

Electronic Supplementary Information

Tunable molecular packing modes via H- or J-aggregates in the supramolecular helical nanostructures from an achiral C_3 symmetric molecule

Yi Lu^a, Zhaocun Shen^c, Changshuo Lian^a, Jie Wu^{*a}, Minghua Liu^{*b}, Zongxia Guo^{*a}

^aKey Laboratory of Optic-electric Sensing and Analytical Chemistry for Life Science, MOE, College of Chemistry and Molecular Engineering, Qingdao University of Science and Technology, Qingdao, China, Shandong Key Laboratory of Biochemical Analysis, College of Chemistry and Molecular Engineering, Qingdao University of Science and Technology, Qingdao, China.

^bBeijing National Laboratory for Molecular Science, CAS Key Laboratory of Colloid, Interface and Chemical Thermodynamics, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, P. R. China.

^cCollege of Materials Science and Engineering, State Key Laboratory of Bio-Fibers and Eco-Textiles, Shandong Collaborative Innovation Center of Marine Biobased Fibers and Ecological Textiles, Institute of Marine Bio-based Materials, Qingdao University, Qingdao 266071, P. R. China

** E-mail: wujie@qust.edu.cn, liumh@iccas.ac.cn, zxguo@qust.edu.cn.*

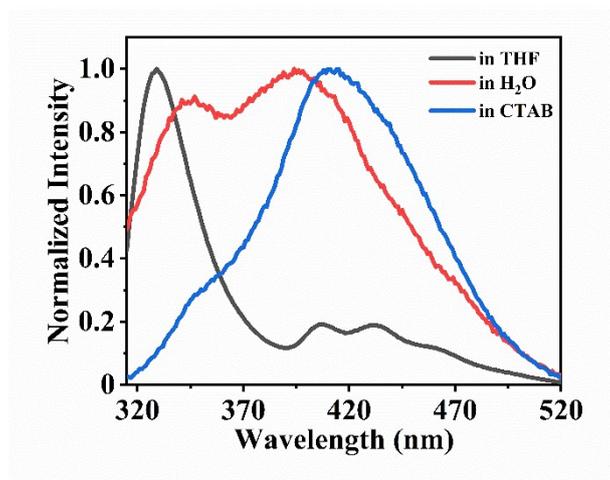


Fig. S1 FL spectra of BTECM in THF, H₂O and CTAB aqueous solution (1.2 mM) after 240 h of aging at 25°C, all of the spectra were normalized by the maximum emission of black line.

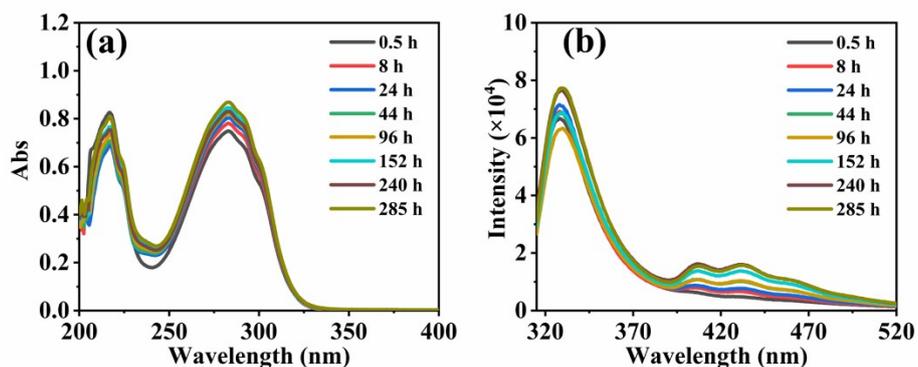


Fig. S2 UV-Vis spectra (a) and FL spectra (b) of BTECM in THF as a function of the aging time at 25°C.

