## **Supporting Information**

## Organic Nano-structures with Controllable Morphology Fabricated from Mixed (Phthalocyaninato)(porphyrinato) Europium Double-decker Complexes

Xiaomei Zhang, Quanbo Wang, Lizhen Wu, Wei Lv, Jitao Lu, Yongzhong Bian, and Jianzhuang Jiang\*



**Figure S1.** CD spectra of (*R*) and (*S*)-EuH[Pc(OBNP)<sub>2</sub>](TClPP) (**2**) in dilute chloroform solution (A) and their nano-scale hollow spheres fabricated from (*R*) and (*S*)-EuH[Pc(OBNP)<sub>2</sub>](TClPP) (**2**) with CMC dispersed in methanol (B).



**Figure S2.** IR spectra of nano-scale hollow spheres (A) fabricated from 1/CMC complex, double-decker 1 (B) and nano-belts fabricated from 1 (C) in the region of 400-1800 cm<sup>-1</sup> with 2 cm<sup>-1</sup> resolution.



**Figure S3.** IR spectra of nano-scale hollow spheres (A) fabricated from 2/CMC complex, double-decker 2 (B) and nano-tubes fabricated from 2 (C) in the region of 400-1800 cm<sup>-1</sup> with 2 cm<sup>-1</sup> resolution.



Figure S4. Molecular size of 1 obtained from the crystal structure of a similar compound Gd(Pc)(TCIPP) (A) and schematic representation of a dimer (B) formed from compound 1.



**Figure S5.** Molecular size of 1 obtained from the crystal structure of a similar compound, Gd(Pc)(TClPP) (A) and schematic representation of a dimer (B) formed from 1/CMC complex.



**Figure S6.** (A) Low-magnification TEM image of the self-assembled nano-belts of symmetric EuH[Pc(OBNP)<sub>2</sub>](TClPP) (**2**); (B) SEM image of the self-assembled nano-belts of symmetric EuH[Pc(OBNP)<sub>2</sub>](TClPP) (**2**); (C) High-magnification SEM image of symmetric EuH[Pc(OBNP)<sub>2</sub>](TClPP) (**2**), showing the terminal belt structure.



**Figure S7.** TEM spectra of nanoparticles fabricated from (R)-EuH[Pc(OBNP)<sub>2</sub>](TCIPP) (**2**) at 45°C.