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Supporting Information

Fabrication of Nanofibres with Azopyridine Compound in Inorganic Acids

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1. The DSC of A12AzPy

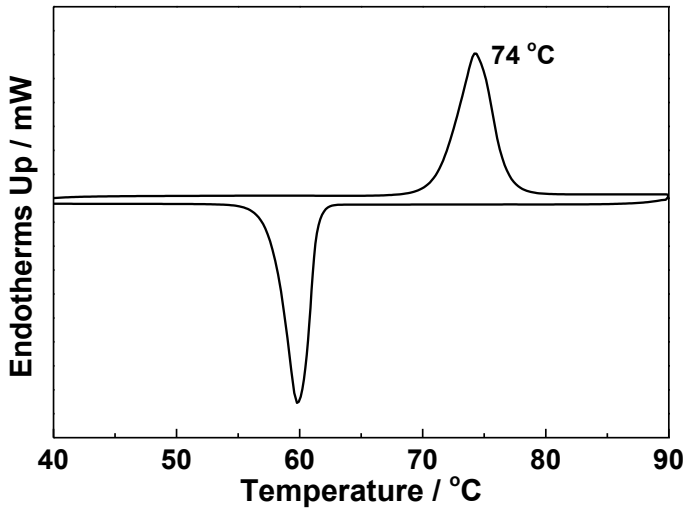

Figure S1. The DSC measurements of the A12AzPy.

2. The pKa values of inorganic acids

Table S1. The pKa values of different inorganic acids.

No.	Name	Chemical Formula	Ka	pKa
1	Boric acid	H_3BO_3	5.8×10^{-10} (K1)	9.2
			1.8×10^{-13} (K2)	12.7
			1.6×10^{-14} (K3)	13.8
2	Nitric acid	HNO_3	2.0×10	-1.3
3	Sulfuric acid	H_2SO_4	1.0×10^{3} (K1)	-3.0
			1.0×10^{-2} (K2)	2.0
4	Phosphoric acid	H_3PO_4	7.5×10^{-3} (K1)	2.1
			6.3×10^{-8} (K2)	7.2
			4.4×10^{-13} (K3)	12.4
5	Perchloric acid	$HClO_4$	1.0×10^{10}	-10.0

Table S2. The pKa values of different halogen acids.

No.	Name	Chemical Formula	Ka	pKa
1	Hydrofluric acid	HF	6.6×10^{-4}	3.2
2	Hydrocloric acid	HCl	1.6×10^{2}	-2.2
3	Hydrobromic acid	HBr	1.0×10^{9}	-9.0
4	Hydroiodic acid	HI	1.0×10^{10}	-10.0

3. The pH values of A12AzPy, acids and self-organization fibres in THF

Table S3. The pH values of A12AzPy, acids and self-organization fibers in THF. Here, 0.05 ml acids and 0.02 g A12AzPy in 1 ml THF solution was used.

No.	Compounds	pH	Compounds	pH
1	THF	4.28	A12AzPy in THF	6.16
2	HCl in THF	0.98	A12AzPy/HCl in THF	1.52
3	HNO_3 in THF	1.29	A12AzPy/HNO_3 in THF	2.07
4	H_2SO_4 in THF	0.66	A12AzPy/H_2SO_4 in THF	1.22
5	H_3PO_4 in THF	2.28	A12AzPy/ H_3PO_4 in THF	2.97

