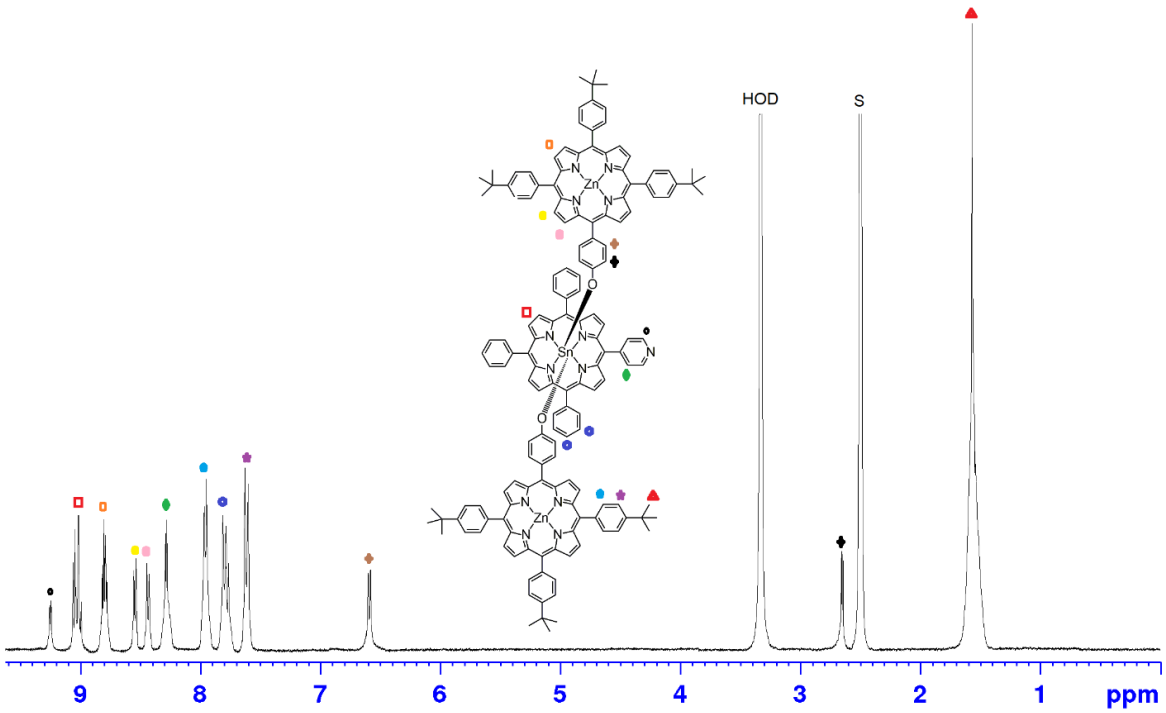

Fig. S2 ^{1}H NMR spectrum of triad **2** in DMSO-d_6.