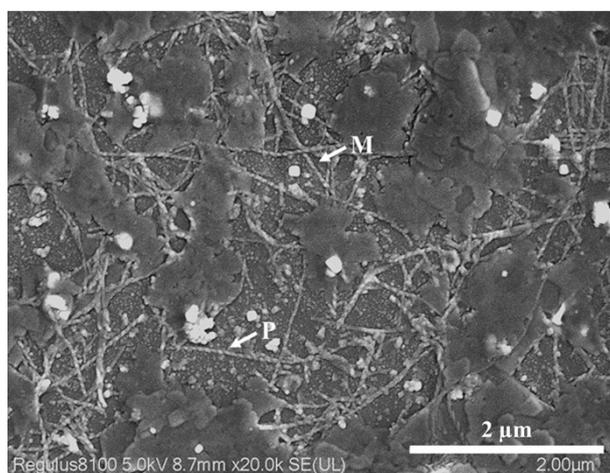


Fig. S3 SEM images of the assembled nanostructures of BTECM in CTAB aqueous solution (1.2 mM) after 8 h of aging at 25°C.

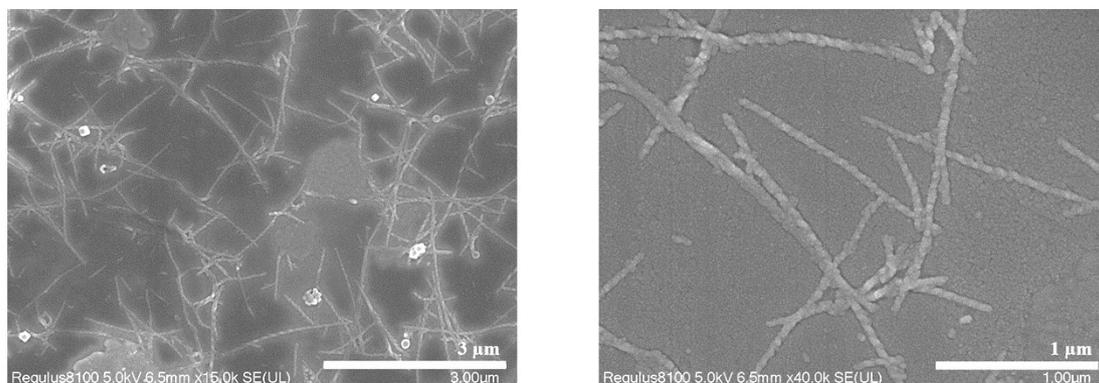


Fig. S4 SEM images of the assembled nanostructures of BTECM in CTAB aqueous solution (1.2 mM) after 240 h of aging at 25°C.

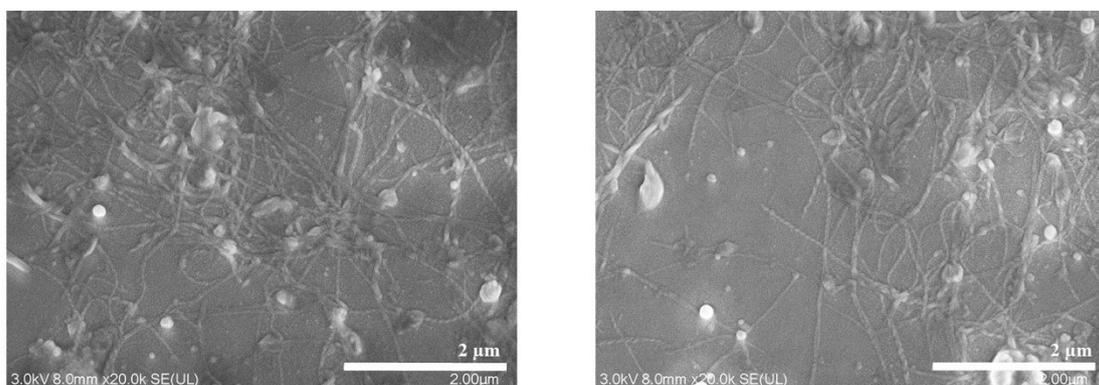


Fig. S5 SEM images of the assembled nanostructures of BTECM in H₂O after 330 h of aging at 25°C.

