

Supplementary Information
Physicochemical, self-assembling and field-effect transistor properties of two thienoacene isomers

Rongjin Li,^{ab} Huanli Dong,^a Xiaowei Zhan,^{*a} Hongxiang Li,^{*b} Shu-Hao Wen,^c Wei-Qiao Deng,^{*c} Ke-Li Han,^c and Wenping Hu^{*a}

^a Beijing National Laboratory for Molecular Sciences, Key Laboratory of Organic Solids, Institute of Chemistry, Chinese Academy of Sciences, Beijing, P. R. China. E-mail: huwp@iccas.ac.cn; xwzhan@iccas.ac.cn

^b Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, P. R. China.

^c State Key Laboratory of Molecular Reaction Dynamics, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, P. R. China.

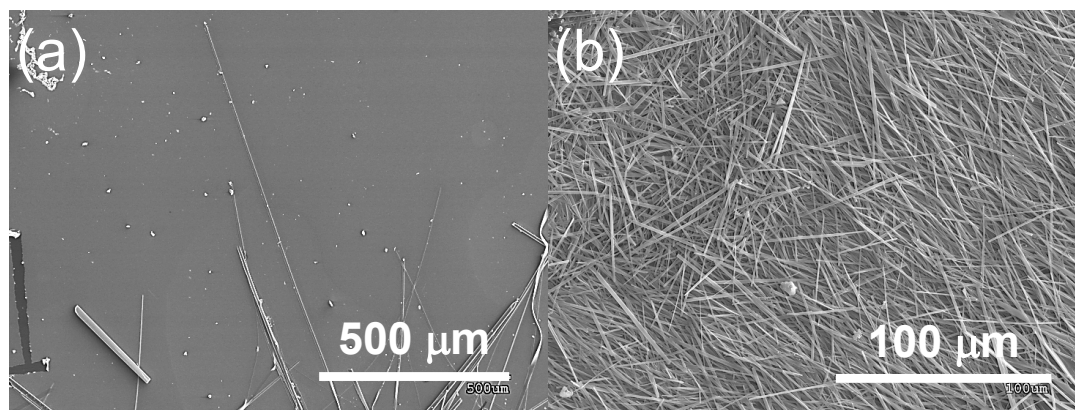


Fig. S1 SEM images of solution self-assembled 1D wires of the *syn* isomer. (a) one wire with length exceeds 1 mm. (b) large area wires.

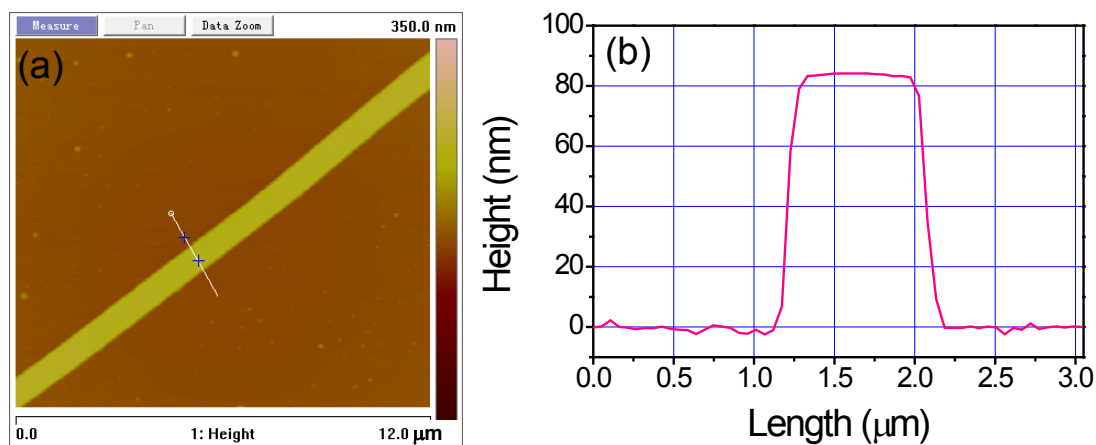


Fig. S2 (a) AFM image of an individual wire of the *syn* isomer and (b) the corresponding section analysis. The height is less than 100 nm.

