



INSTITUTE SEMINAR

15 December 2014

3:00 pm

Fermion

Speaker:

Prof. K. Tominaga
Kobe University, Japan

Title:

**Low-frequency motions in condensed phases studied
by pulsed terahertz radiation**

Abstract:

The low-frequency region below several terahertz corresponds to intermolecular modes of complexes and intramolecular modes with a weaker potential force and/or larger reduced mass. Intermolecular interactions such as hydrogen bonding, van der Waals forces, and charge-transfer interactions play important roles in various chemical reactions and biological functions. Moreover, the low-frequency spectra also reflect molecular dynamics on a time scale from picoseconds to femtoseconds. There has been dramatic progress in the generation and detection techniques of freely propagating THz radiation in the past two decades. We have widely applied this technique to investigate low-frequency dynamics of various kinds of condensed materials, including liquids, solutions, proteins, and molecular crystals.