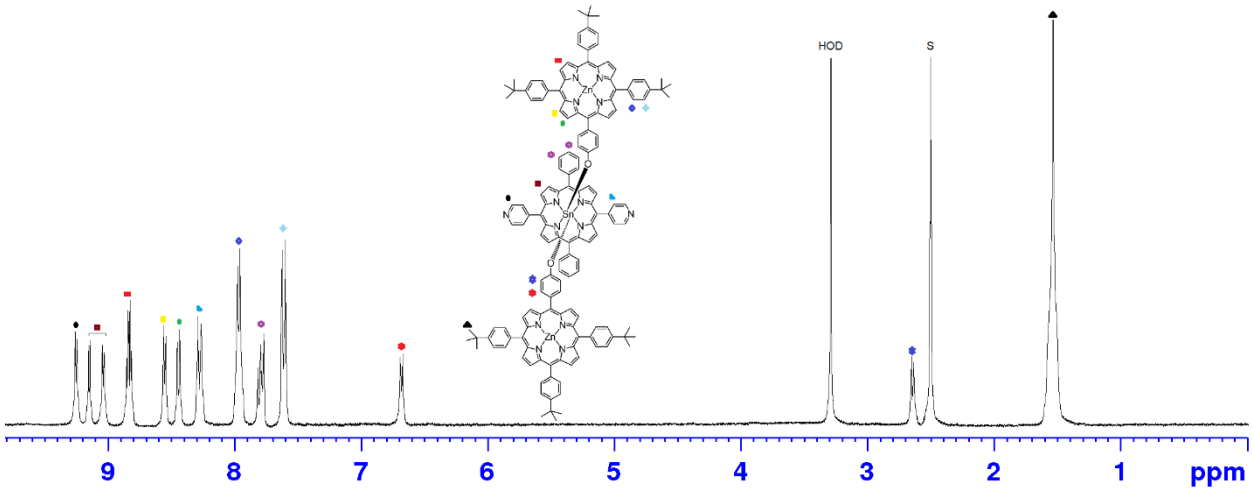

Fig. S3 ^{1}H NMR spectrum of triad **3** in DMSO-d_6.

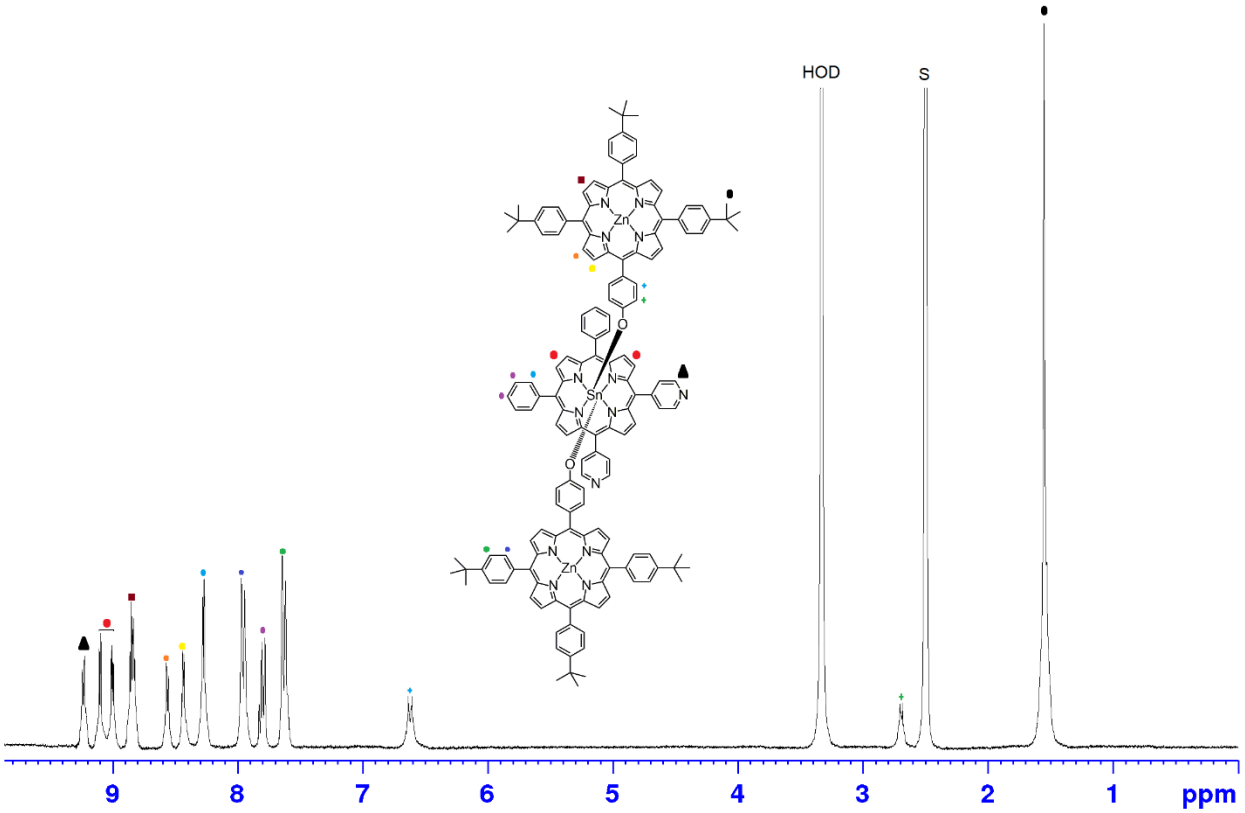

Fig. S4 ^{1}H NMR spectrum of triad **4** in DMSO-d_6.