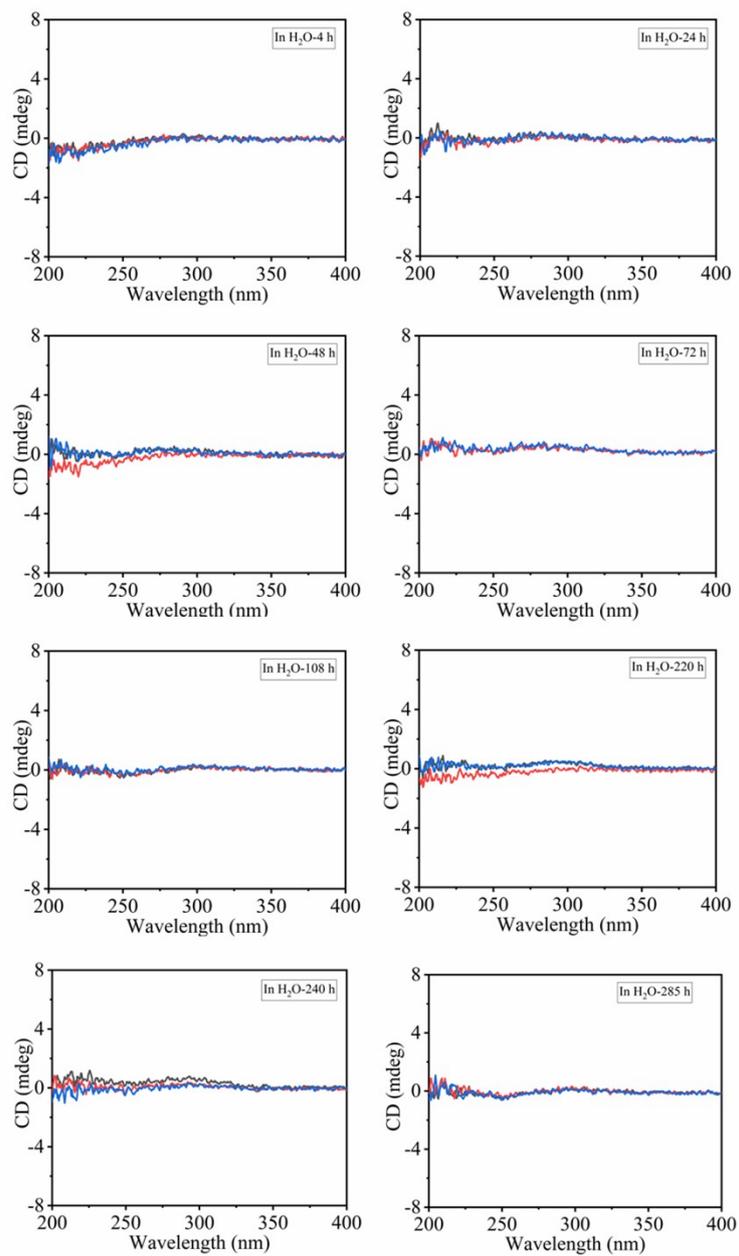


Fig. S6 CD spectra of BTECM in H₂O upon aging at 25°C.

