Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information for
Preparation of polythiophene microrods with ordered chain alignment using nanoporous coordination template

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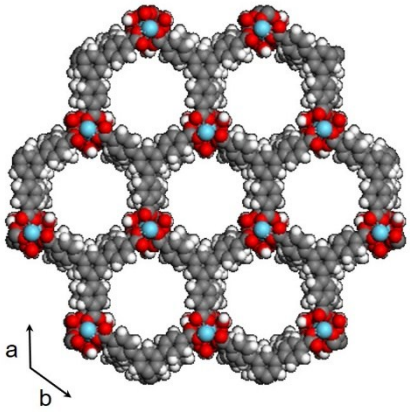

Figure S1. Crystal structure of **1** (La, sky blue: O, red: C, gray: H, white).

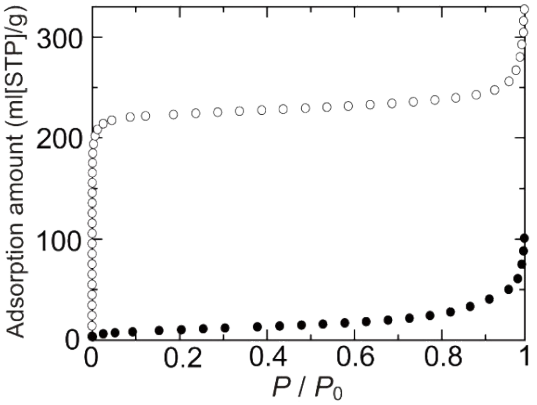

Figure S2. N_2 adsorption measurements of **1** (open circle) and **1**⊃PTh (filled circle) at 77 K. The adsorption isotherm of **1**⊃PTh showed drastic decrease in the amount of adsorption and the surface area compared with that of **1**, which indicated the presence of PTh chains within nanochannels (**1**; S_{BET} = 901 m^2/g, **1**⊃PTh; S_{BET} = 28 m^2/g).

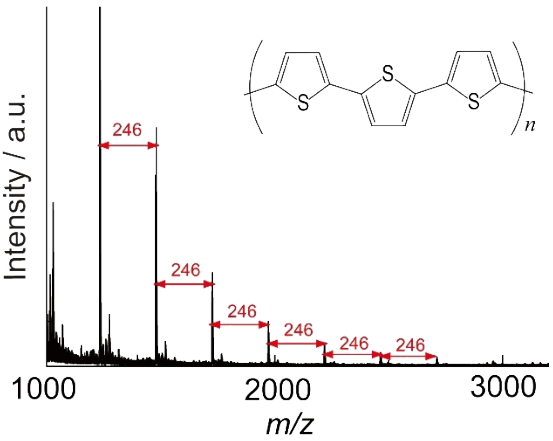

Figure S3. MALDI-TOF MS spectrum of PTh isolated from **1**. Peaks for a number of linear polymers with the repeating unit of TTh (m/z = 246) could be detected.

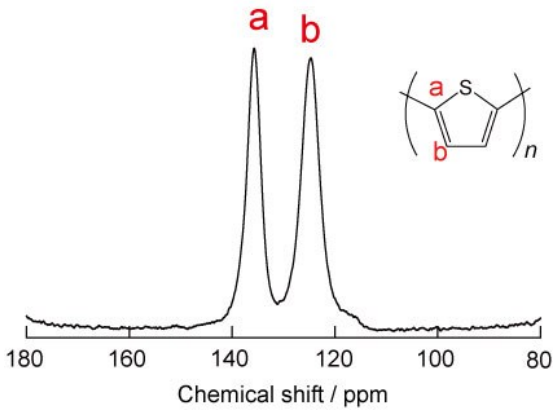

Figure S4. Cross polarization magic angle spinning (CP-MAS) solid state ^{13}C NMR spectrum of isolated PTh from **1**. The two peaks at 136 ppm and 125 ppm are assigned to carbons at 2,5- and 3,4-position of thiophene ring, respectively. It must be noted that PTh did not show any additional peaks, indicating that linear PTh devoid of branching was obtained.[1,2]