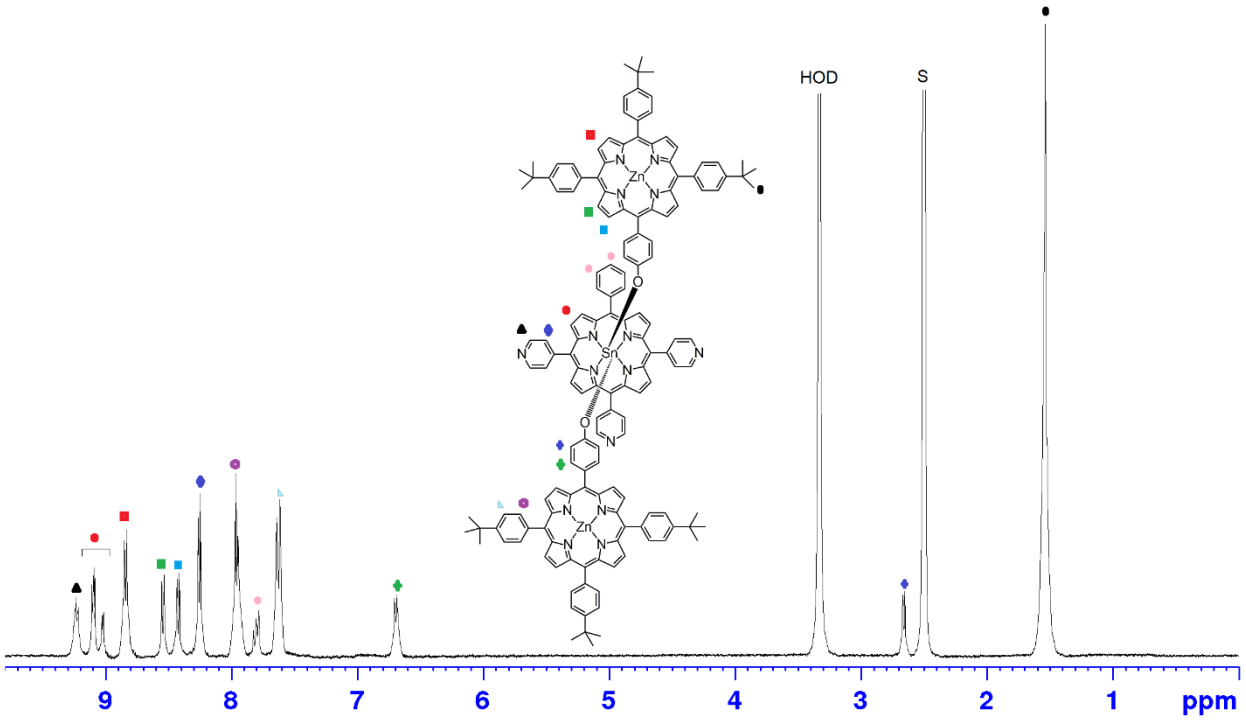

Fig. S5 ^{1}H NMR spectrum of triad **5** in DMSO-d_6.

