

Supporting information

Multiple Stimuli Triggered Structural Isomerization of Copper

Iodide-pyridine Crystals

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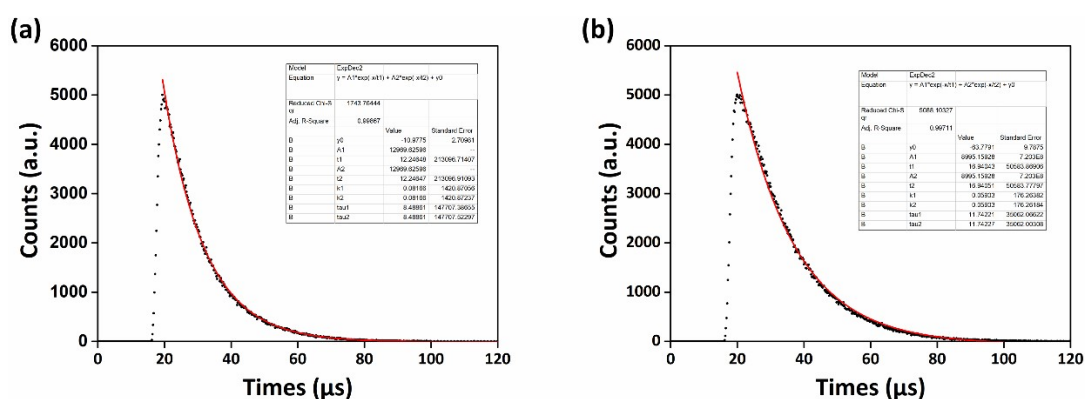


Figure S1. PL life time of [CuI(py)]_n (a) and [CuI(py)]₄ (b). Time-correlated single photon counting (TCSPC) method¹ was used to evaluate the life time data of the isomers.

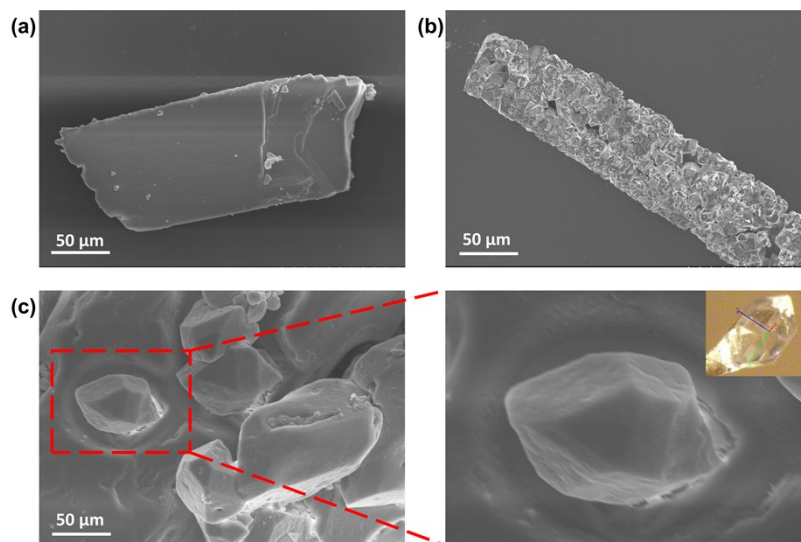


Figure S2. SEM pictures of several [CuI(py)]_n samples. (a) The single crystal stick, which was not suffered acetone atmosphere, shows a smooth surface. (b) After the isomerization caused by the treatment of acetone, the surface of sample became rugged. (c) Picture of partial stick, the isomerization of which was terminated, and the detail picture on the right shows it has the same morphology with the [CuI(py)]₄ single crystal, besides, the inset of detail picture shows the [CuI(py)]₄ single crystal and its orientation.

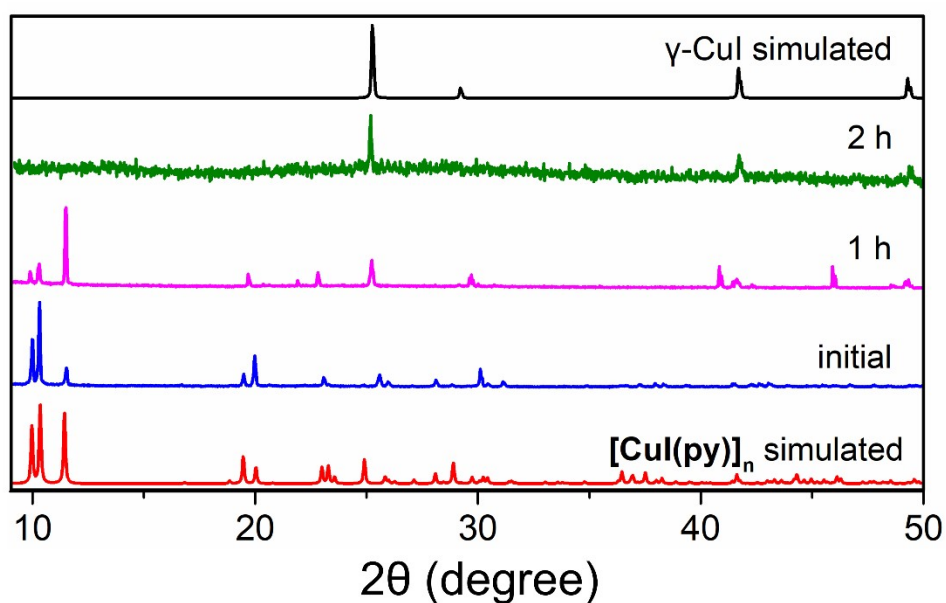


Figure S3. PXRD patterns of the $[\text{CuI}(\text{py})]_n$ sample after exposed in an unconfined space with flowing acetone atmosphere.

	initial	1h	2h	6h	24h
dichloromethane	blue	blue	white	yellow	yellow
methanol	blue	blue	blue	blue	yellow
acetonitrile	blue	blue	blue	yellow	yellow
trichloromethane	blue	blue	white	yellow	yellow
toluene	blue	blue	blue	blue	yellow
tetrahydrofuran	blue	blue	white	yellow	yellow
ethyl acetate	blue	blue	blue	blue	yellow
ethanol	blue	blue	blue	blue	blue
dimethyl sulfoxide	blue	blue	blue	white	yellow
N,N-dimethylformamide	blue	white	yellow	yellow	yellow
acetone	blue	white	yellow	yellow	yellow

Table S1. Luminescent behaviors of the $[\text{CuI}(\text{py})]_n$ samples exposed in different solvents. Luminescence under 365nm UV light of the samples were observed by naked eye.

Reference

1. R. M. Ballew and J. Demas, *Analytical Chemistry*, 1989, **61**, 30-33.