



PHYSIKALISCHES KOLLOQUIUM

Mittwoch, 29.05.2013, um 17:15 Uhr

Ort: Reichenhainer Str. 90; Neues Hörsaalgebäude, Raum: 2/N013



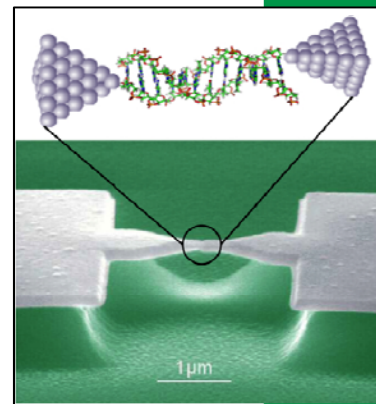
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Molecular electronics – from single molecules to molecular networks

Molecular electronics aims for scaling down electronics to its ultimate limits by choosing single molecules as the building blocks of active devices. The advantages of this approach are the high reproducibility of molecular synthesis on the nanometer scale, the ability of molecules to form large structures by self-assembly and the huge versatility of molecular complexes. On the other hand, conventional contacting techniques cannot form contacts on the single molecule scale and imaging techniques nowadays cannot provide a detailed image of such junctions. Therefore the fabrication has to rely on some degree of selforganization of the constituents and the proof that a molecule has been contacted successfully can be only given by indirect methods, for example by measuring the current transport through the junctions.

Using such techniques, various properties of the molecules can be studied. Special examples are differences between various coupling endgroups of the molecules and effects of light-irradiation onto the molecular junctions. Further integration of the molecular structures into larger networks can be achieved by binding the molecules on larger templates, which are formed by selforganization. We demonstrate first electrical characterization of DNA structures, which are used for the generation of such templates.



Alle Zuhörer sind ab 17:00 Uhr zum Kaffee vor dem Hörsaal eingeladen.