

Imaging three-dimensional surface objects with submolecular resolution by atomic force microscopy

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Intramolecular resolution accomplished by atomic force microscopy (AFM) has recently attracted considerable attention because its potential to unveil the chemical structure of unknown molecules, characterise charge distributions and bond ordering within molecules, as well as to study chemical transformations and intermolecular interactions. So far, most of these achievements make use of planar molecules because high-resolution imaging of three-dimensional (3D) surface structures with AFM remains challenging.

Here we present a general method for sub-molecular imaging of non-planar molecules and the study of 3D surface systems with atomic resolution using a cantilever-based AFM.

