SAIP 2011

Contribution ID : 218

Graphene Coatings:Snythesi/Physical-Chemical Investigations

Wednesday 13 Jul 2011 at 17:00 (02h00')

Content :

The main aim of this project is to synthesize, isolate, identify and characterize graphene, defined as a one-atom layer of hexagonally bonded carbon atoms using mechanical exfoliation method. Moreover, this technique is based on pulling apart the layers of a piece of highly oriented pyrolytic graphite(HOPG) and transfer layers from the graphite onto a SiO_2 substrate. Graphene is the first truly 2D dimensional material and has a number of remarkable mechanical and electrical properties. It is substantially stronger than steel, and it is very stretchable. The thermal and electrical conductivity is very high and it can be used as a flexible conductor. Graphene is a zero-gap semiconductor and has a novel electron structure, with its conduction and valence bands meeting at the Dirac point. This characteristic enables the electron conduction by shifting the Fermi level with applied field.

Level (Hons, MSc, PhD, other)? :

MSc

Consider for a student award (Yes / No)? :

YES

Short Paper :

NO

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Session classification : Poster1

Track classification : Track A - Condensed Matter Physics and Material Science

Type : Poster Presentation