
COLLOQUIUM

- SPEAKER

Dr. Seokchan Yoon (Department of Physics, Korea University)

- TITLE

Cavity QED with single atoms: manipulation of single neutral atoms in an optical cavity

- ABSTRACT

Cavity quantum electrodynamics (cavity QED) is the fundamental study of the light-matter interaction at the single-photon level. In a well-controlled system such as a single atom strongly coupled to a light field of a high-finesse optical cavity even a single photon can deterministically change the state of the atom, which could play a key role in quantum communication and information technology of the future. In this talk, recent experimental works on cavity quantum electrodynamics of single neutral atoms will be reviewed. Laser-cooling and trapping techniques for preparing and controlling a single or a few atoms in a high-finesse optical cavity will be discussed. Detecting and manipulating of the quantum state of atoms located in an optical cavity will also be presented.

- DATE AND VENUE

November 2, 2016 (Wednesday, 5:00–6:00 p.m.)
Seminar room 116, KU R&D Center

- Language

Korean