

## **Tailoring the properties at organic/metal interfaces by surface alloying.**

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Controlling the physical chemical properties of organic layers deposited on metallic surfaces is important for engineering of devices based on metal/organic interfaces. It is well established that substrate/molecule interactions can produce significant changes in the properties of the adsorbed molecules including changes in the configuration (bending), re-alignment of the electronic levels, formation of hybridized electronic states, etc.. A possible route to control the properties of metal/organic interfaces is to modify the molecules by taking advantage of the versatility of the organic chemistry. Another possible route is to adapt the substrate by applying the methods of surface science. In our case, we follow the second approach.

In this talk I will comment our advances in the control of the chemical reactivity of the Cu(001) surface by Sn surface alloying and its effects on the deprotonation of the carboxyl (RCOOH) groups of terephthalic acid (TPA, Benzene-1,4 dicarboxylic acid), and on the self-assembling of 5-amino-hexahelicenes.