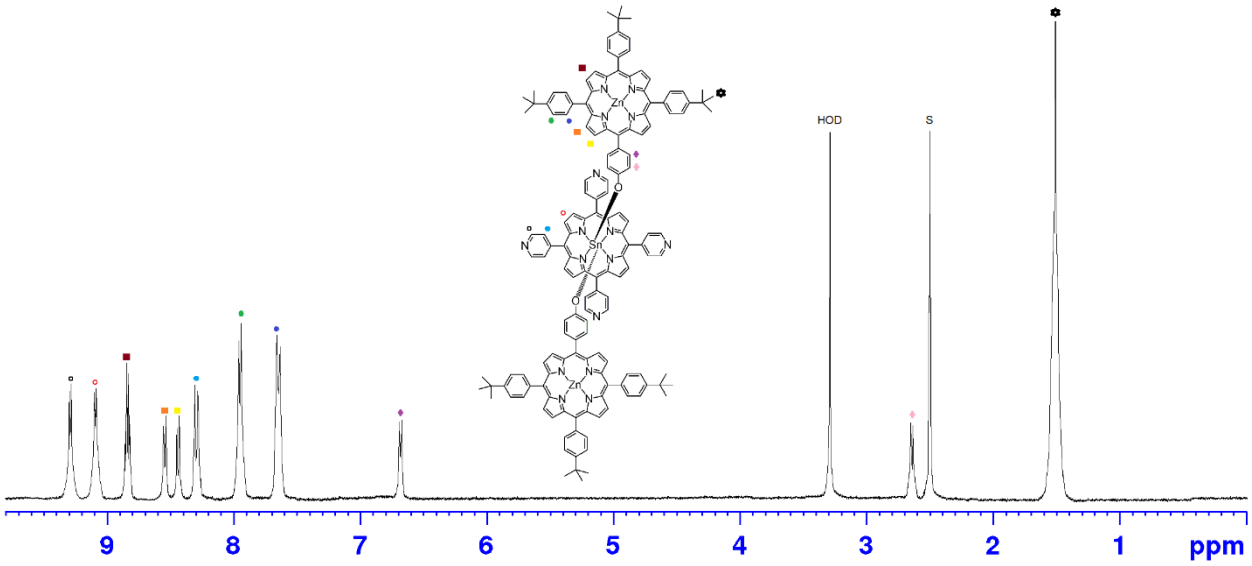

Fig. S6 ^{1}H NMR spectrum of triad **6** in DMSO-d_6.

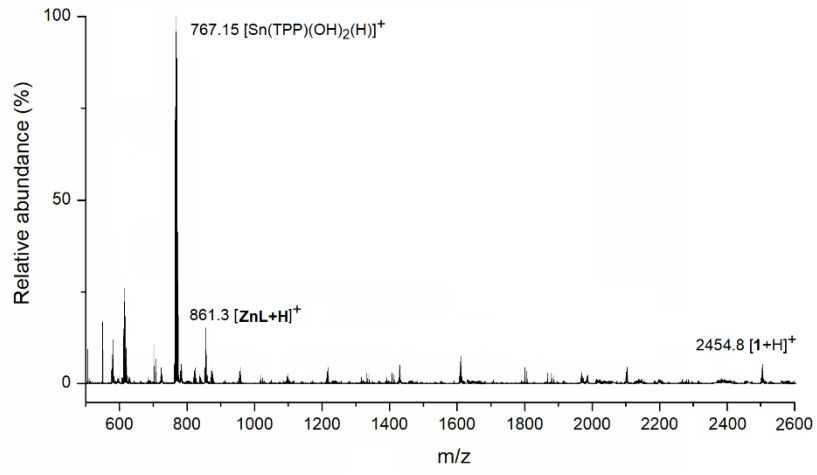

Fig. S7 ESI-mass spectrum of triad **1**.

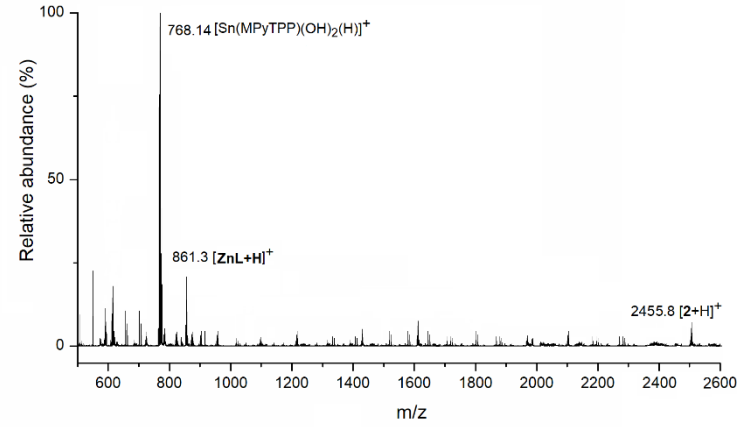

Fig. S8 ESI-mass spectrum of triad **2**.

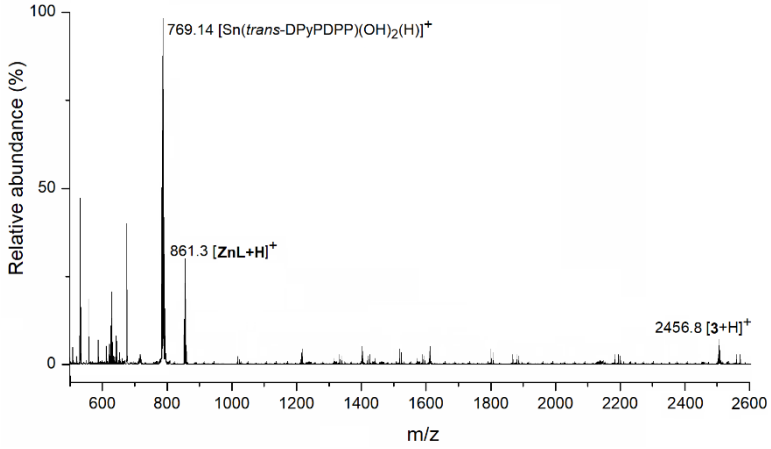

Fig. S9 ESI-mass spectrum of triad **3**.

