Supporting Information for

Electrically Conductive Hybrid Nanofibers with Enhanced π-π Stacking Interactions

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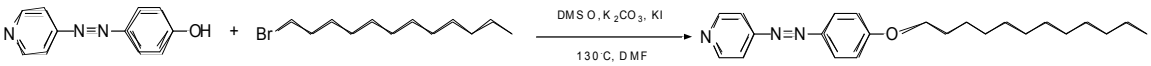
1. Materials

Tetrahydrofuran (THF), hydrogen chloride (37%), laurylbenzenesulfonic acid sodium (DBSNa), dodecylbenzenesulfonic acid (DBSA), *p*-toluenesulfonic acid monohydrate (TSAM), sodium lauryl sulfate, were commercially available (TCI) and used without further purification. Scheme 1 shows the synthetic route of compound **1.**



Scheme 1. The synthetic scheme of compound 1.

2. Characterization

A polarizing optical microscope (POM, ECLIPSE LV100POL, Nikon) equipped with a hot stage and a digital camera (Nikon, D5000) was performed. The structures of nanofibers were confirmed by nuclear magnetic resonance spectroscopy (NMR, JEOL

AL-400), Fourier transform infrared spectroscopy (FT-IR, Shimadzu IR Prestige-21), X-ray diffraction (XRD RIGAKU RAD-3A), respectively. The conductivity of nanofibers was measured via a standard four-probe method using LARESTA-GP MCP-T610 (MISUBISHI CHEMICAL CORPORATION). The morphologies of nanofibers were observed by atomic force microscopy (AFM, Nanopics 1000, Seiko) and scanning electron microscopy (SEM, Keyence VE-8800).

3. Fabrication of hybrid nanofibers

As shown in Figure S6, HCl (11 M, 0.05 mL) was added to a THF solution (1 mL) of **1** (2.3 mg) and dodecylbenzenesulfonic acid (DBSA) **3** (2.1 mg), or **1** (2.5 mg) with dodecylbenzenesulfonic sodium salt (DBSNa) **6** (2.4 mg), and the resulted mixtures of **4** with **5** or **4** with **5** plus NaCl were obtained. The obtained solutions were dropped onto glass substrates, the hybrid nanofibers spontaneously formed upon evaporation of resulted mixture.

4. Film forming method

The films showing electric conductivity were formed with analogous conditions corresponding to the forming of hybrid nanofibers. When the resulted solutions (1 mL)

were slowly evaporated at room light with 1 day, the films formed in solid states.

