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STM observation of thia[11]hetero helicene on gold(111) and gold(110) surface

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Monolayers of helically shaped aromatic compound, hexathia[11]heterohelicene (11TH), which consists of five benzene rings and six thiophene rings were prepared on gold(111) and gold(110) surface under UHV condition. LEED and STM were used for the structural study focused on the molecular chirality. 11TH monolayer on gold(111) substrate showed the same structure as on (111) analogue of polycrystalline surface. 11TH evaporated on gold(110) showed loosely packed molecular chains. The results were compared with the results on gold polycrystalline surface and the bulk structural analysis.