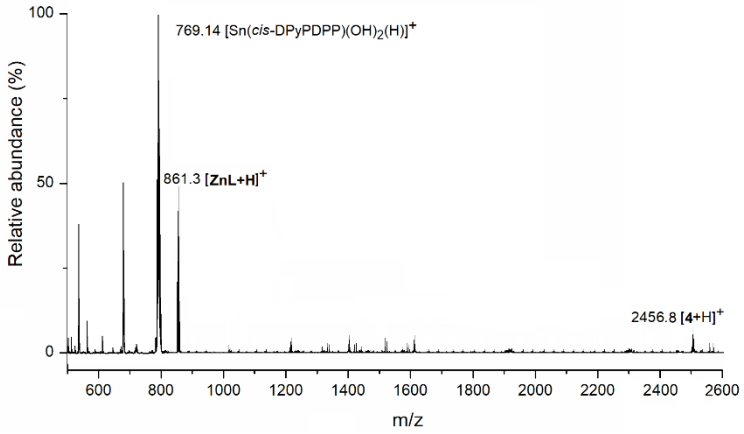

Fig. S10 ESI-mass spectrum of triad **4**.

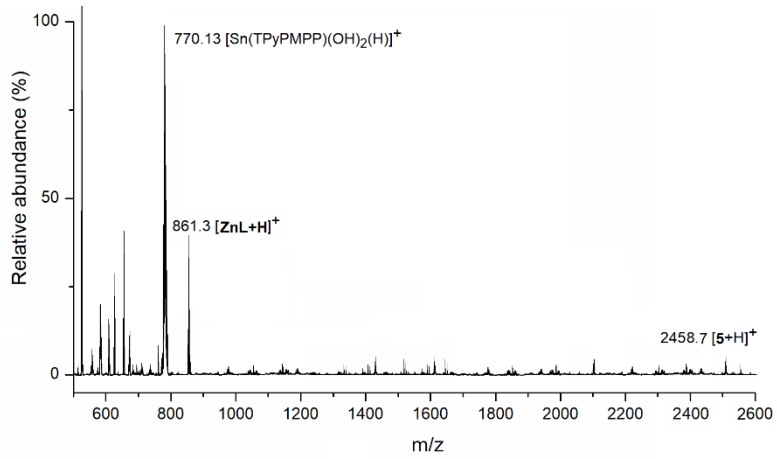

Fig. S11 ESI-mass spectrum of triad **5**.

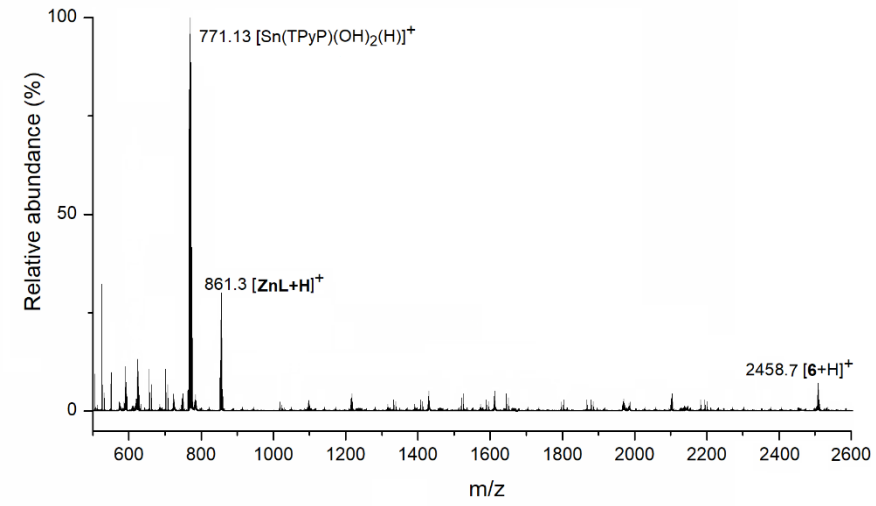

Fig. S12 ESI-mass spectrum of triad **6**.