4. The Morphology of fabricated fibers from various organic solvents

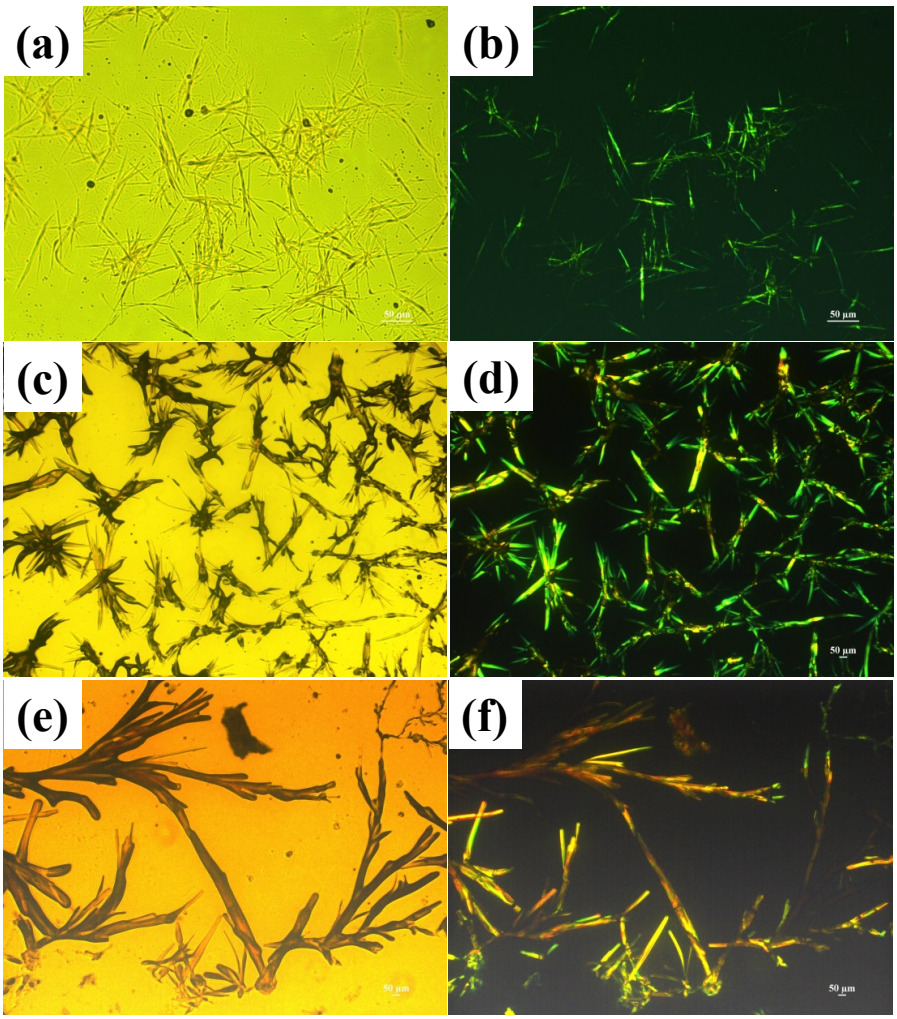

Figure S2. The optical (a, c, e) and the POM (b, d, f) pictures of the fabricated fibres which formed with sulfuric acid made in (a) acetone, (b) DMF and (c) DMSO at room temperature.

5. The Morphology of fabricated fibers from various organic solvents

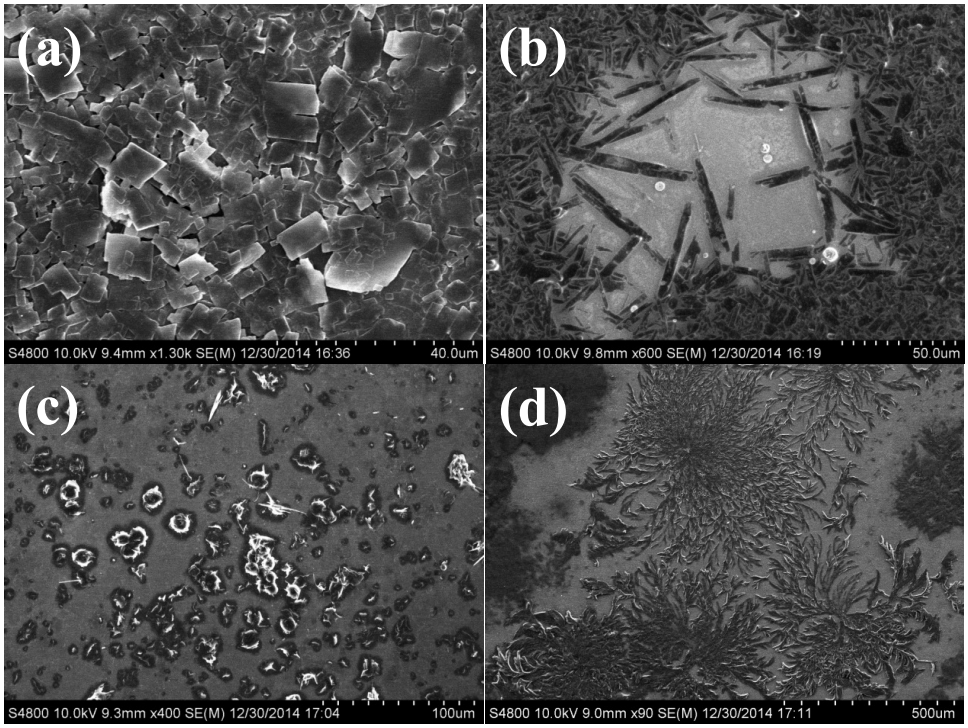

Figure S3. The SEM pictures of the fabricated fibres formed with sulfuric acid from different organic solvents at room temperature. (a) Dichloromethane, (b) toluene, (c) petroleum ether, and (d) chloroform.