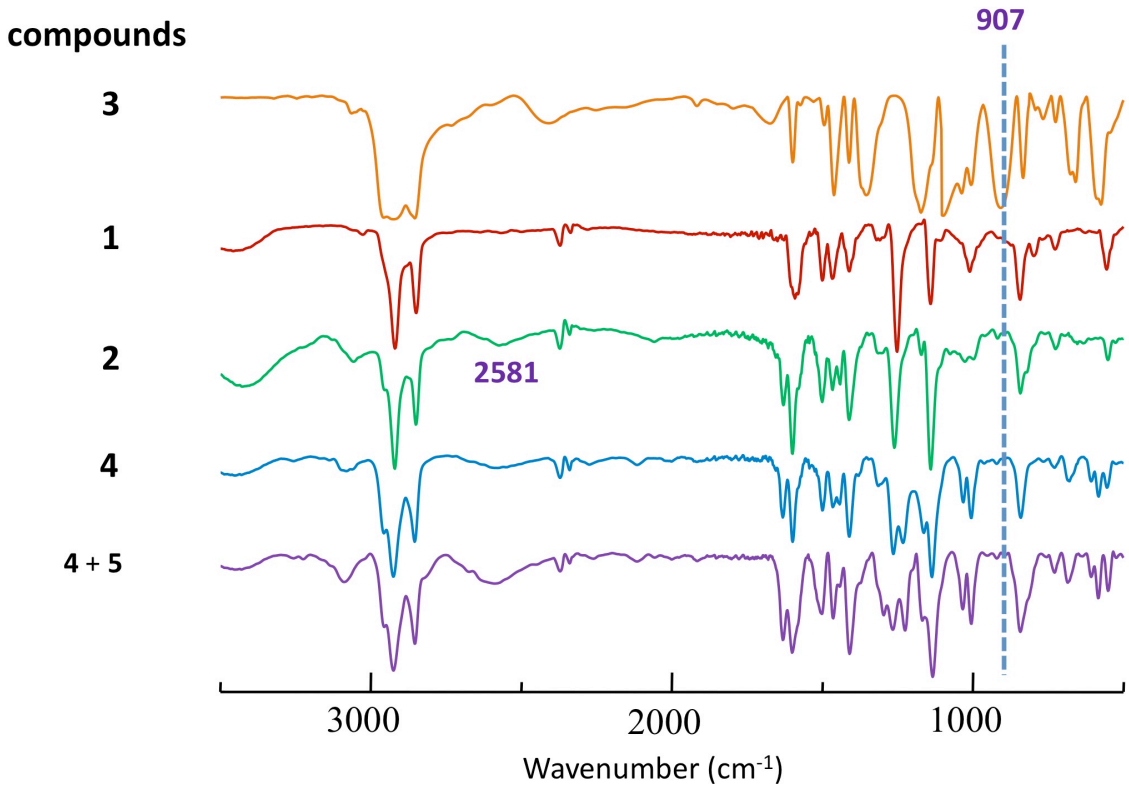


Figure S1. FT-IR spectra of LMW compounds.

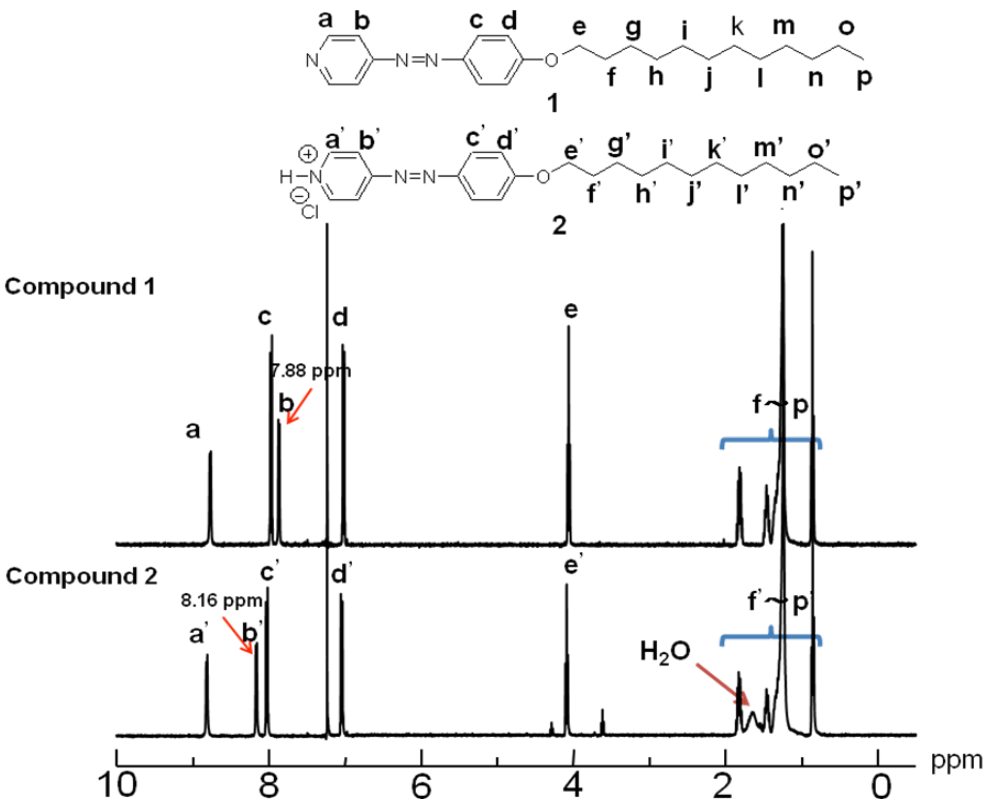


Figure S2. ^{1}H NMR spectra and their assignments of compounds of **1** and **2**.