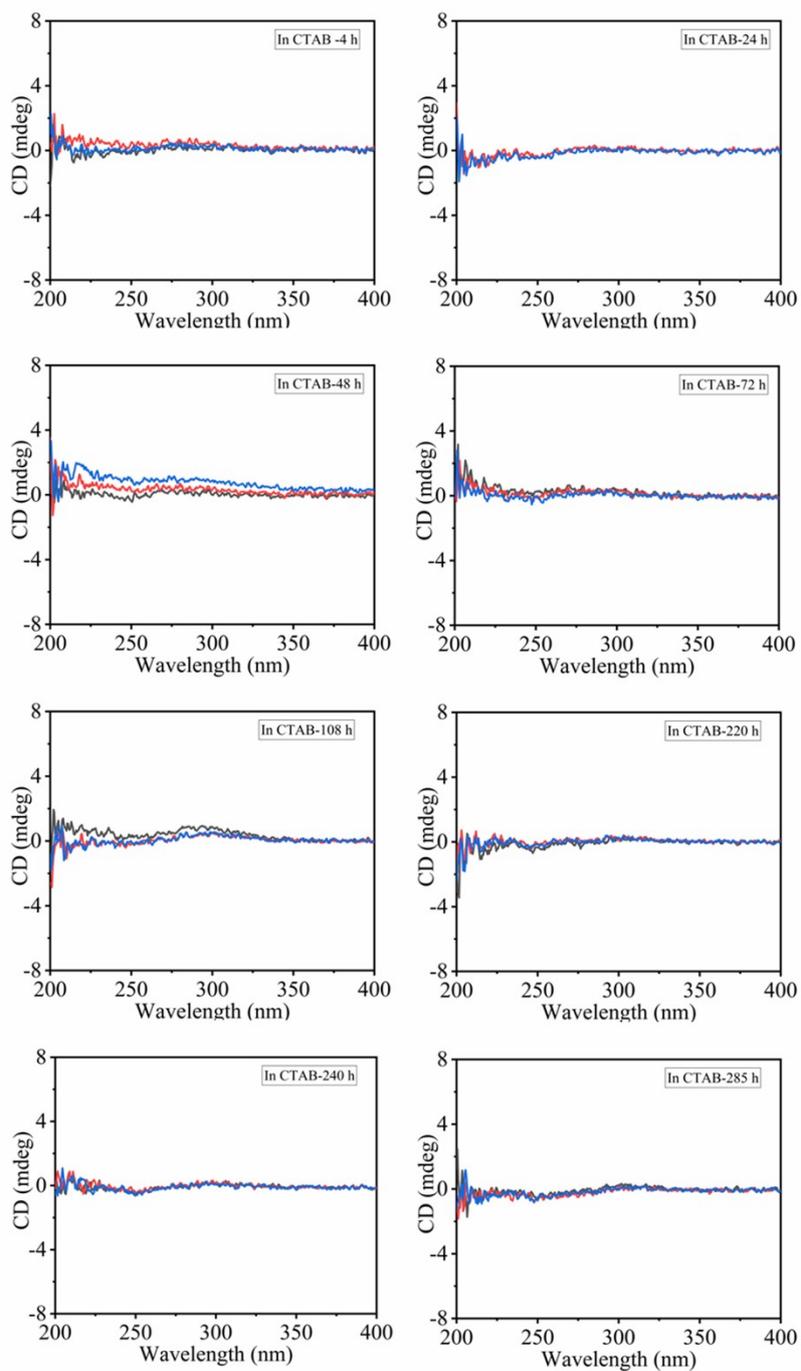


Fig. S7 CD spectra of BTECM in CTAB aqueous solution upon aging at 25°C.

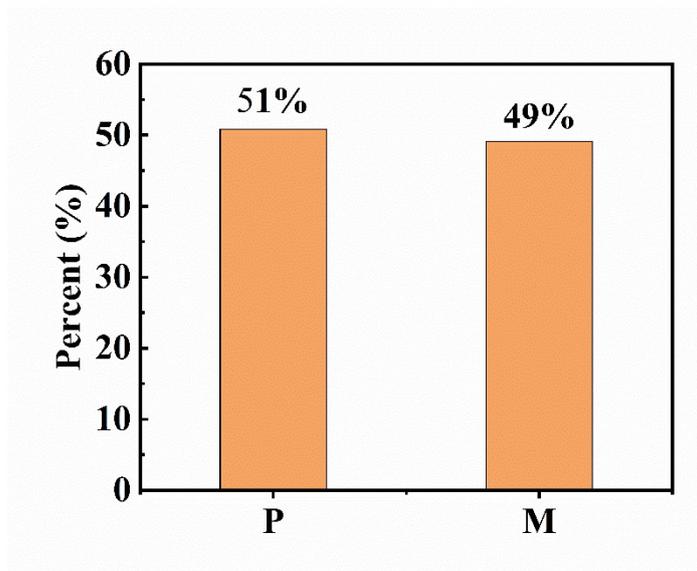


Fig. S8 The statistical distributions of twists obtained from 178 helical structures by SEM measurement in CTAB aqueous solution after 240 h of aging at 25°C.