6. The TEM of A12AzPy

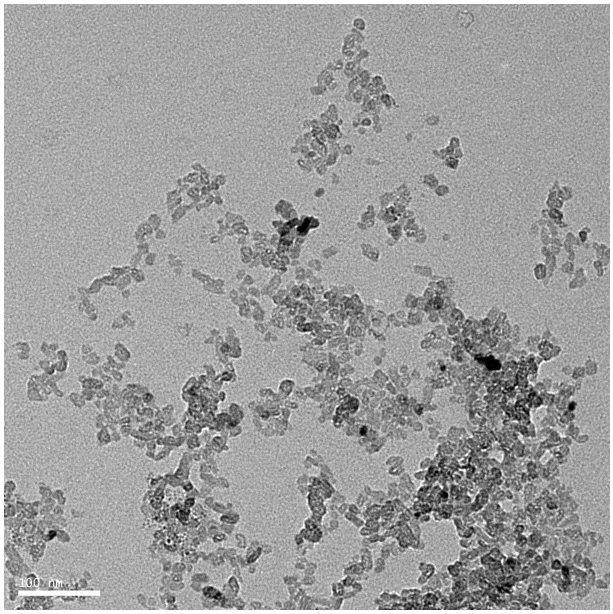

Figure S4. The TEM of pure A12AzPy.

7. The FT-IR analysis of LMW fibres

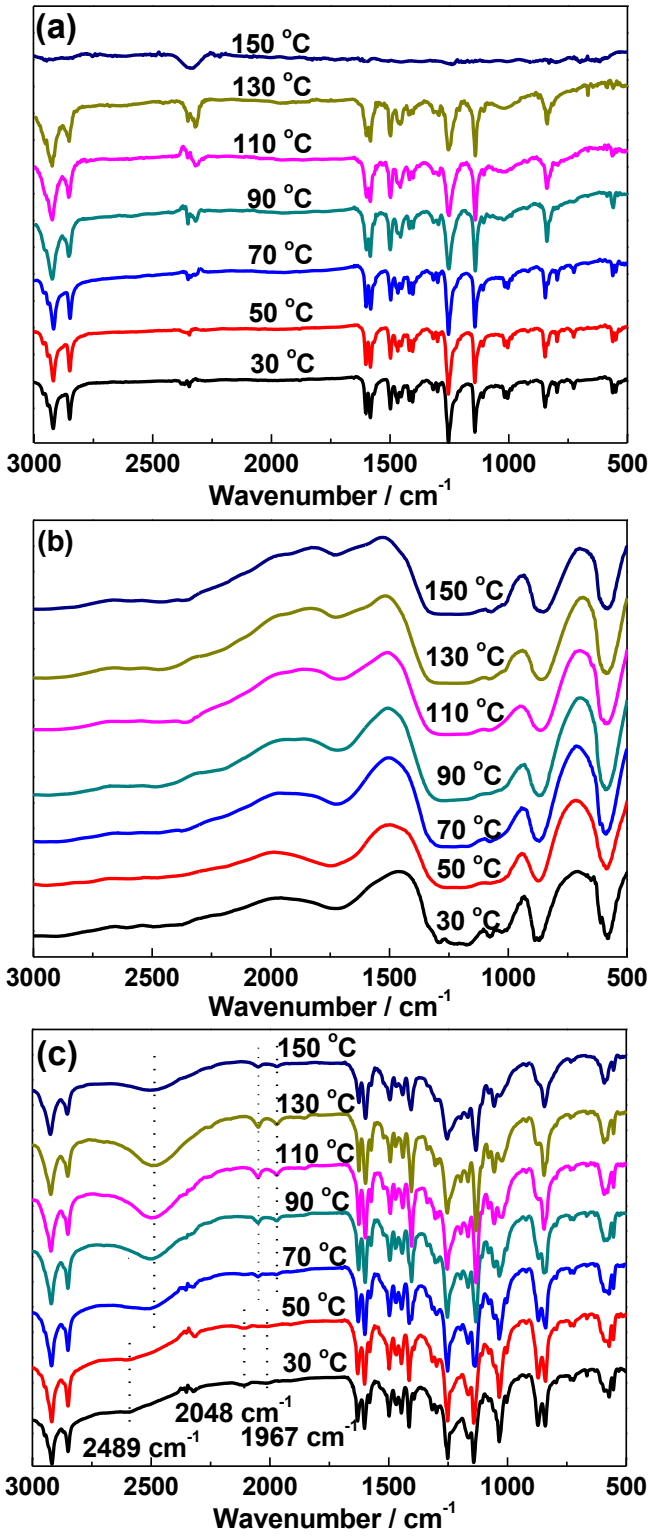

Figure S5. The temperature dependent FT-IR spectra of the samples. (a) A12AzPy, (b) H_2SO_4 and (c) LMW fibres.