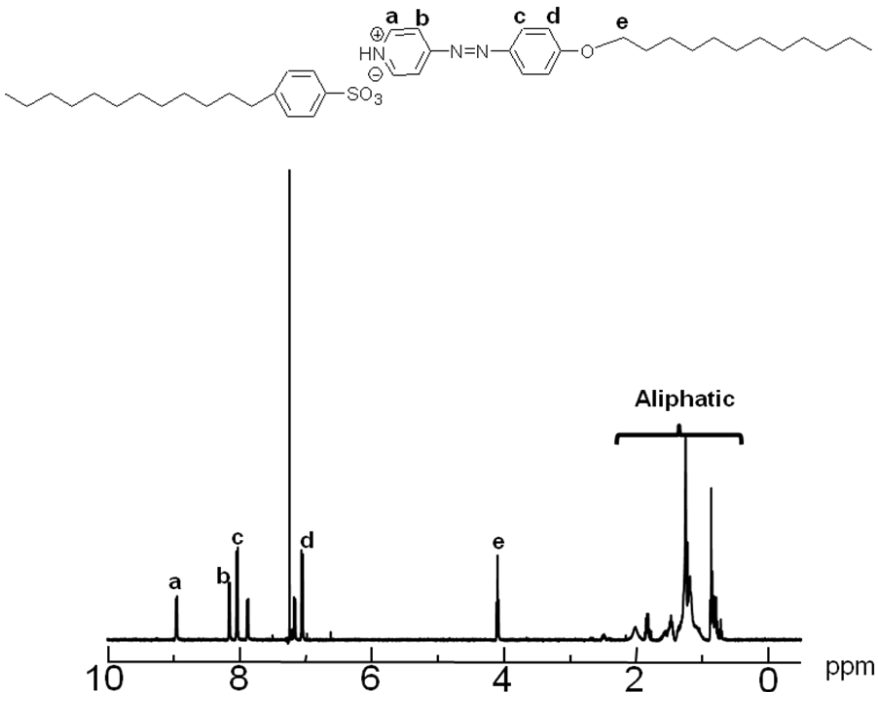


Figure S3. ^{1}H NMR spectrum and its assignment of compound of **4** in $CDCl_3$.

