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Surface induced selective deposition of Dysprosium Polyoxometalate on HOPG surface studied by STM and STS DAVID COSTA MILAN, LT-Nanolab University of Alicante, ELENA PINILLA CIENFUEGOS, SALVADOR CARDONA SERRA, EUGENIO CORONADO MIRALLES, Research Team on Molecular Materials University of Valencia, CARLOS UNTIEDT LECUONA, LT-Nanolab University of Alicante — Scanning Tunneling Microscope (STM) and scanning Tunnelling spectroscopy (STS) techniques have been used to study the Preyssler type Polyoxometalate $K_{12}[DyP_5W_{30}O_{110}]$ molecules deposited on Highly Oriented Pyrolytic Graphite surface (HOPG). Chainlike arrangements of clusters containing two or three molecules, as well as different cluster sizes are observed. As many structural artifacts are present on the graphite surface, like Moiré patterns, that could look like the molecular deposits, we have studied their STS and size to ensure the presence of the POM molecules on the surface. This article shows the possibility of addressing POMs on a flat surface to obtain their electronic properties through STS.

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