



Prof. Sungjin Park

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**Carbon-based materials with molecular
designing and their catalytic properties**

**August 3
Thursday, 11 AM**

Bldg. 101
Seminar Room on the 1st floor

Abstract

Chemical designing on nano-materials in molecular level would be a promising route to create new hybrid materials and to control various properties of nano- and molecular materials. Organometallic compounds have been a center of molecular catalysts with preeminent catalytic activity and selectivity in a wide range of chemical transformations. As carbon-based nanomaterials, such as graphene-based materials, carbon nanotubes, and carbon nitrides, are sterically bulky, and they exhibit a wide spectrum of electrical properties, they can dramatically tune the catalytic behavior of transition metal-based active species. Hybridization of organometallic complexes with graphene-based materials can give rise to enhance catalytic performances. In this presentation, I will discuss my recent research activities on the fundamental chemistry of carbon-based nano-materials as well as catalytic applications.

You are cordially invited to attend!

Special Seminar



Dr. Alberto Bianco

CNRS, Immunology, Immunopathology and
Therapeutic Chemistry, University of Strasbourg,
ISIS, Strasbourg, France

Multifunctional graphene-based materials

August 3
Thursday, 1:30 PM

Bldg. 101
Seminar Room on the 1st floor

Abstract

Graphene and other related two-dimensional materials are considered unique systems for many applications in different fields, including the biomedical field. They are offering the possibility to explore a wide range of reactions for their chemical functionalization and for the design of complex multifunctional systems that allow further their exploitation in therapy, imaging and diagnosis. In this presentation, I will illustrate the chemical strategies to functionalize two-dimensional nanomaterials with appropriate functional groups and therapeutic molecules in view of their biomedical applications. I will describe few examples of their use in cancer therapy and imaging. I will also present appropriate strategies to enhance the biodegradability and tune the toxic effects of these nanomaterials.

References

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