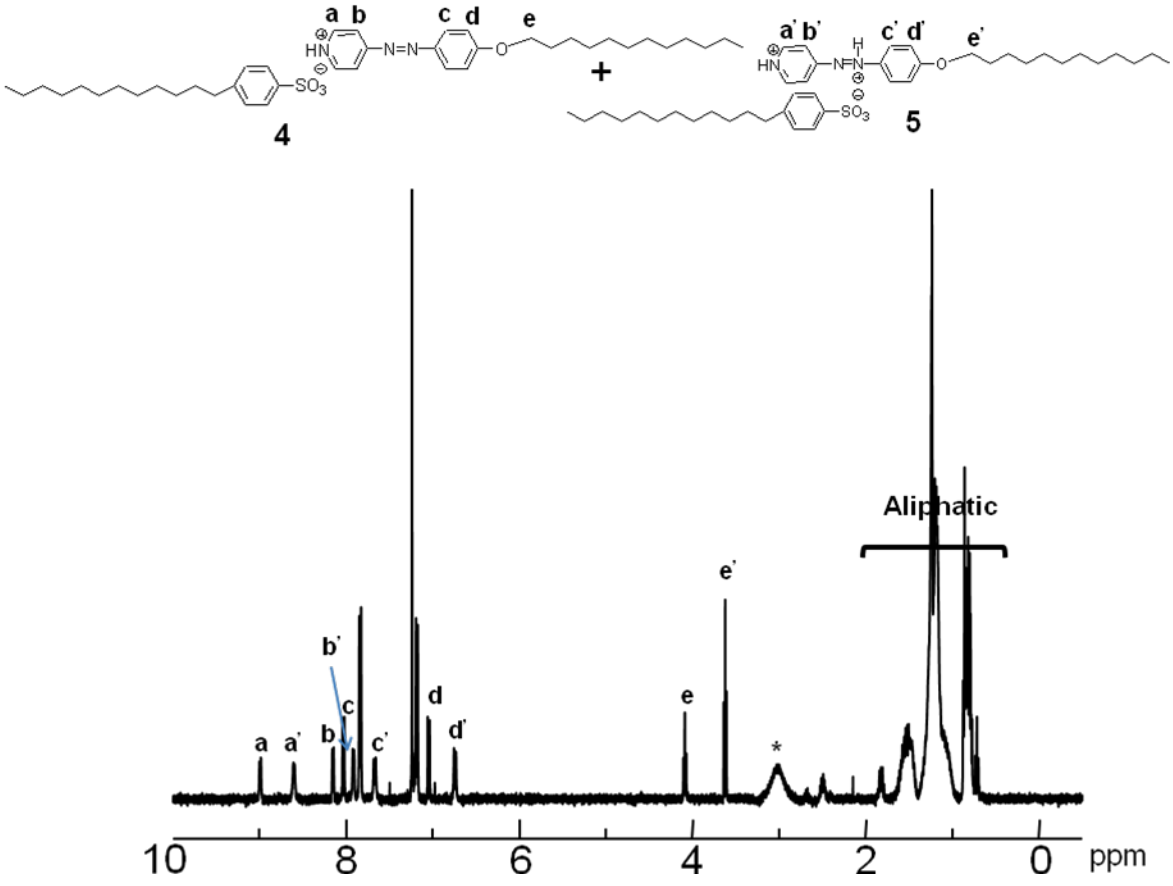


Figure S4. ^{1}H NMR spectrum and its assignment of a mixture of **4** with **5** in $CDCl_3$.

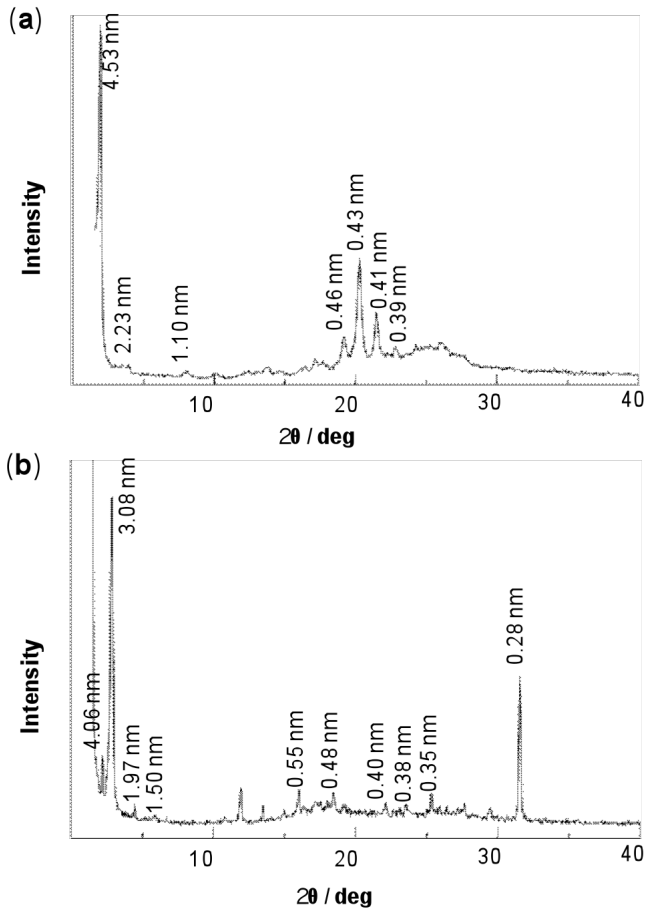


Figure S5. X−ray diffraction patterns of **2** (a) and a mixture of **4** with **5** plus NaCl (b) in film state.

