Self-Assembly Behavior of Alkylated Isophthalic Acids Revisited: Concentration in Control and Host-Guest Induced Phase Transformation

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Contents

1. Self-assembly of ISA-OC10

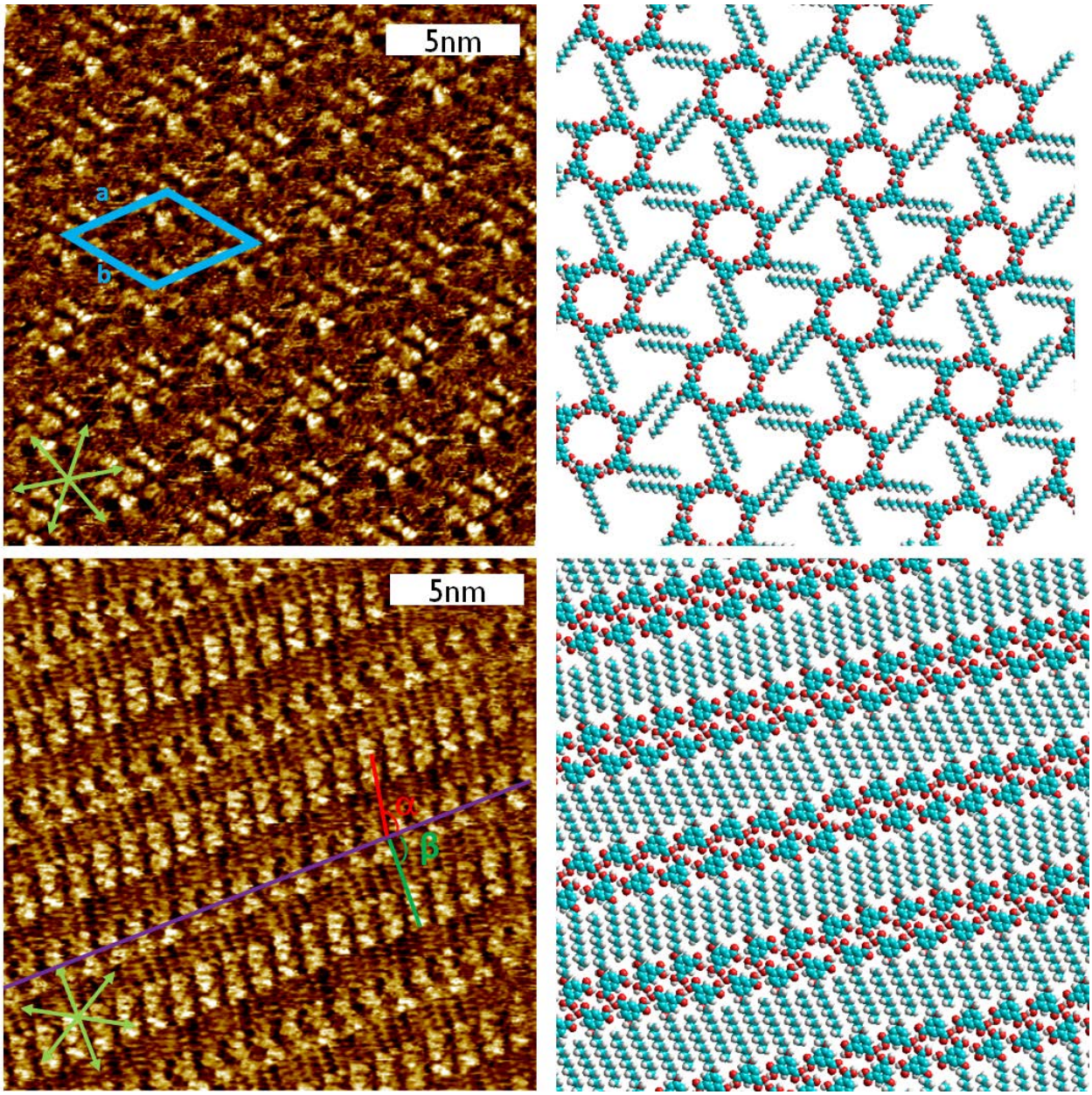

Figure S1: STM images and corresponding tentative models of ISA-OC10 at the phenyloctane/HOPG interface (0.5mM mM, V_{bias} = -0.65 V, I_{set} = 0.12 nA) showing the porous (top) and the lamellar network (bottom). (Unit cell parameters for the porous network: α = 57.7 ±