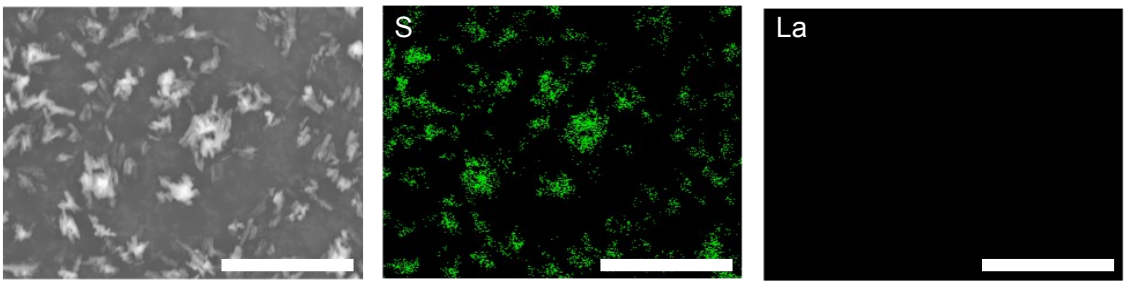

Figure S5. SEM image and SEM-EDX elemental maps of PTh isolated from **1**, which demonstrate the removal of **1** during the polymer recovery process. Scale bars = 25 μm.

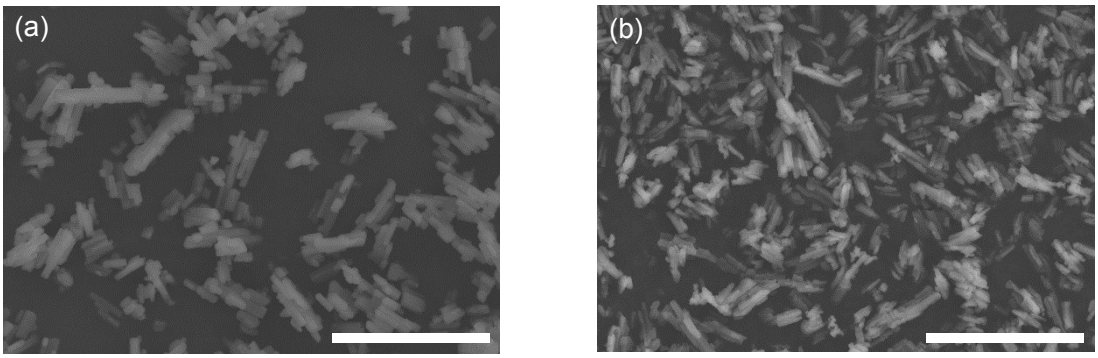

Figure S6. SEM images of (a) **1**⊃PTh, (b) PTh isolated from **1**. Scale bars = 20 μm.

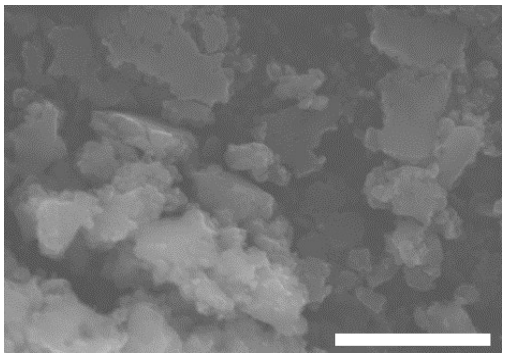

Figure S7. SEM image of PEDOT isolated from **1**. Scale bar = 10 μm.

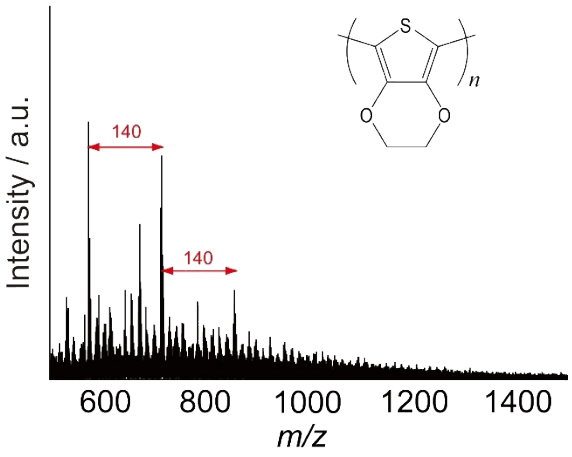

Figure S8. MALDI-TOF MS spectrum of PEDOT isolated from **1**. Peaks for a number of linear polymers with the repeating unit of EDOT (m/z = 140) could be detected.

[1] J. Chen, J. Shu, S. Schobloch, A. Kroeger, R. Graf, R. Muñoz-Espí, K. Landfester and U. Ziener, *Macromolecules*, 2012, **45**, 5108-5113.

[2] M. Leclerc, F. M. Diaz and G. Wegner, *Makromol. Chem.*, 1989, **190**, 3105-3116.