

**Supporting Information**  
**for**  
**UHV deposition and characterization of a mononuclear iron(III)  $\beta$ -diketonate complex on Au(111)**

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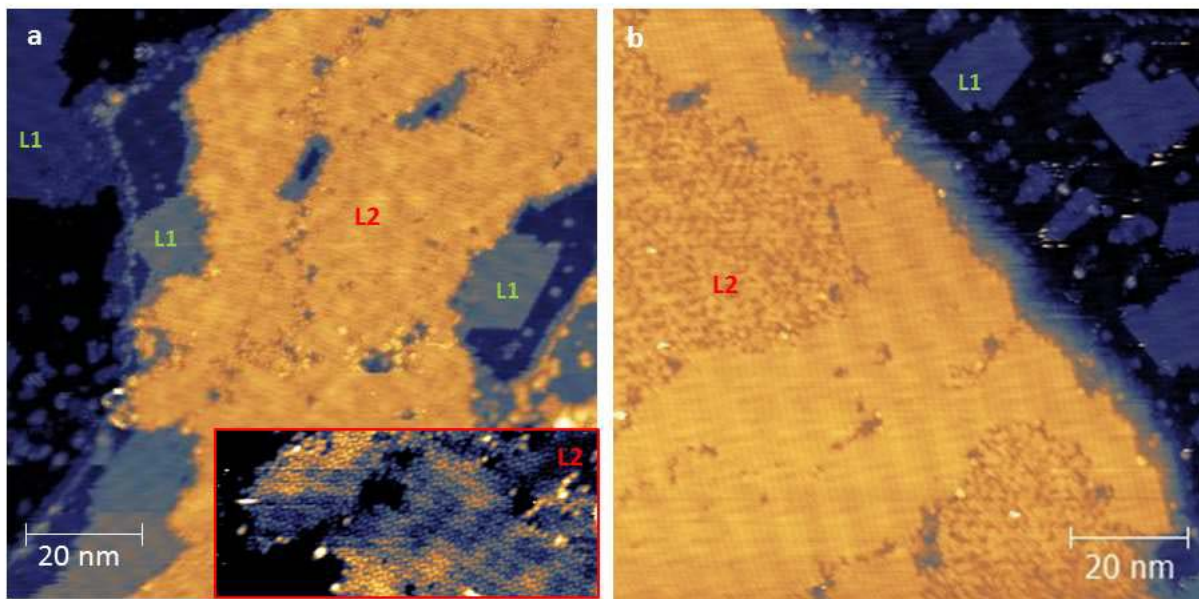
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**Additional STM images**



**Figure S1:** STM images of the Au(111) surface after exposure to  $\text{Fe}(\text{dpm})_3$  for  $t_1 = 30$  min (low rate). First and second layer are indicated as L1 and L2, respectively. (a) Size =  $100 \times 100 \text{ nm}^2$ , Bias =  $-2 \text{ V}$ ,  $I = 3 \text{ pA}$ . (Inset) Enlarged view of L2, Size =  $18 \times 41 \text{ nm}^2$ . (b) Size =  $100 \times 100 \text{ nm}^2$ , Bias =  $-2 \text{ V}$ ,  $I = 5 \text{ pA}$ . The height of L2 is  $0.27 \pm 0.04 \text{ nm}$ , therefore comparable to L1 ( $0.29 \pm 0.2 \text{ nm}$ ). Figure 1b shows a second layer characterized by ordered and disordered domains.