

摘要 | 15 February 2007. Confining and controlling electrons onto metal surfaces is an awkward task, and currently researchers do this by carefully positioning single atoms using techniques such as scanning electron microscopy (STEM). But these "top-down" methods are either time consuming or difficult to control, so make it hard to engineer ensembles of confining nanostructures.

关键词 | electron microscopy; electron beam

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Barth told Physics Web that the periodicity of the 1D stripes can be tuned in "arbitrary detail" by simply altering the concentration of methionine molecules on the surface. Furthermore, by arranging single atoms of iron along the silver stripes using STM, his team could reduce the system to zero dimensions. "We believe that the ease, versatility and elegance of the bottom-up strategy will attract widespread attention," he said.