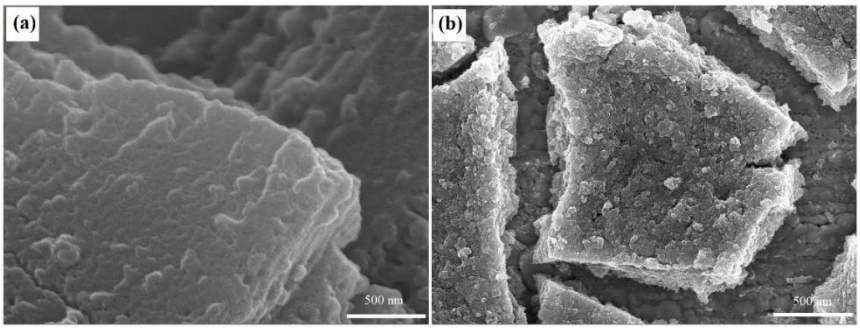

Fig. S13 High-resolution FE-SEM images of the morphologies for self-assembled aggregates formed from the mixed solvent (toluene: *n*-hexane = 1:1). (a) **ZnP**; (b) **SnP**[1].

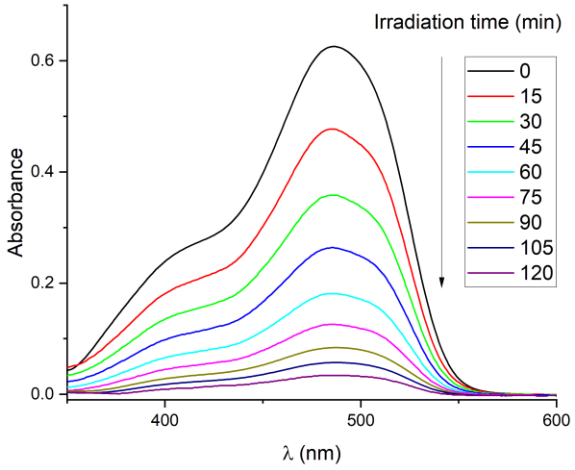

Fig. S14 Time-dependent absorption spectra of Orange II (ORII) in the presence of photocatalyst derived from triad **4** under visible-light irradiation.

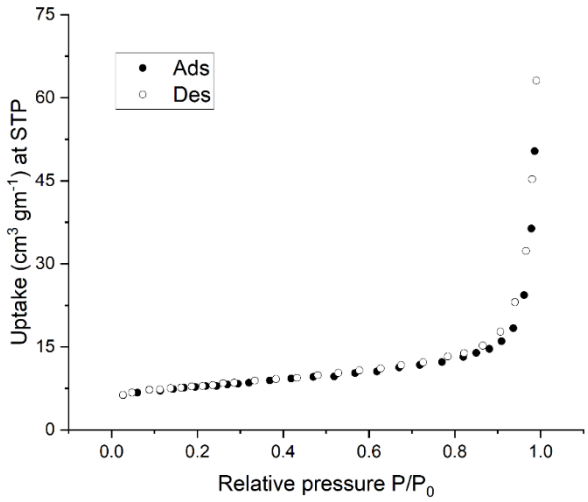

Fig. S15 Adsorption and desorption isotherms of N_2 for catalyst **4** at 77 K.

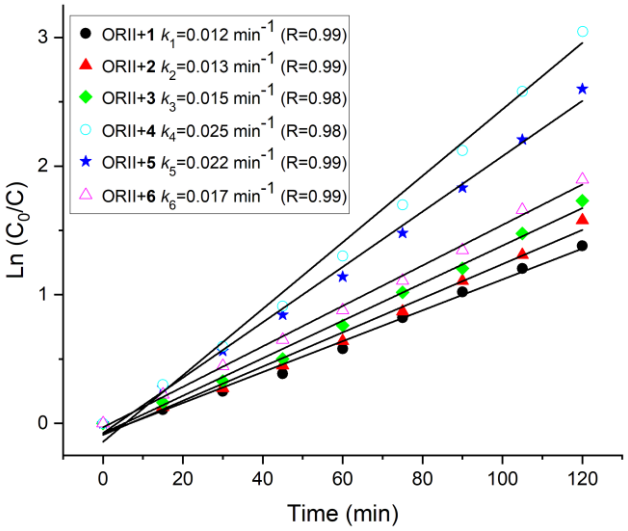

Fig. S16 Kinetics for the photocatalytic degradation of Orange II (ORII) by nanostructures derived from mixed solvent system under visible-light irradiation.

