TIFR Centre for Interdisciplinary Sciences
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Internal Seminar

Engineered 2D Layered Nanomaterials for Photoconductive and Photocatalytic Applications

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Graphene (GR) based van der Walls (vdW) heterostructures with other two-dimensional (2D) crystalline semiconductor atomic layers are receiving tremendous attention in recent days. Combination of highly conductive and optically transparent (97.7%) graphene with semiconductor transition metal dichalcogenide (STMD) layers could exhibit the exceptional properties due to their atomic thinness over a large area, high mechanical strength, optical transparency and direct bandgap for photoconductive and photocatalytic applications. Current challenges of fabrication and characterization of engineered 2D nanomaterials, which shade a light on novel GR-STMD vdW heterostructures with desired functionalities will be discussed. My talk will be focussed on the photoconductive and photocatalytic applications of graphene, other 2D materials and their van der Waals heterostructures and their future perspective will be discussed.

Monday, Dec 14th 2015

11:30 AM (Tea/Coffee at 11:15 AM)

Seminar Hall, TCIS