Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Supporting Information

Morphology-Dependent Supramolecular Photocatalytic Performance of Porphyrin Nanoassemblies: From Molecule to Artificial Supramolecular Nanoantenna

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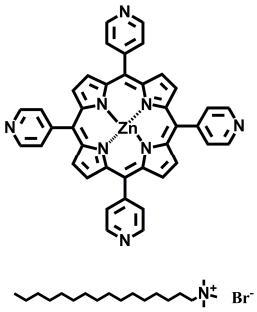

Scheme S1. Chemical structure of ZnTPyP (top panel) and CTAB (bottom panel).

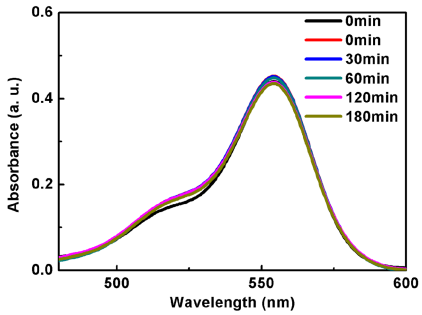

Fig. S1. Real–time absorption spectra of RhB dye during the photodegradation process. The data is obtained from a blank experiment, where no catalyst is used. The black and red curves marked as 0 min are the absorption spectra detected from the original RhB solution before (black) and after (red) the dark adsorption experiment, respectively.

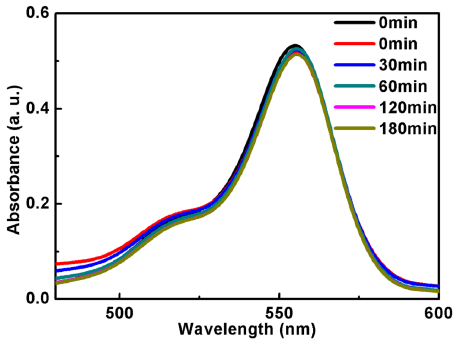

Fig. S2. Real–time absorption spectra of RhB dye over ZnTPyP nanospheres, which are obtained by an aging time of 15 minutes. The black and red curves marked as 0 min are the absorption spectra detected from the original RhB solution before (black) and after (red) the dark adsorption experiment, respectively.

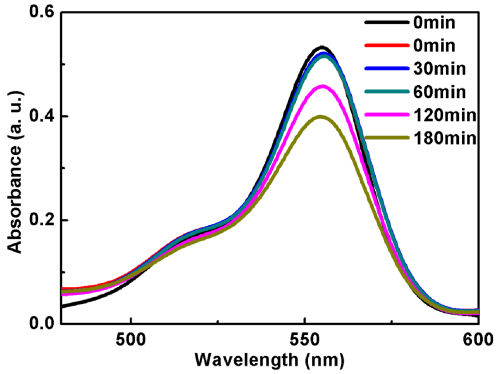

Fig. S3. Real–time absorption spectra of RhB dye over ZnTPyP nanospheres/nanofibers, which are obtained by an aging time of 24 hours. The black and red curves marked as 0 min are the absorption spectra detected from the original RhB solution before (black) and after (red) the dark adsorption experiment, respectively.

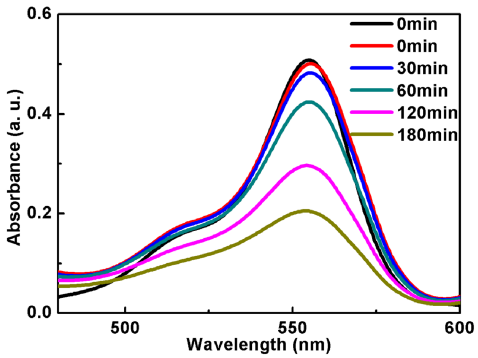

Fig. S4. Real–time absorption spectra of RhB dye over ZnTPyP nanofibers, which are obtained by an aging time of 10 days. The black and red curves marked as 0 min are the absorption spectra detected from the original RhB solution before (black) and after (red) the dark adsorption experiment, respectively.

