

## Supporting Information

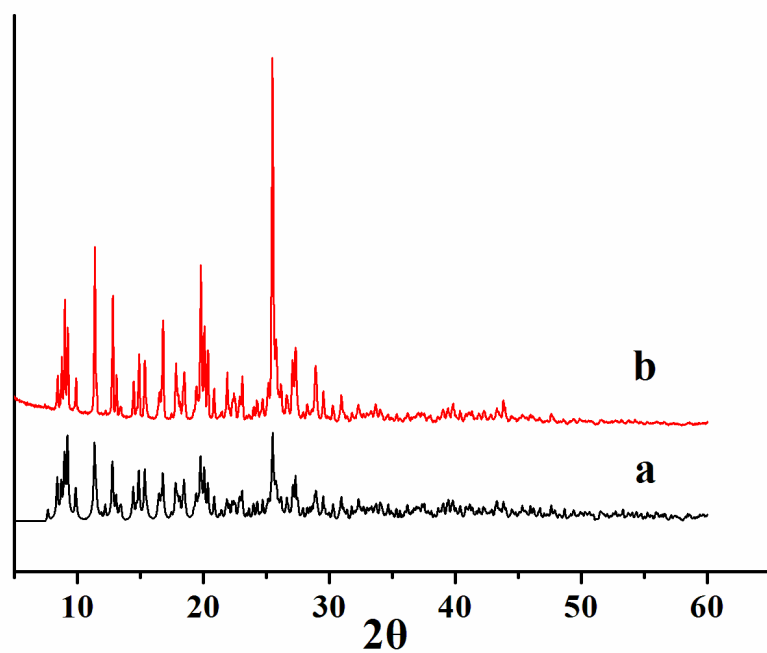
### Synthesis of a 3D Photochromic Coordination Polymer with Interpenetrating Arrangement: Crystal Engineering for Electron Transfer between Donor and Acceptor Units

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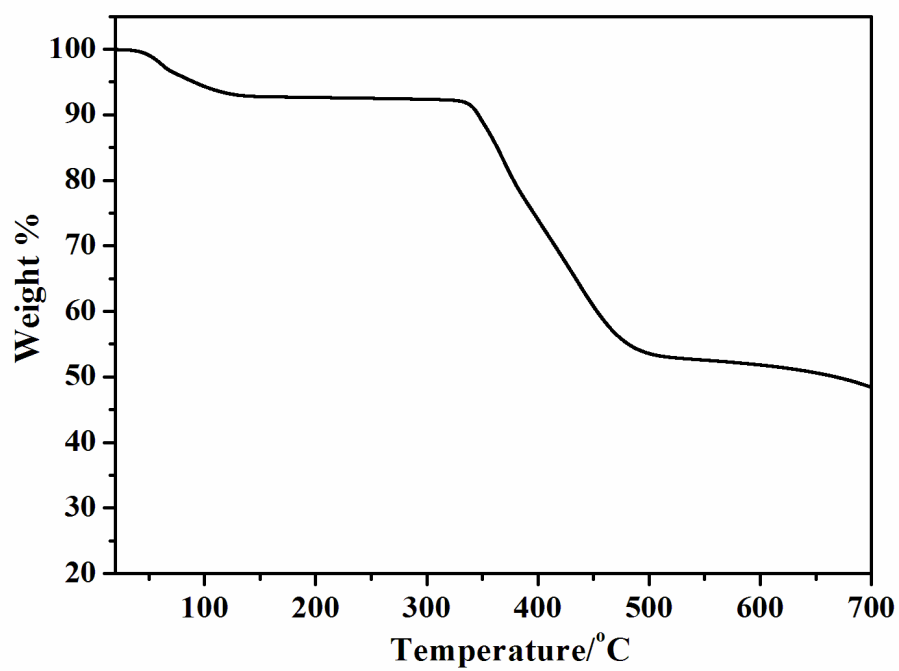
#### Experimental Section

All the reagents were purchased from commercial channels and used without further purification; N-(3-carboxyphenyl)-4,4'-bipyridinium chloride was synthesized as reported. UV-Visible spectral measurements were carried out using a HITACHI U-3010 spectrometer. The ESR spectra were recorded at room temperature with a Bruker EMX-10/12 Electron Spin Resonance Spectrometer. IR spectra were characterized by a Bruker Tensor 27 FTIR spectrometer in the range of 4000-400  $\text{cm}^{-1}$  using a KBr disk.

