Supporting Information

Solid-to-solid crystallization of organic thin films: Classical and non-classical pathways

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Figure S1. The SEM side view of the annealed samples at 80°, 120° and 150°C.

Figure S2. XRD results of CuQ2 films annealed at 80 °C, 120 °C, 150 °C and calculated XRD from α- and β-phase CuQ2.

Figure S3. a) The EDS of purchased substance; b) The EDS of CuQ2 thin films on Si substrate.

Explanation of Figure S2. and Figure S3., respectively.
1. XRD results of CuQ2 films annealed at 80 °C, 120 °C, 150 °C and calculated XRD from α- and β-phase CuQ2.

The microstructure analysis was carried out on a power X-ray diffractometer (PXRD, Bruker AXS, D8 advance). The calculated CIF files were based on α phase1 and β phase2 crystal of CuQ2.

![Figure S1](image1.png)

Figure S1. The SEM side view of the annealed samples at 80°, 120° and 150°C.

![Figure S2](image2.png)

Figure S2. XRD results of CuQ2 films annealed at 80 °C, 120 °C, 150 °C and calculated XRD from α- and β-phase CuQ2.
2. The EDS of purchased substance and the EDS of CuQ\textsubscript{2} thin films on Si substrate.

The elements of the purchased substance measured by the EDS contain carbon (61.41%), oxygen (22.91%), nitrogen (10.58%), copper (4.78%) and a small amount of sulfur (0.31%). Industrial synthesis CuQ\textsubscript{2} process need copper sulfate, this is why impurities of the purchased substance contained sulfur. However, the EDS result of thermally evaporated CuQ\textsubscript{2} thin films on Si substrate have no sulfur, indicating a purification process during the thermal evaporation. The EDS of the purchased substance and the CuQ\textsubscript{2} thin films on Si substrate are shown in Fig. S3.

![Figure S3](Retracted).

**Figure S3.** a) The EDS of purchased substance; b) The EDS of CuQ\textsubscript{2} thin films on Si substrate.

**REFERENCES:**

(1) Hoy, R. C.; Morriss, R. H., The crystal structure of the α form of anhydrous copper 8-hydroxyquinolinate. *Acta Crystallogr.* **1967**, 22, (4), 476-482.

(2) Palenik, G. J.; The structure of coordination compounds. II. The crystal and molecular structure of the β form of anhydrous copper 8-hydroxyquinolinate. *Acta Crystallogr.* **1964**, 17, (6), 687-695.