

PHYSICAL COLLOQUIUM

INVITATION

Monday, 20.01.2020, 4.15 p.m., W2-1-148

speaks

Prof. Dr. M. Alexander Schneider,
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about

**“Organic molecules on ideal surfaces –
investigations on metal and metal oxide surfaces”**

During the last two decades we have seen many examples of the creation of molecular layers on ideal, single crystalline surfaces and the unraveling of their properties using surface science methods. Most of these systems were created on metal surfaces and showed the potential of self-assembly and on-surface reactions. From the application point of view the coupling to the metal substrate is in most cases detrimental and, hence, in recent years also oxides have come into the focus of research. Here, a general recipe how to induce self-assembly and order in molecular layers is still lacking.

In my talk I will discuss a few comparative studies of larger organic molecules (mostly porphyrins) on metal and on cobalt oxide surfaces and illustrate with the help of scanning tunneling microscopy and density functional theory calculations what causes self-assembly to work on metals (sometimes even leading to stereoselective on-surface reactions) and what prevents it on the oxide surfaces in many cases.

All interested persons are cordially invited.

Sgd. Prof. Dr. Niklas Nilius