1.0º, a = 3.39 ± 0.1 nm, b = 3.66 ± 0.1 nm)

2. Self-assembly of ISA-OC18

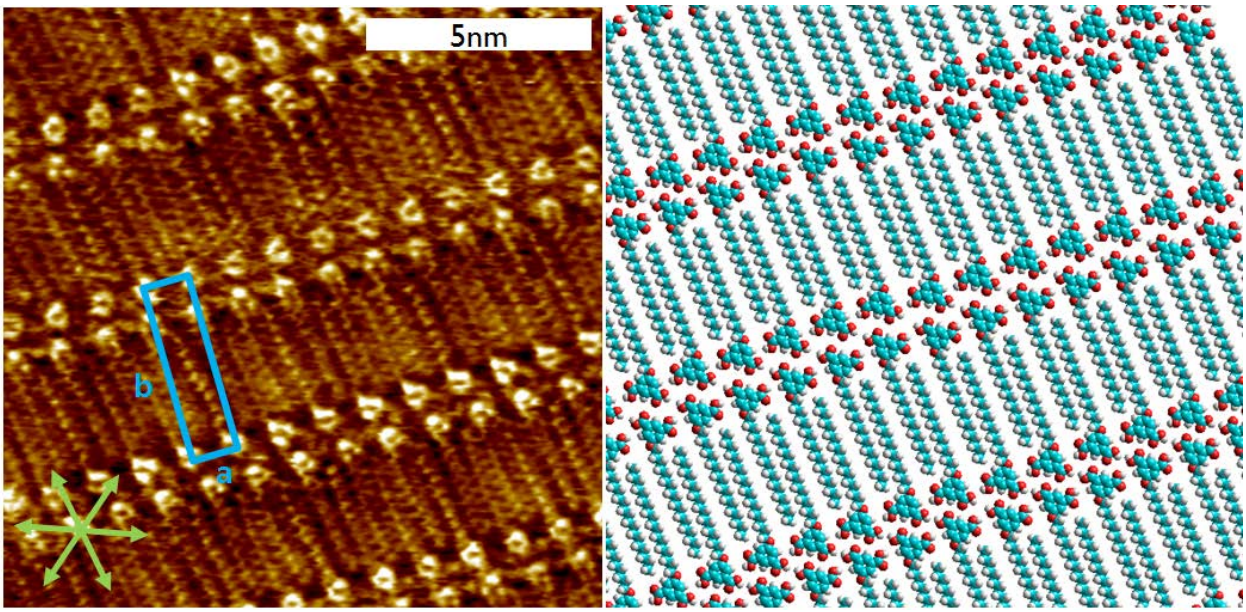

Figure S2: STM image and corresponding tentative molecular model of ISA-OC18 at the phenyloctane/HOPG interface (0.47mM, V_{bias} = -0.85 V, I_{set} = 0.2 nA), showing the lamellar network (unit cell parameters: α = 89.8 ± 2.5º, a = 0.89 ± 0.1 nm, b = 3.82 ± 0.2 nm)

