



IBS Center for Molecular Spectroscopy and Dynamics

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## COLLOQUIUM

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- **SPEAKER**

Dr. Noh Soo Han (Dept. of Chemistry, Kyung Hee University)

- **TITLE**

Optical Properties of Luminescent Materials: Steady-State and Time-Resolved Spectroscopy

- **ABSTRACT**

The optical properties of various luminescent materials were investigated by steady-state and time-resolved spectroscopy, which could suggest photodynamics, nonlinear optical processes, and photocatalytic activities of target materials. There were two parts in the presentation; Part I introduced the steady-state and time-resolved spectroscopy and part II focused on the optical properties of semiconductor nanoparticles and semiconductor-metal nanocomposites.

First part introduced the experimental approaches and theoretical background of steady-state and time-resolved spectroscopy in condensed phase. Especially, time-correlated single photon counting for time-resolved experiment was explained in more detail. Furthermore, the experimental set-up was introduced for various purposes.

In part II, the optical properties of the ZnO nanoparticles, ZnO-Au nanocomposites, and Ag-In-S nanoparticles were examined, which suggested the origin of luminescence, such as band gap and defect emission, and the photocatalytic activity in multielectron processes.

- **DATE AND VENUE**

September 15, 2017 (Friday, 11:00 - 12:00)  
Seminar Room 116, KU R&D Center

- **LANGUAGE**

Korean