

Electron-Induced Tautomerization for Patterning of Organic Molecules on Solid Surfaces

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Technology Summary

The present invention demonstrates an all-electron control over chemical attachment and subsequent self-assembly of an organic molecule into a well-ordered three-dimensional monolayer on a metal surface. Electron excitation enables tethering, direct control over the size and shape of the self-assembled pattern, its defect structure, and the reverse process of molecular disassembly from single molecular level to mesoscopic scale.

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