3. Large scale STM images of ISA-OC10 and ISA-OC14 at different concentrations and ISA-OC18 at submonolayer coverage

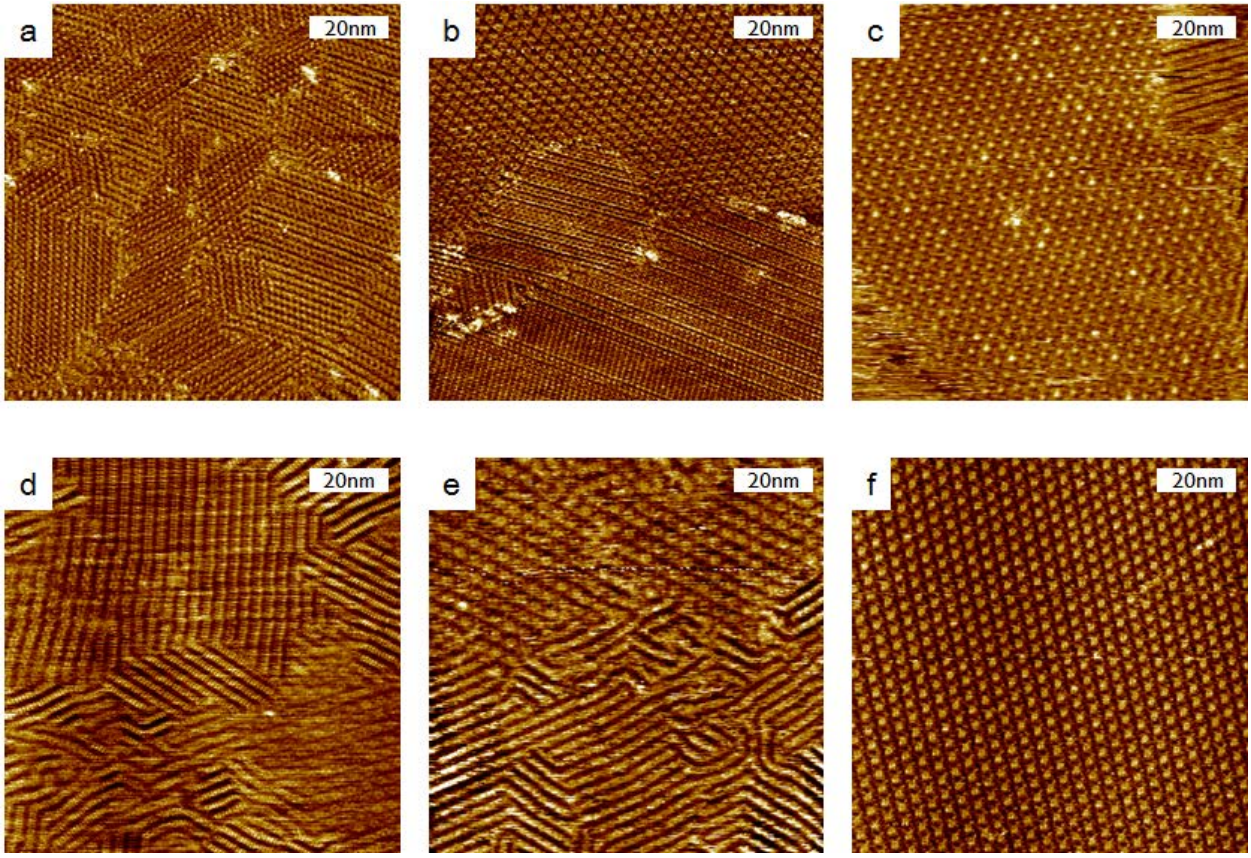

Figure S3: STM images of (a-c) ISA-OC10 and (d-f) ISA-OC14 at the phenyloctane/HOPG interface at different concentrations, showing the formation of hexameric patterns at lower concentration. a) 1.0mM, V_{bias} = -0.65 V, I_{set} = 0.12 nA, b) 0.49mM, V_{bias} = -0.65 V, I_{set} = 0.12 nA, and c) 0.1mM, V_{bias} = -0.65 V, I_{set} = 0.12 nA, d) 2.65mM, V_{bias} = -0.50 V, I_{set} = 0.13 nA, e) 1.33mM, V_{bias} = -0.65 V, I_{set} = 0.13 nA, and f) 0.03mM, V_{bias} = -0.65 V, I_{set} = 0.12 nA.).

