

---

## COLLOQUIUM

---

- **SPEAKER**

Prof. Bonggeun Shong (Assistant Professor of Chemistry, Chungnam National University)

- **TITLE**

Chemistry of molecules on solid surfaces:

From fundamentals of adsorption to deposition reactions

- **ABSTRACT**

A deep understanding on the behavior of the molecules on the surfaces is necessary to be able to maximize the performance of heterogeneous catalysts, as well as to develop devices with organic–inorganic hybrid interfaces. Especially nanomaterials often show properties dominated by their surfaces, often completely different compared to their bulk. Given the importance of these interfaces, study on the chemistry of molecules directly attached to solid surfaces is a topic of increasing interest.

In this talk, fundamental aspects of the adsorption, reaction, and desorption of molecules on various solid surfaces will be presented. In many cases, the strongest interaction that drives the adsorption of organic molecules on the surfaces is local bond formation between the molecules and the surface. However, weaker lateral interactions within the adsorbate–substrate system are also present, and are observed in diverse aspects depending on the system. An expansion of such fundamental understanding toward deposition of thin films and heterogeneous catalysts will be discussed. A combination of experimental techniques in addition to theoretical methods is helpful in elucidation of the surface processes.

- **DATE AND VENUE**

August 12, 2016 (Friday, 1:00–2:00 p.m.)  
Seminar room 116, R&D Center