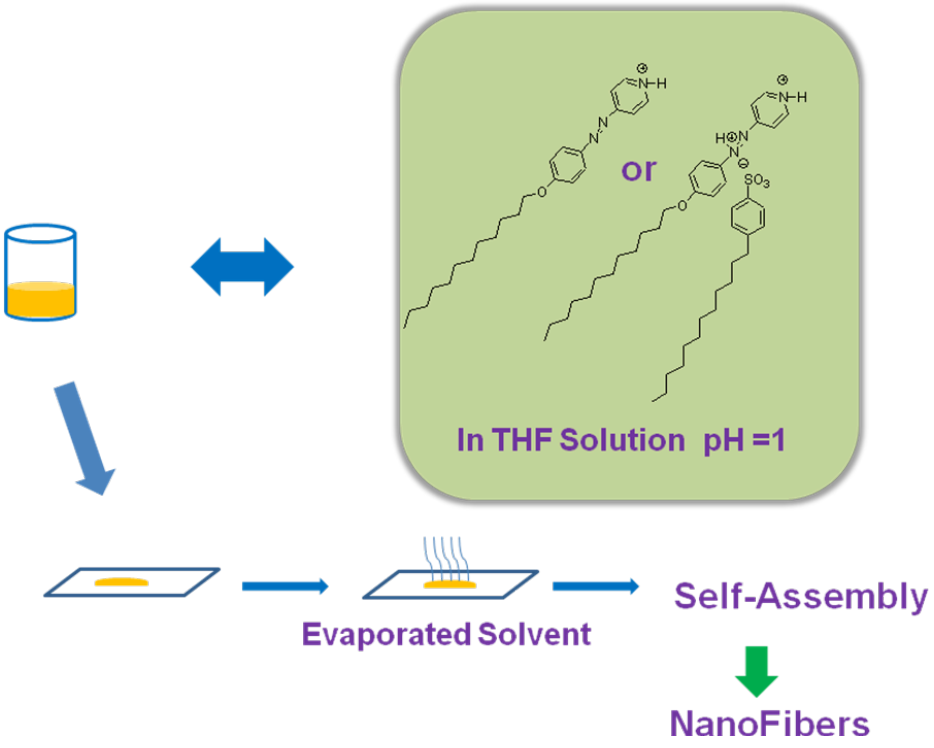


Figure S6. Illustration of the fabrication processes of organic nanofibers.

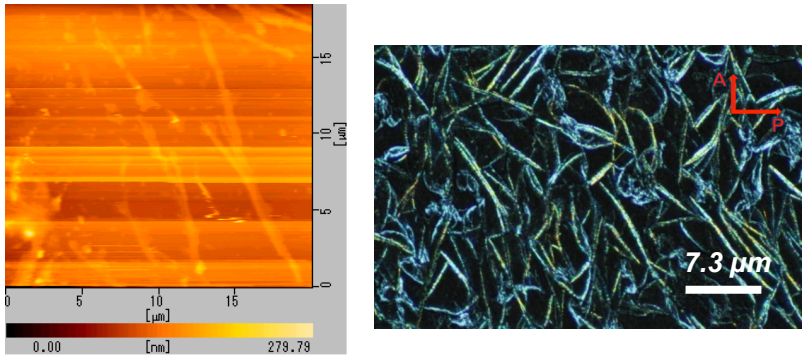


Figure S7. AFM (left) and POM (right) images of nanofibers fabricated with **2**. A, analyzer; P, polarizer.