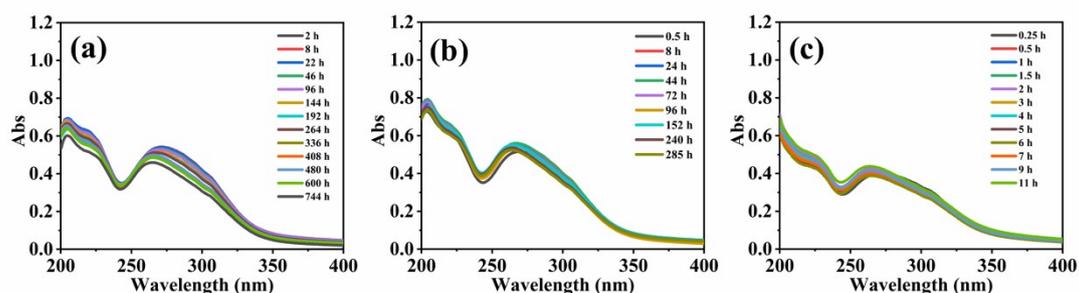


Fig. S9 UV-Vis spectra of BTECM in H₂O as a function of aging times at 10 (a), 25 (b) and 40°C (c).

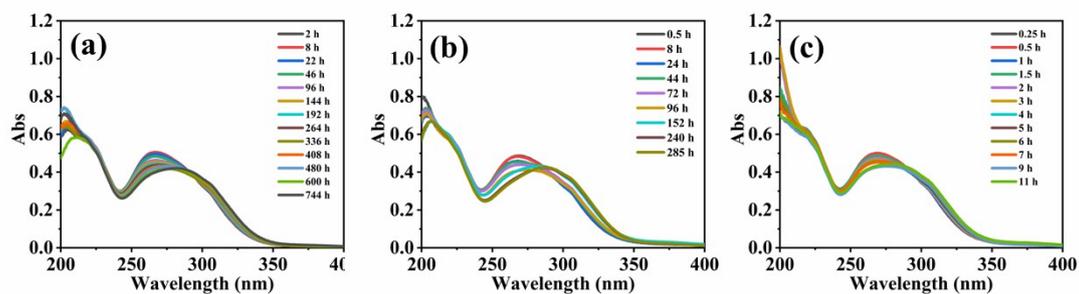


Fig. S10 UV-Vis spectra of BTECM in CTAB aqueous solution as a function of aging times at 10 (a), 25 (b) and 40°C (c).

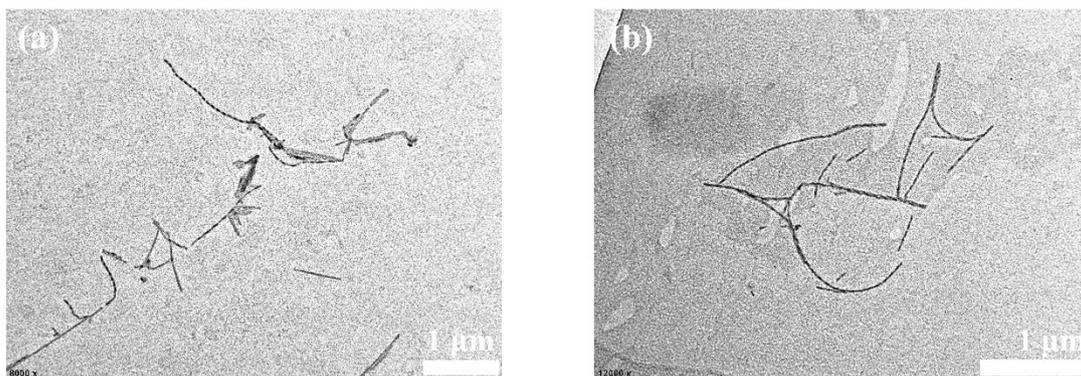


Fig. S11 TEM images of the assembled nanostructures of BTECM in H₂O (a) and CTAB aqueous solution (b) after 600 h of aging at 10°C.

