SEMINAIRE ISMO

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Tailoring low dimensional surface nanostructures of defined physicochemical properties

Organic species and nanoarchitectures including metal atoms at well-defined interfaces provide high potential for single-site heterogeneous catalysts, light harvesting, nanomachines and molecular spintronics. The advancement is underpinned by the continuous development of materials with tailored properties controllable at the molecular scale.

Here we visit the extension of the conjugation (polymerisation) of all-organic N-containing molecules with the aim of tuning the electronic bandgap. Further functionalisation is achieved by incorporation of various metals in the surface nanoarchitectures.

In reverse order, we investigate new avenues towards metal directed self-assembly of organic matter at interfaces, by adjusting the functional moiety of the organic part, or the metal centre.

Finally, we extend this approach to introduce organometallic nanostructures with carbenes, which provide strong tethers. We achieve both planar and out-of-plane ligation, therefore giving the potential for extension from single layers to thin films of metal-organic frameworks.

Mardi 24 octobre 2017 à 11h

Bât. 210 – Amphi 1 (2ème étage)

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