



IBS Center for Molecular Spectroscopy and Dynamics

COLLOQUIUM

- **SPEAKER**

Prof. Haw Yang (Princeton University)

- **TITLE**

The Configurational and Kinetic Elements of Molecular Dynamics in Complex Systems

- **ABSTRACT**

The distribution of the molecular property and the dynamics thereof are the two unique pieces of information enabled by the single-molecule approach but not available from the conventional ensemble-averaged experiments. In this presentation, we will discuss how single-molecule Förster-type resonance energy transfer (FRET) helps to illuminate several fundamental aspects of biochemistry and molecular biology. Ideas that will be examined include the basic notion of the venerable “induced-fit” concept, conformational gating, and the molecular nature of cooperativity. We next discuss how the application scope can be expanded to visualizing a virus-like nanoparticle—and eventually a single HIV-1 virus—approaching a living cell in real time and in full 3D fidelity (3D multi-resolution imaging). We will also point out the technologies and the theoretical underpinning that made possible these experiments and quantitative interpretation thereof.

- **DATE AND VENUE**

June 27, 2017 (Tuesday, 4:00 - 5:00 p.m.)
Seminar Room 116, KU R&D Center

- **LANGUAGE**

English

- **INVITED BY**

Prof. Sang-Hee Shim

* If you want to discuss with Prof. Haw Yang (from 1 to 4 pm) or have a dinner with him, please contact to Prof. Sang-Hee Shim (sangheeshim@korea.ac.kr).