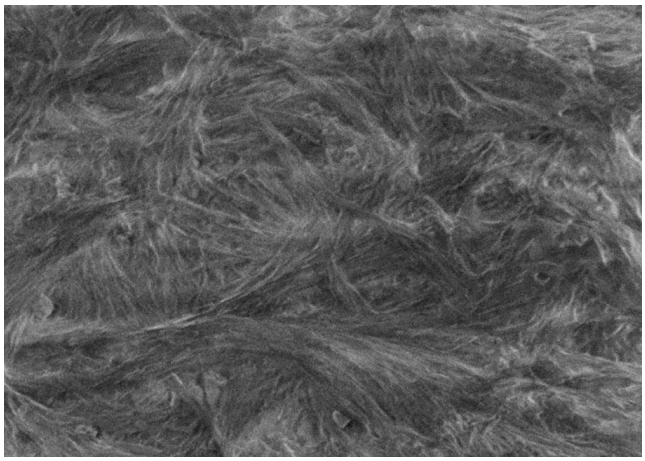


Figure S8. SEM Image of hybrid nanofibers containing **4** with **5** plus NaCl

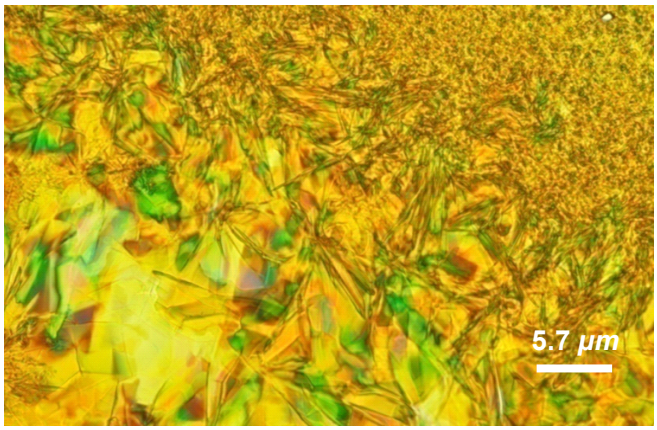


Figure S9. The optical image of solid mixture obtained by reaction of azopyridine **1** with DBSA **3** in a THF solution without addition of HCl.

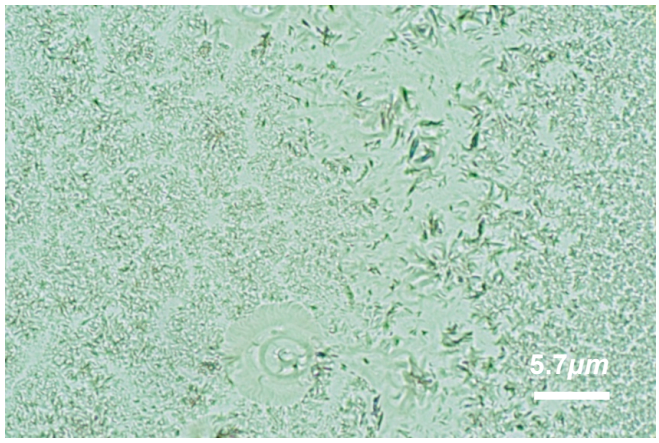


Figure S10. The optical image of a solid mixture of azopyridine **1** with DBSNa **6** in THF solution without treatment of HCl.