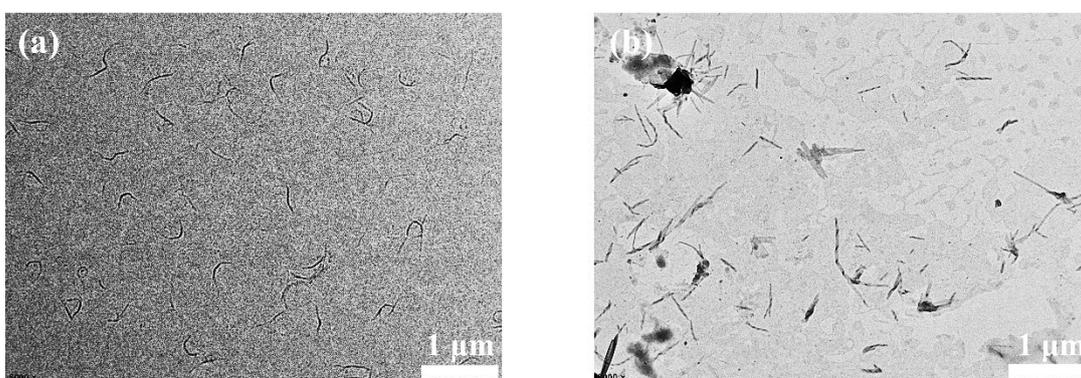


Fig.S12 TEM images of the assembled nanostructures of BTECM in H₂O after 15 min (a) and 2 h (b) of aging at 40°C.

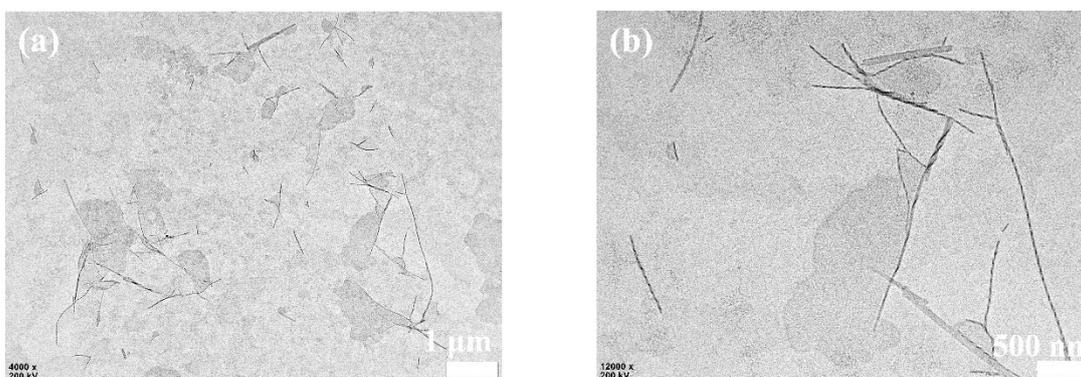


Fig.S13 TEM images of the assembled nanostructures of BTECM in CTAB aqueous solution after 2 months of aging at 25°C.

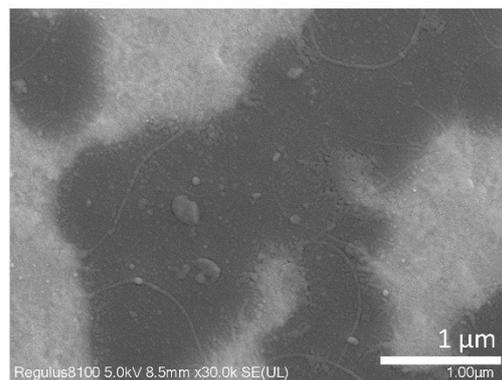
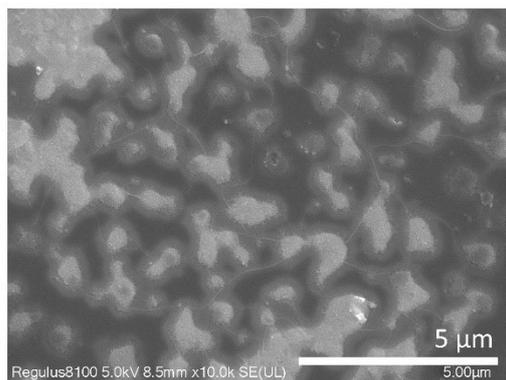


Fig. S14 SEM images of BTECM in THF (1.2 mM) at 25°C.