
DRF: Thesis SL-DRF-19-0235

RESEARCH FIELD

Chemistry / Physique de l'état condensé, chimie et nanosciences

TITLE

Synthesis and optical properties of graphene nanoparticles

ABSTRACT

Graphene as a constituent of graphite was close to us for almost 500 years. However, it is only in 2005 that A. Geim and K. Novoselov (Nobel Prize in 2010) reported for the first time the obtaining of a nanostructure composed by a single layer of carbon atom. The exceptional electronic properties of graphene make it a very promising material for applications in electronic and renewable energies.

For many applications, one should be able to modify and control precisely the electronic properties of graphene. In this context, we propose to synthesize chemically graphene nanoparticles and study their absorption and photoluminescence properties. This project will be developed in collaboration with Physicists so the candidate will work in a multidisciplinary environment.

LOCATION

Institut rayonnement et matière de Saclay
Service Nanosciences et Innovation pour les Matériaux, la Biomédecine et l'Energie
Laboratoire Innovation, Chimie des Surfaces Et Nanosciences
Place: Saclay
Start date of the thesis: 01/10/2019

CONTACT PERSON

Stéphane CAMPIDELLI
CEA
DRF/IRAMIS/NIMBE/LICSEN
DRF/IRAMIS/NIMBE/LICSEN
Laboratoire d'Innovation en Chimie des Surfaces et Nanosciences
Bat.125 p.146
91191 Gif sur Yvette
Phone number: +33 1 69 08 51 34
Email: stephane.campidelli@cea.fr

UNIVERSITY / GRADUATE SCHOOL

Paris Sud
Sciences Chimiques: Molécules, Matériaux, Instrumentation et Biosystèmes (2MIB)

FIND OUT MORE

<http://iramis.cea.fr/Pisp/stephane.campidelli/>

<http://iramis.cea.fr/nimbe/licsen/>

THESIS SUPERVISOR

Stéphane CAMPIDELLI

CEA

DRF/IRAMIS/NIMBE/LICSEN

DRF/IRAMIS/NIMBE/LICSEN

Laboratoire d'Innovation en Chimie des Surfaces et Nanosciences

Bat.125 p.146

91191 Gif sur Yvette