

**SUPPORTING INFORMATION FOR**

**Packing biomolecules into Sierpiński triangles with global  
organizational chirality**

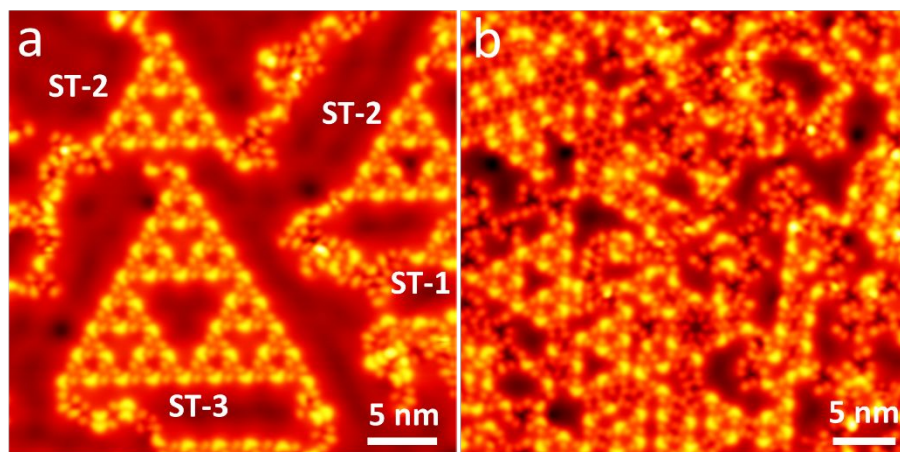
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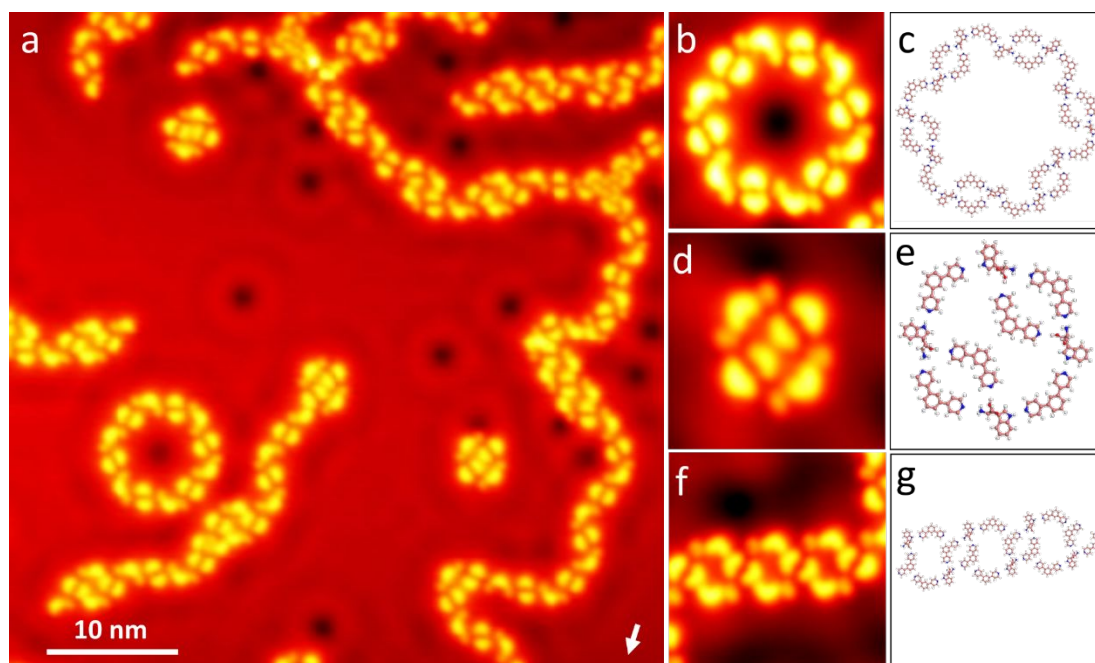
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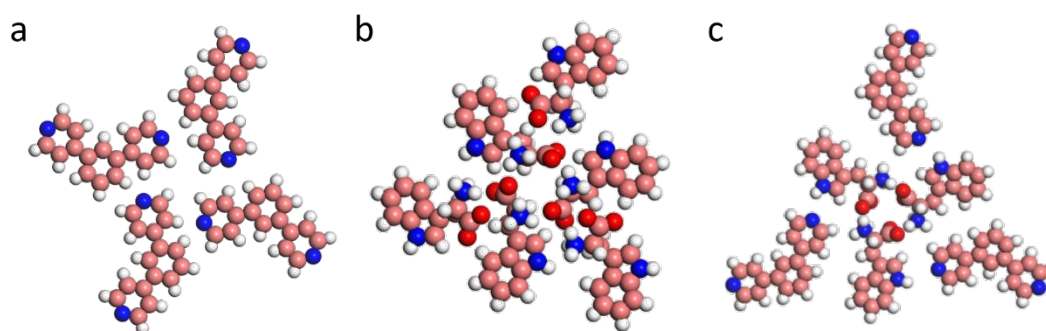
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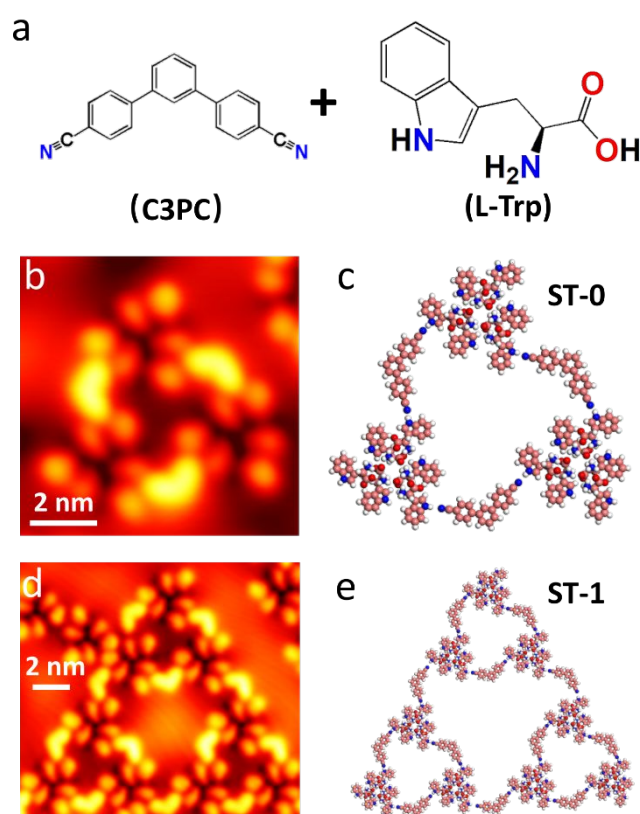
**Figure S1.** Large-scale STM images of STs formed by L-Trp and BPyB molecules at low (a) and high (b) molecular coverages. STs of high orders can only be formed at low molecular coverages. Imaging conditions: (a)  $V_{\text{bias}} = 0.1$  V,  $I = 0.1$  nA; (b)  $V_{\text{bias}} = 0.2$  V,  $I = 0.04$  nA.



**Figure S2.** (a) When depositing BPyB and L-Trp molecules on Ag(111) at a ratio of BPyB to L-Trp larger than 2:1, ring-like structures, clusters and one-dimension chains form on Ag(111). (b-g) Enlarge images of different structures and their molecular models. Scanning parameters: (a)  $V = 0.1$  V,  $I = 0.04$  nA; (b, d, f):  $V = 10$  mV,  $I = 0.04$  nA.



**Figure S3.** (a-c) Optimized gas-phase molecular structures of a BPyB tetramer, a L-Trp hexamer and a L-Trp-BPyB-ST-0.



**Figure S4.** Sierpiński triangles constructed by L-Trp and C3PC. (a) The chemical structure of C3PC and L-Trp. (b-c) High-resolution STM image of L-Trp-C3PC-ST-0 and its corresponding molecular model. (d-e) STM image of L-Trp-C3PC-ST-1 and its molecular model. Imaging conditions: (b)  $V_{\text{bias}} = 10 \text{ mV}$ ,  $I = 0.04 \text{ nA}$ ; (d)  $V_{\text{bias}} = 50 \text{ mV}$ ,  $I = 0.04 \text{ nA}$ .