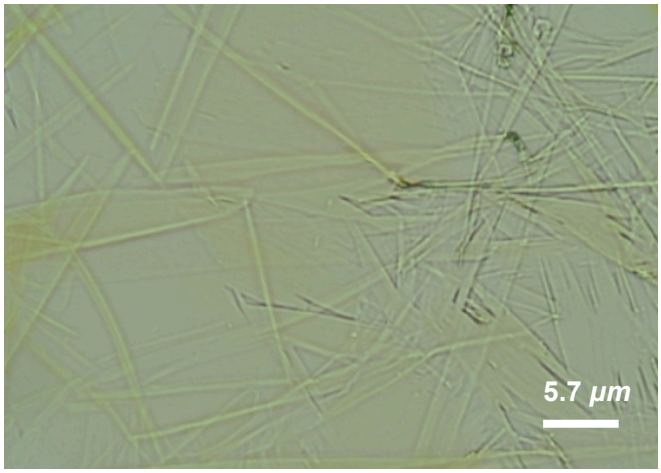


Figure S11. The optical image of compounds obtained by reaction of sodium lauryl sulfate with **1** by treatment of excess HCl in THF solution.

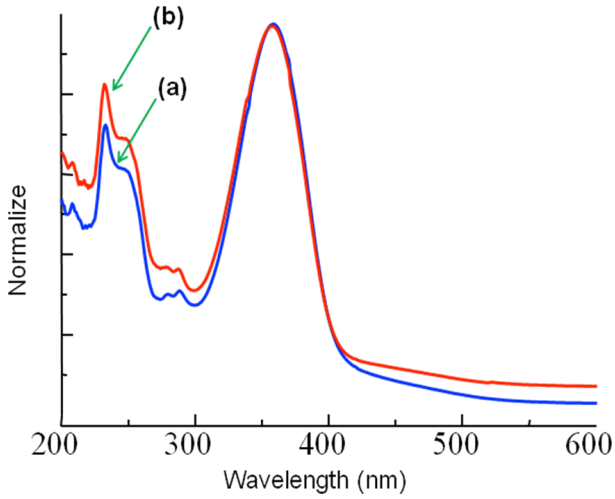


Figure S12. UV-vis absorption spectra of THF solutions of **4** and **5** (a), and **4** and **5** plus NaCl in THF solution (b).

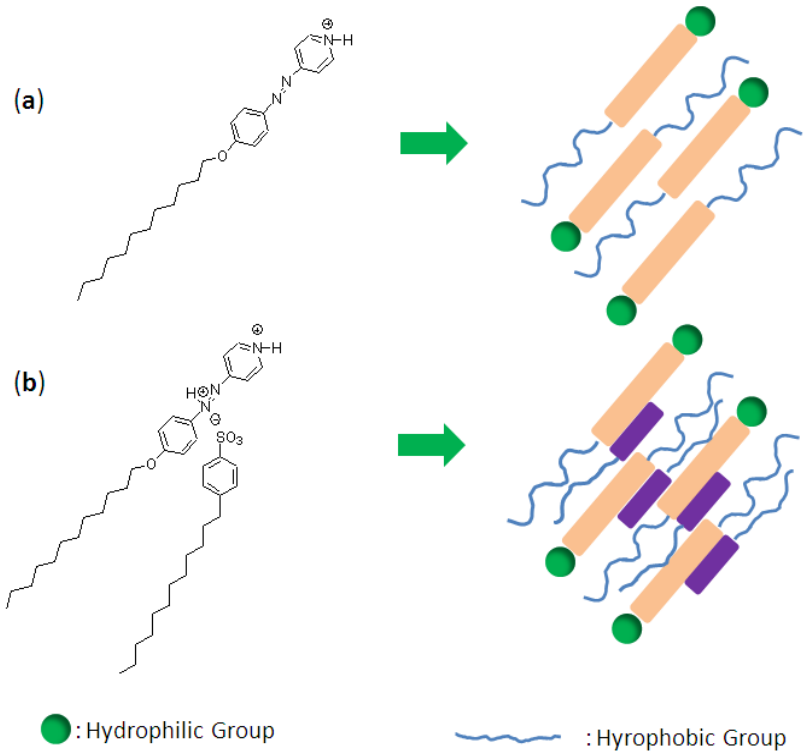


Figure S13. Possible schemes of the fabricated organic nanofibers and their hybrids. (a) nanofibers, (b) hybrid nanofibers.