

Manuel Cardona Lectures

This series of lectures offer the opportunity to interact with some of the most prominent researchers in nanoscience-related fields. At the same time, they are a tribute to Prof Manuel Cardona, a key figure in the history of this Institute.



Recent progresses in the Center for Integrated Nanostructure Physics

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Abstract

Launched in 2012 with a strong support of Korean government under the umbrella of Institute for Basic Science (IBS), the Center for Integrated Nanostructure Physics (CINAP) focuses researches in two-dimensional layered materials and their hybrids to various heterostructures from synthesis and exploration of new physical and chemical properties to device physics. We will report our recent progresses on 2D materials. This covers some progresses on the synthesis of singlecrystal monolayer and multilayer graphene, and transition metal dichalcogenides, the best record thermoelectric figure of merit at room temperature, structural and electronic phase engineering of 2D materials, and heterointerfacial devices, multiexcitons in MoS₂, Ag nanowire-2D material hybrid for optical communication, and tunnelling devices.