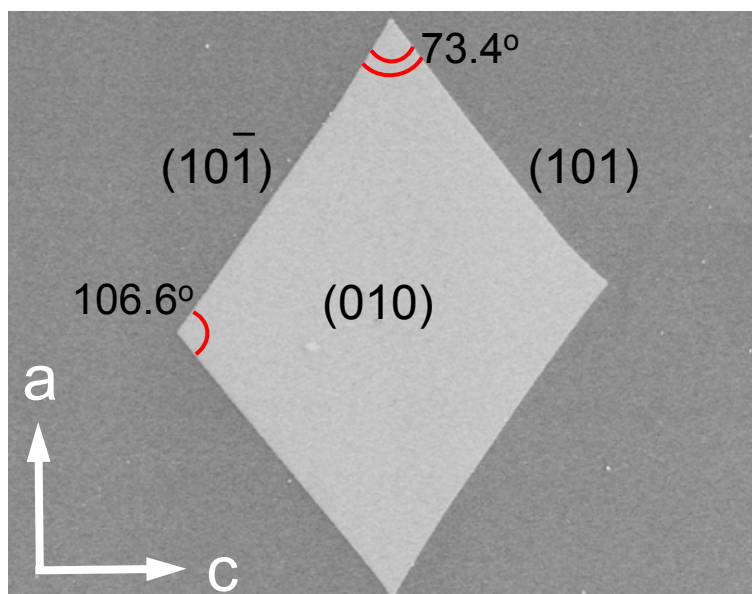


Fig. S3 SEM image of a single crystal of the *anti* isomer. The planes were indexed by its single crystal structures according to the law of consistency of interfacial angles.

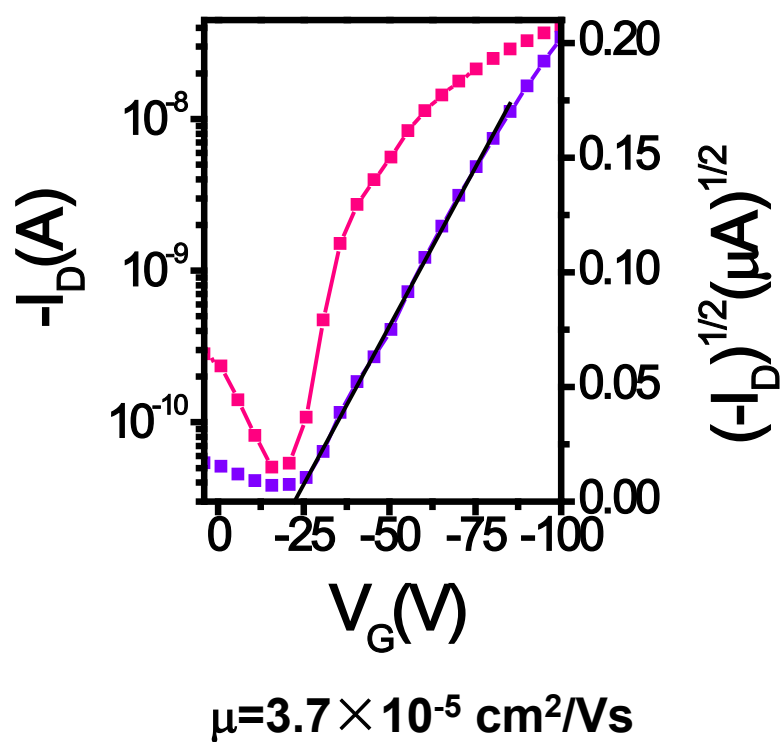


Fig. S4 Typical transfer curve of evaporated thin film of the *syn* isomer. The mobility was in the order of $10^{-5} \text{ cm}^2/\text{Vs}$.