

688th ASRC Seminar

Date: Thursday, June 29, 13:30 ~ 15:00

Location: Room 103, ASRC bldg.

Speaker: Professor Katsuyuki Fukutani
(University of Tokyo)

Title: Nuclear dynamics and electronic effects of hydrogen on solid surfaces: diffusion, spin conversion and electronic structure

Abstract: Hydrogen is involved in a variety of chemical processes on surfaces. While hydrogen exhibits vibrational and rotational dynamics in its adsorption state, it in some cases undergoes diffusion into the substrate as well as on the surface, and participates in chemical reactions. Furthermore, hydrogen exchanges an electron with surfaces having a significant effect on the surface electronic structure. In this presentation, I would like to introduce our recent studies on nuclear dynamics of hydrogen, hydrogen transport across surfaces, and charge transfer between the surface and hydrogen by using nuclear reaction analysis and resonance enhanced multiphoton ionization in combination with surface science techniques.

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