8. UV-vis absorption analysis

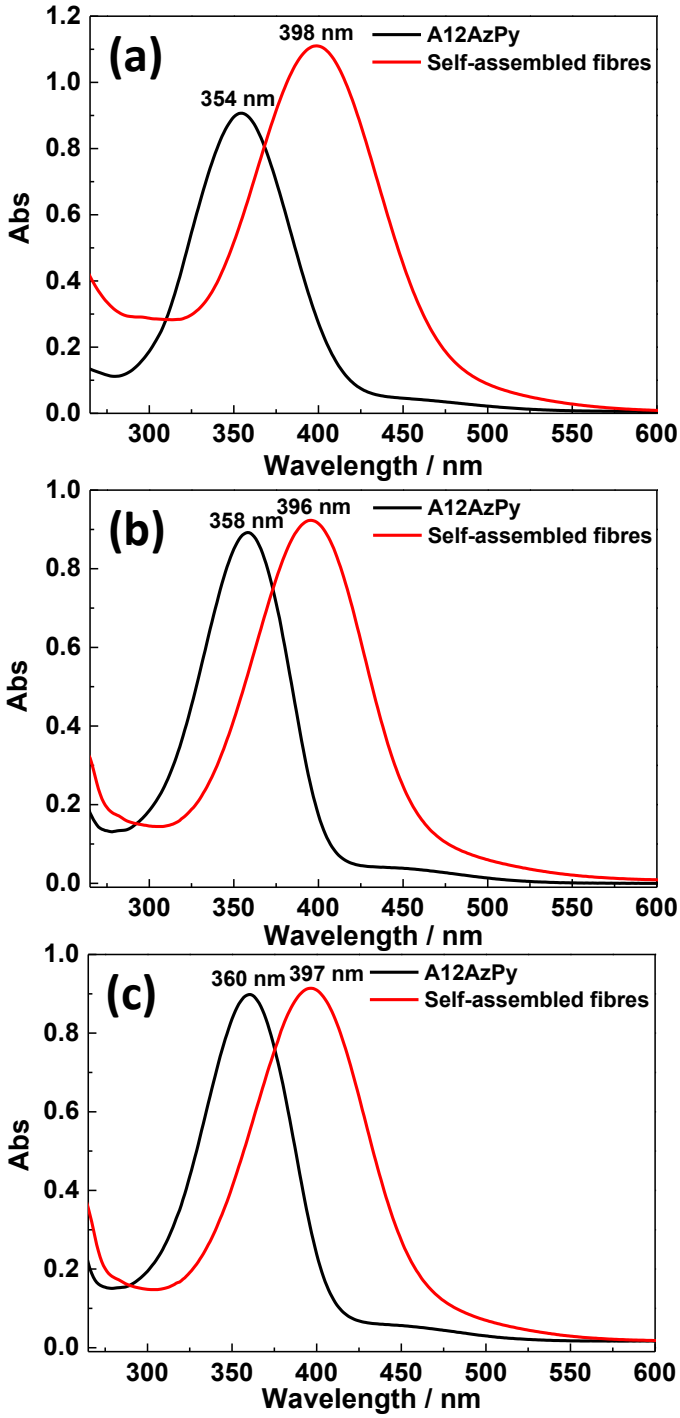

Figure S6. UV-vis absorption spectra of the A12AzPy and self-assembled fibres in Acetone (a), DMF (b) and DMSO (c) solution.

9. The Fluorescence spectra of LMW fibres

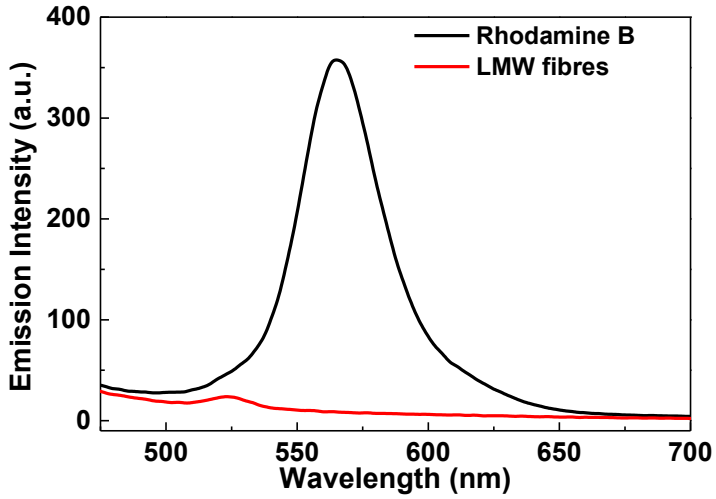

Figure S7. The fluorescence emission spectra of LMW fibres in THF. And the excitation at 456 nm.

Fluorescence quantum yield measurements, using Rhodamine B as reference (Φ_f=0.9) in ethanol, were performed at room temperature for a THF solution with LMW fibres. As shown in Figure S5, the LMW fibres in THF solution showed a weak emission at 523 nm and the measured fluorescence quantum yield (Φ_f) is 0.065.