



SEMINAIRE ISMO

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The backside of graphene – functionalization, defects and new compound materials

The ease by which the properties of graphene are affected through contact with other materials is one of its unique features and defines an integral part of its potential for applications. Through a combination of microscopy, spectroscopy and ab initio calculations it will be demonstrated, that the substrate of epitaxial graphene itself as well as intercalation layers, created by the insertion of atoms under its backside, are efficient tools to change the electronic properties and the interaction of graphene with the environment on its frontside. This enables us not only to functionalize graphene as a template for patterned adsorption of atoms and molecules, but also to change the strength in ionic, van der Waals, and chemical binding of adsorbates.

With the rise of graphene, defect engineering in 2D-layer systems has become an emerging subject. We show here that for supported graphene, the substrate on its backside gives rise to new phenomena in defect creation and annealing. Interface channeling, vacancy cluster antidot lattice formation, and nano platelet aggregation through ion irradiation of graphene will be addressed.

Mardi 30 septembre 2014 à 11h

Bât 210 - Amphi 1(2^{ème} étage)

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