

2023 IBS-CALDES Seminar

- ✓ **Date & Time:** 3:00PM, November 21 (Tue), 2023
- ✓ **Venue:** IBS POSTECH Campus Bldg. 104 (Auditorium)
- ✓ **Speaker & Title**

3:00PM~ Prof. Jae Hoon KIM (Yonsei University)
Terahertz Spectroscopy of Quantum Materials

4:10PM~ Prof. Chang Uk JUNG (Hankuk University of Foreign Studies)

I) What if we see the world with PHYSICS eye?

Bus seat/ NEW string theory/ Jack Sparrow, HAN SeokBong, and Physics

II) Discovery of ‘Topotactic resistance switching RAM’

Organized by Prof. Han Woong YEOM(yeom@postech.ac.kr, 054-260-9000)
Dr. Jhinhwan LEE (jhinhwan@ibs.re.kr, 054-260-9014)

■ 3:00PM~

Terahertz Spectroscopy of Quantum Materials

Jae Hoon Kim

Department of Physics, Yonsei University

Quantum materials at the forefront of condensed matter research require access to extremely low frequencies of the electromagnetic spectrum beyond the infrared. The terahertz region lying between the infrared and the microwave frequencies has emerged as a fertile ground for exploring novel effects and phenomena in quantum materials. Recent developments in femtosecond solid-state lasers brought an unexpected opportunity to implement terahertz time-domain spectroscopy (THz-TDS). Here, the fundamental principle of standard THz-TDS is introduced along with immediate applications to research on quantum materials. Case studies, including superconductors, topological insulators, quantum spin liquids (QSLs), and two-dimensional (2D) magnets, will be presented.