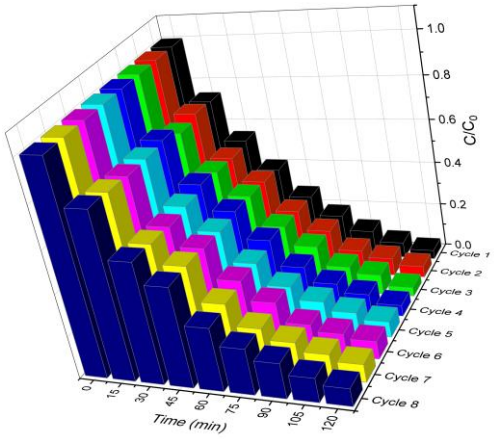

Fig. S17 Catalytic cycles (consecutive 8 cycles) for photocatalyst **4** for the degradation of Orange II (ORII).

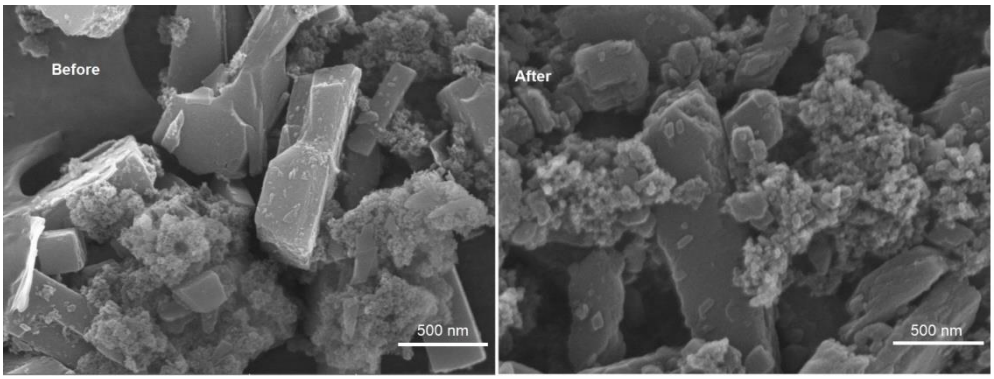

Fig. S18 FE-SEM image of photocatalyst **4** after 8 consecutive cycles in the degradation of Orange II (ORII).

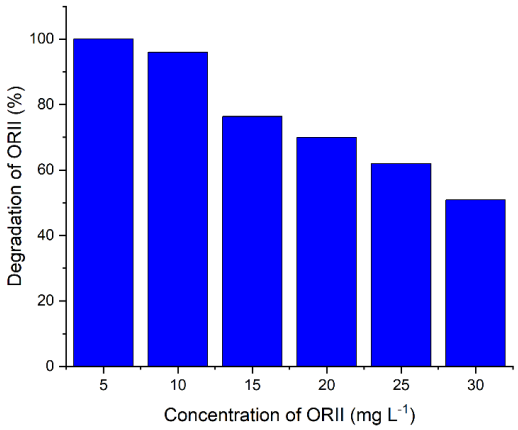

Fig. S19 Performance of photocatalyst **4** (10 mg used) with respect to changes in initial concentration of Orange II (ORII).

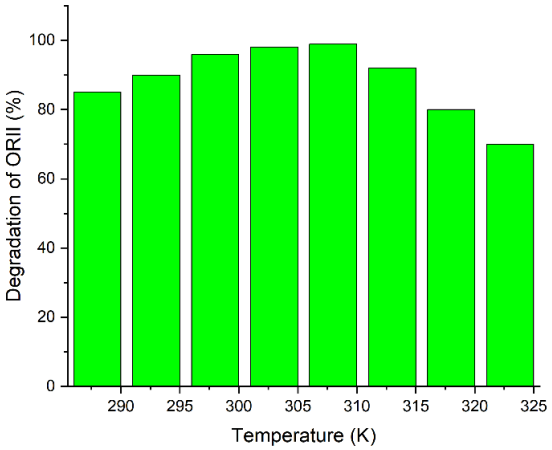

Fig. S20 Effect of temperature for the degradation by photocatalyst **4**.