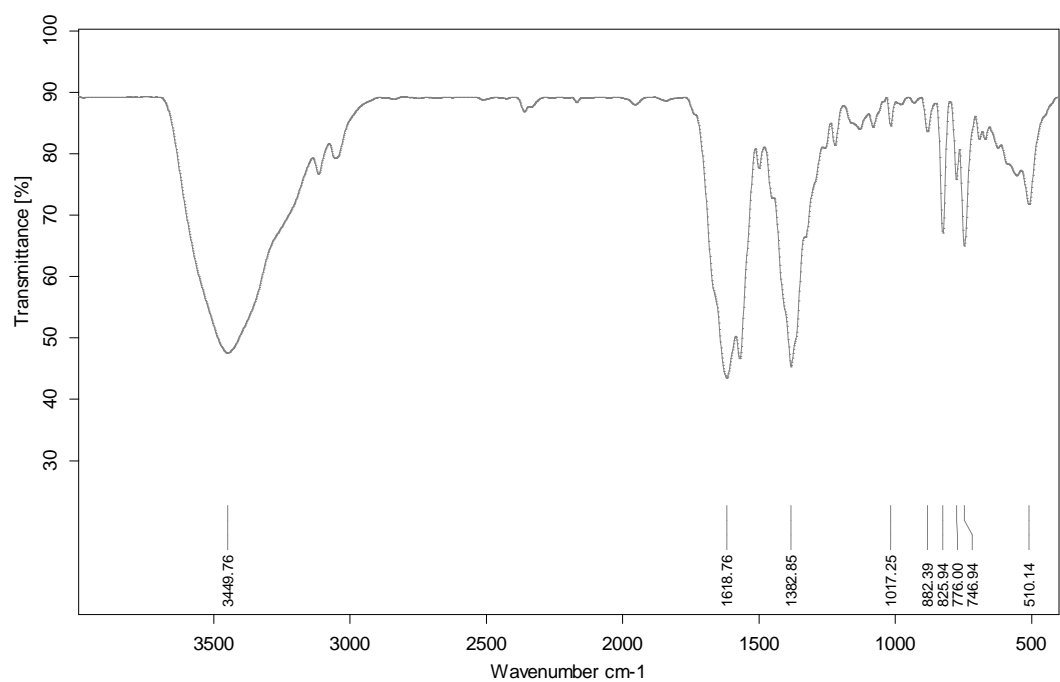
**Synthesis of 1:**  $\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$  (29.7mg, 0.1mmol) was added to a mixture of p- $\text{H}_2\text{BDC}$  (16.6mg, 0.1mmol), N-(3-carboxyphenyl)-4,4'-bipyridinium chloride (31mg, 0.1mmol) in  $\text{H}_2\text{O}$  (2ml),  $\text{C}_2\text{H}_5\text{OH}$  (4ml) and DMF (4ml). The mixture was sealed in a 25ml Teflon-lined steel bomb and heated at 85°C for 48h. Yellow block-like crystals were collected by filtration, washed by water and ethanol, and dried at room temperature (0.018mmol, 23mg, 54% yield based on  $\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ ).



**Figure S1** PXRD patterns for compound **1**: (a) simulated; (b) of a sample at room temperature.



**Figure S2.** Thermal gravimetric curve of **1**



**Figure S3.** IR spectrum of **1**