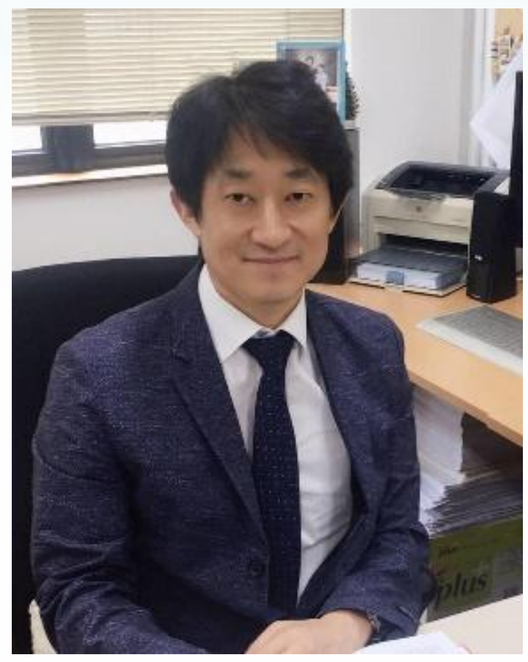
# 学 术 报 告

State Key Laboratory of Chemical Resource Engineering

# Exfoliated 2D Nanosheets of Layered Inorganic Solids: Efficient Lego Blocks for Functional 3D Nanohybrids



**报 告 人：Prof. Seong-Ju Hwang**

**Ewha Womans University, Korea**

**时　　间：2018年1月15日（周一）下午 3:30**

**地　　点：无机楼107会议室**

## 报告人简介：

**Prof. Hwang now is the director of Materials Research Institute for Clean Energy in Ewha Womans University and the director of Center for Hybrid Interfacial Chemical Structure (SRC center designated by Korean Research Foundation, Republic of Korea). He is also the specialized director of the Committee of EXAFS Beamline, Pohang Light Source, Korea. He has published 60 patent, and over 250 papers (h-index: 43). Moreover, he has given 265 presentations in international conference (65 Invited Talks) and 407 presentations in local conference (84 Invited Talks). His research interest focus on the 2D nanosheets, graphene, 1D nanowires, nanohybrids, electrodes for Li/Na/Mg ion, Li-S, and Li-air batteries & supercapacitors, photocatalysts, electrocatalysts, mesoporous adsorbents for recovering greenhouse gases, nanobio materials, high-Tc superconductors, up-to-date spectroscopic analysis for nanomaterials.**

## 报告内容简介：

**The exfoliated 2D nanosheets of layered inorganic solids (layered metal oxides, layered double hydroxides, transition metal dichalcogenides, and layered metal carbides) attract intense research interest because of their unique physicochemical properties and useful functionalities. The 2D inorganic nanosheets can be synthesized by soft-chemical exfoliation reaction and used as efficient 2D lego blocks for heterolayered nanohybrids, porous nanocomposites, multilayered films, freestanding hybrid films, etc. The resulting 3D hybrid materials possess diverse promising applicabilities for energy and environmental technologies. In this talk, versatile use of the 2D inorganic nanosheets as 2D lego blocks will be presented together with the application of inorganic nanosheet-based nanohybrids with tailorable physicochemical properties and functionalities such as electrode activity, photocatalytic activity, redox catalytic activity, electrocatalytic activity, gas adsorption capability, and nanobio application.**

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