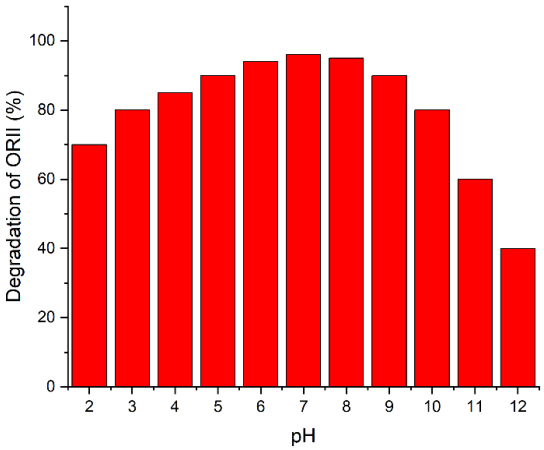

Fig. S21 Effect of pH of the solution for the degradation by photocatalyst **4**.

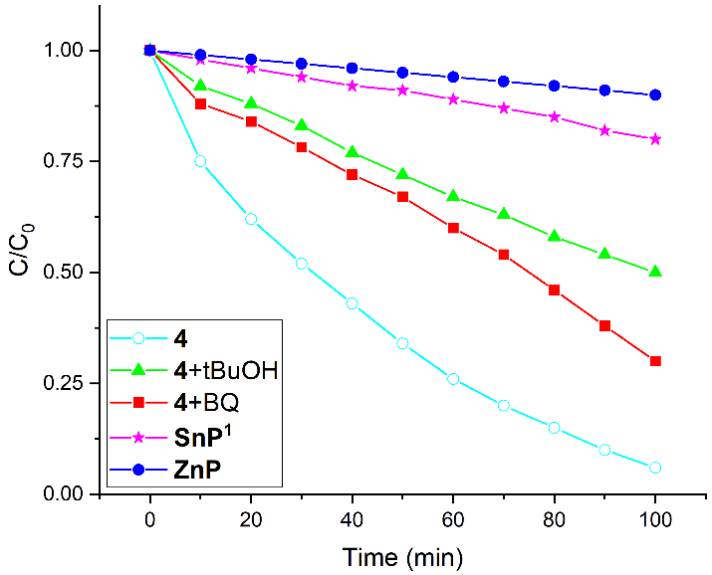

Fig. S22 Photocatalytic degradation of Orange II (ORII) in aqueous solution by photocatalyst **4** generated from mixed solvent with the addition of different scavengers under visible light irradiation. **SnP**[1] and **ZnP** were also used as a catalyst for comparison.

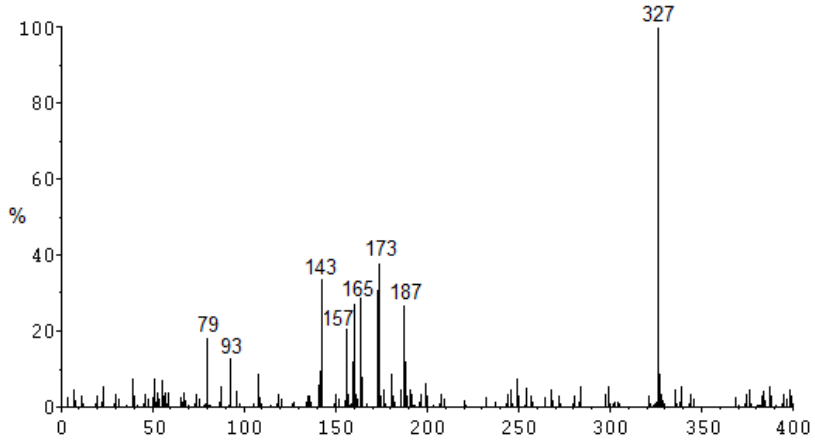

Fig. S23 ESI-mass spectrum (negative ion mode) of the reaction mixture of Orange II (ORII) with photocatalyst **4** after 1 h of visible-light irradiation.