



IBS Center for Molecular Spectroscopy and Dynamics

COLLOQUIUM

- SPEAKER

Director Andreas Heinrich (IBS Research, Center for Quantum Nanoscience, Ewha Womans University, Seoul, South Korea)

- TITLE

Electron Spin Resonance of single atoms on a surface

- ABSTRACT

The scanning tunneling microscope is an amazing experimental tool because of its atomic-scale spatial resolution. This can be combined with the use of low temperatures, culminating in precise atom manipulation and spectroscopy with microvolt energy resolution. In this talk I will apply these techniques to the investigation of the quantum spin properties of transition metal atoms on surfaces. We will conclude with our recent measurements of electron spin resonance in an STM on individual Fe atoms supported on an insulating thin film, offering unprecedented energy resolution on the atomic scale. This tool can be used as an ESR sensor to measure the magnetic field (dipolar interaction) from neighboring atoms, enabling the high-precision measurement of the magnetic moment of individual atoms on surfaces.

- DATE AND VENUE

May 11, 2017 (Thursday, 5:00–6:00 p.m.)
Room 633, Asan Science Bldg

- LANGUAGE

English

- INVITED BY

Director Minhaeng Cho