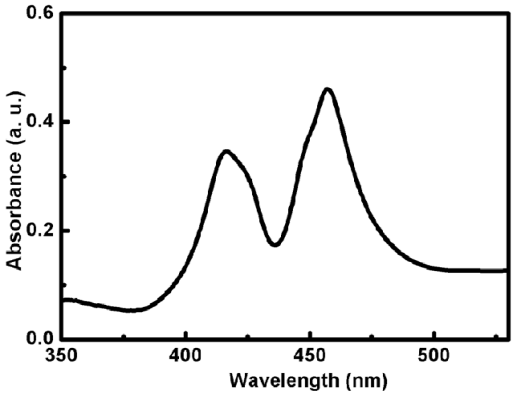

Fig. S5. UV-vis spectrum of the ZnTPyP nanofibers measured after the photocatalytic performance.

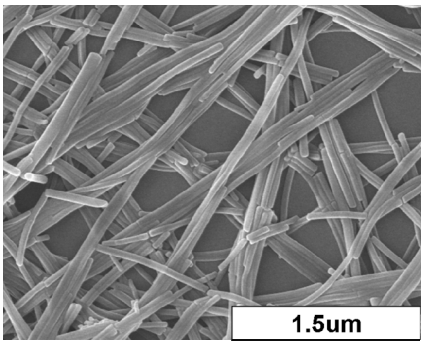

Fig. S6. SEM image of the ZnTPyP nanofibers measured after the photocatalytic performance.

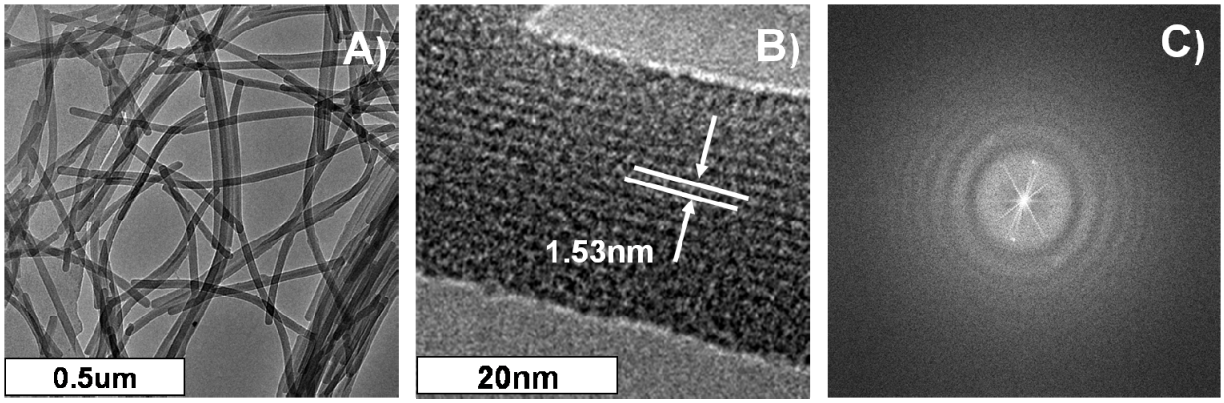

Fig. S7. A) and B): the LRTEM (A) and HRTEM (B) images of the ZnTPyP nanofibers, observed after the after the catalytic performance. C): the FFT pattern of the corresponding nanostructure shown in panel B.

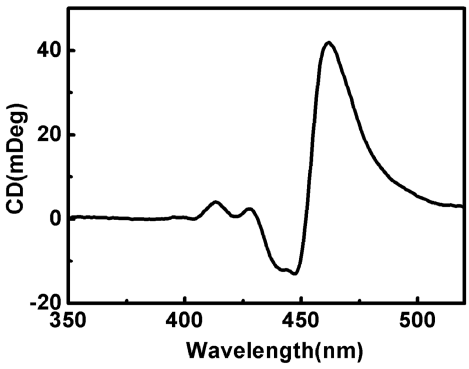

Fig. S8. CD spectra of the ZnTPyP nanofibers fabricated in different batches could display opposite CD signals compared with that shown in the top panel of Fig. 4B.