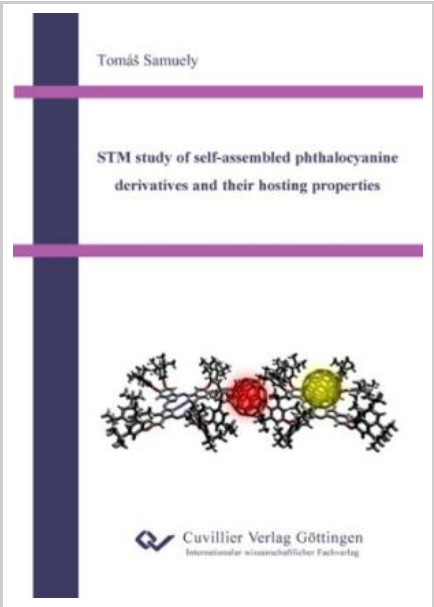

STM study of self-assembled phthalocyanine derivatives and their hosting properties

By Tomas Samuely

Cuvillier Verlag Dez 2008, 2008. Taschenbuch. Book Condition: Neu. 208x144x12 mm. Neuware - Molecular self-assembly, as a most studied case of self-assembly, is one of the few practical strategies for making ensembles of nano- and micro structures. As an essential aspect of the ôbottom-upö approach, it is attractive for both scientific research and technological applications. Therefore a detailed understanding of the moleculesubstrate and intermolecular interactions involved in the self-assembly process is of great interest. In the first part of the thesis, the influence of the phenoxy substituents on the selfassembly of Pcs on (111)-oriented noble metal surfaces is described. The rotational degrees of freedom, characteristic for these substituents enable the formation of various stable and transient phases and allow the substituents to be arranged above the plane of the Pc core, forming a bowl-like structure, which in turn enables the interaction of the Pc core with the metal substrate. The proximity of the Pc core to the metal substrate together with the steric entanglement between neighboring substituents causes significant retardation of the thermodynamic optimization of the conformations. This accounts for the coexistence of some of the phases. In the second part, the influence of replacing two adjacent phenoxy substituents by...

Reviews

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