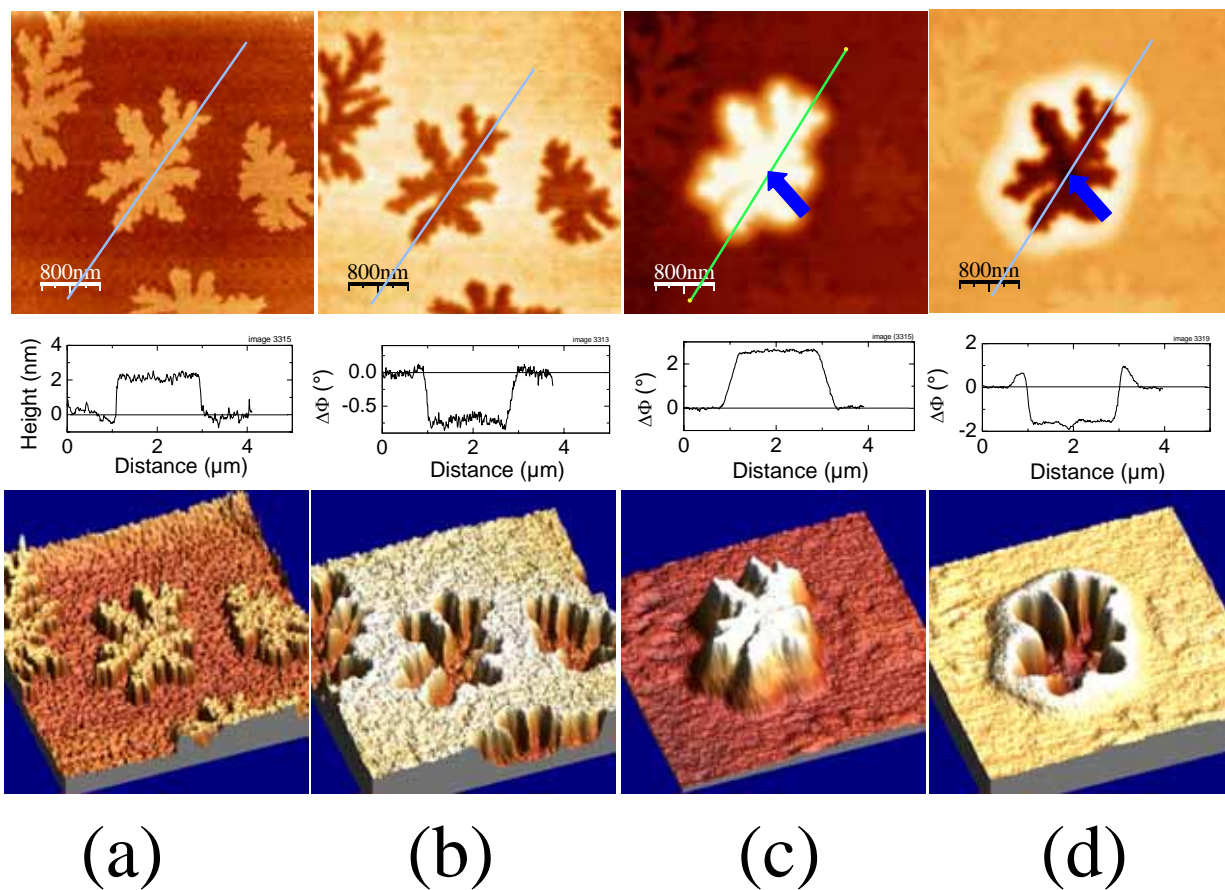


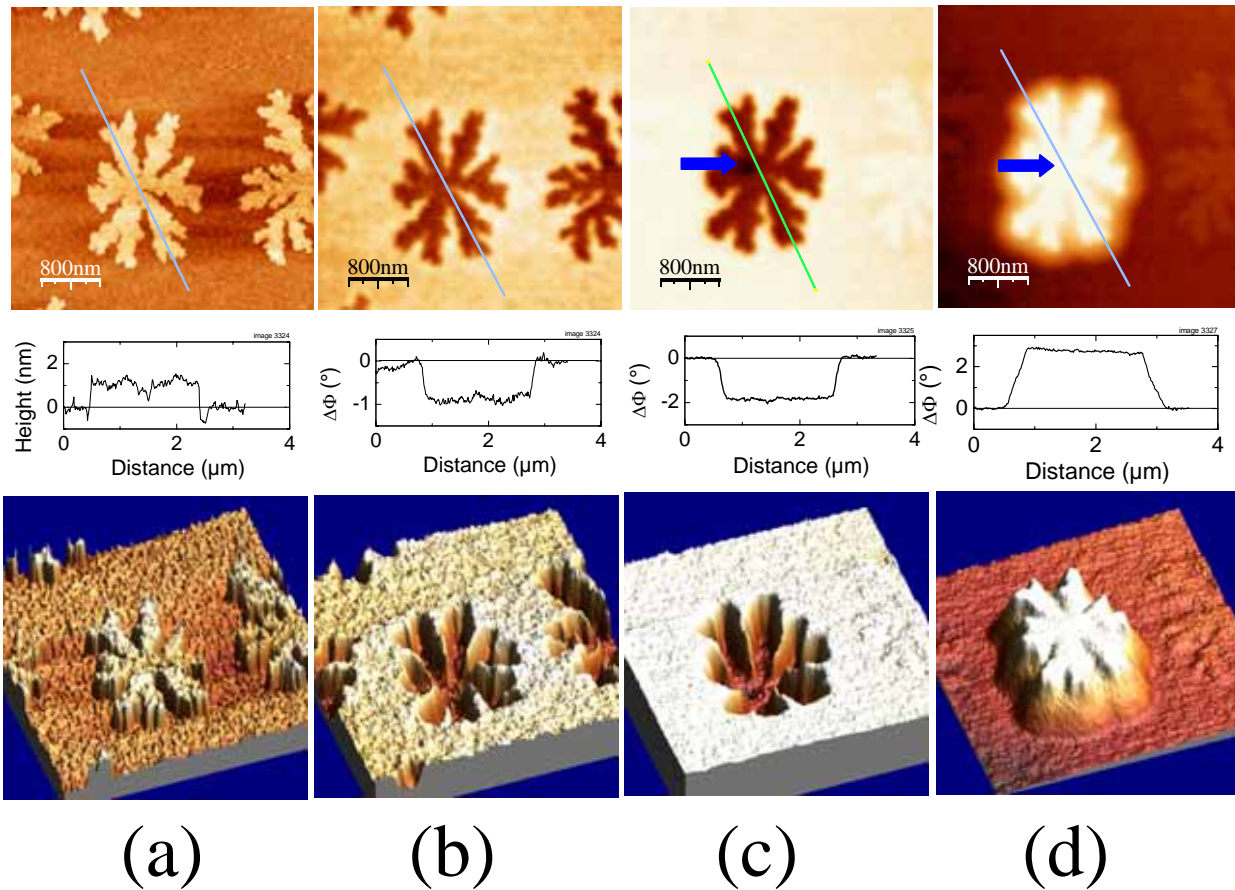
# Ambipolar charge injection and transport in a single pentacene monolayer island

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## Supporting Information



**FIGURE A.** From top to bottom: 2D images, section profiles along the line and 3D images of a second pentacene islands on substrate **I**. (a) TM-AFM of the islands. (b) EFM images (phase shift,  $V_{\text{EFM}} = 5\text{V}$ ,  $z = 60\text{ nm}$ ) of the same islands before charge injection. (c) EFM images (phase shift,  $V_{\text{EFM}} = 5\text{V}$ ,  $z = 60\text{ nm}$ ) of the same islands after a local injection ( $V_{\text{INJ}} = +4\text{V}$  for 4 min) on the central island (injection point marked by the arrow). (d) EFM images (phase shift,  $V_{\text{EFM}} = 5\text{V}$ ,  $z = 60\text{ nm}$ ) after a subsequent local injection at  $V_{\text{INJ}} = -4\text{V}$  for 4 min). All images are  $4\mu\text{m} \times 4\mu\text{m}$ .



**FIGURE B.** From top to bottom: 2D images, section profiles along the line and 3D images of a third pentacene islands on substrate **I**. Compared to previous experiments (fig. 2 in the publication and fig. A in supporting information), the injection sequence has been inverted. Electrons are injected first at  $V_{\text{INJ}} = -4\text{V}$ , followed by hole injection at  $V_{\text{INJ}} = +4\text{V}$ . (a) TM-AFM of the islands. (b) EFM images (phase shift,  $V_{\text{EFM}} = 5\text{V}$ ,  $z = 60\text{ nm}$ ) of the same islands before charge injection. (c) EFM images (phase shift,  $V_{\text{EFM}} = 5\text{V}$ ,  $z = 60\text{ nm}$ ) of the same islands after a local injection ( $V_{\text{INJ}} = -4\text{V}$  for 4 min) on the central island (injection point marked by the arrow). (d) EFM images (phase shift,  $V_{\text{EFM}} = 5\text{V}$ ,  $z = 60\text{ nm}$ ) after a subsequent local injection at  $V_{\text{INJ}} = +4\text{V}$  for 4 min). All images are  $4\mu\text{m} \times 4\mu\text{m}$ .