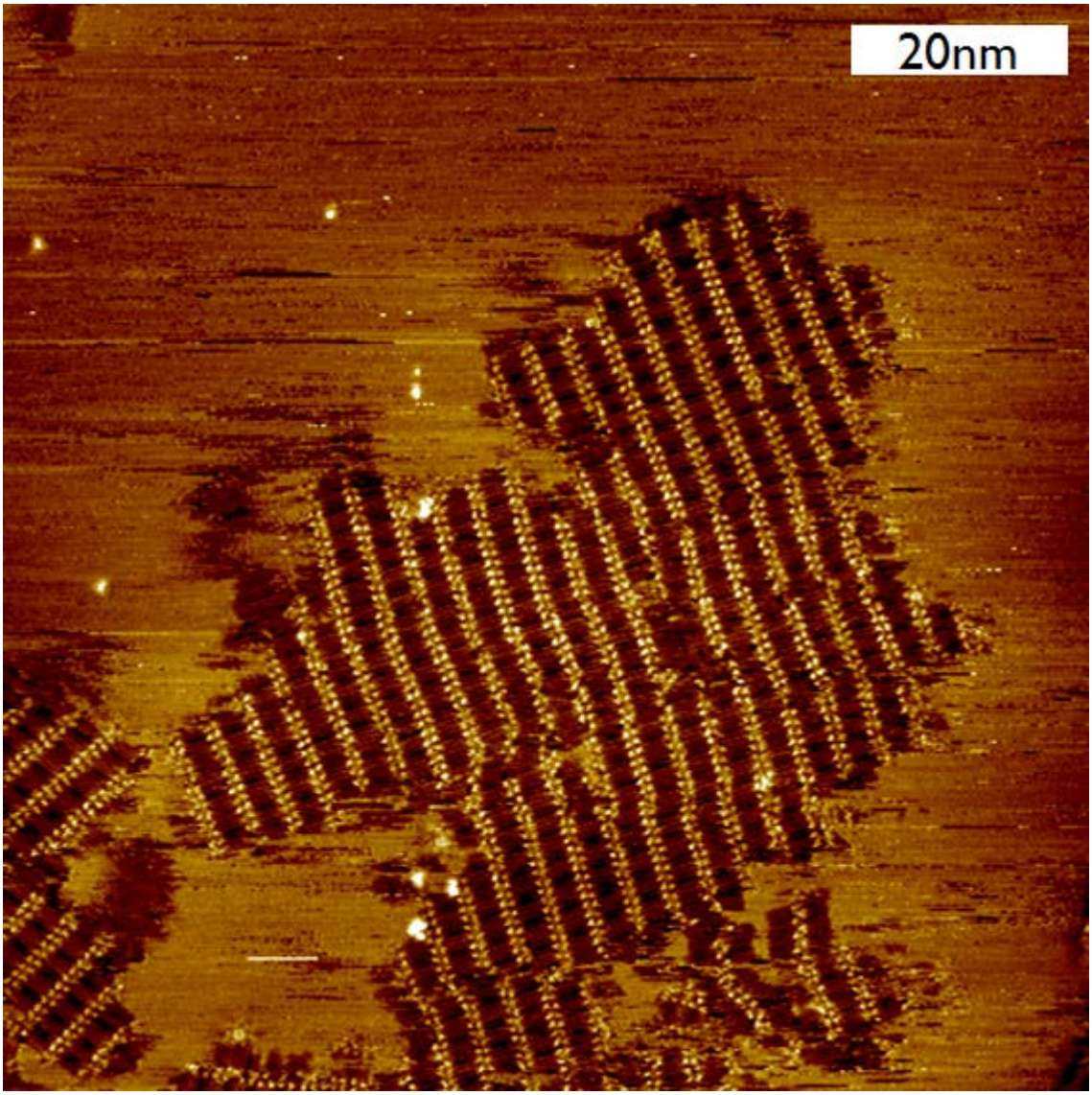

Figure S4: STM image of ISA-OC18 at the phenyloctane/HOPG interface (0.01 mM, V_{bias} = -0.65 V, I_{set} = 0.12 nA). Even at sub-monolayer coverage, ISA-OC18 still uniquely forms the lamellar packing.