

# 698<sup>th</sup> ASRC Seminar

Date: Wednesday, December 13, 10:30 ~ 12:00

Location: Room 103, ASRC bldg.

Speaker: Professor Katsuyuki Fukutani  
(University of Tokyo)

Title: Electron and proton dynamics of hydrogen  
at solid surfaces

Abstract: Hydrogen is the most abundant molecule in the universe, and exhibits unique characters due to its light mass, nuclear spin, and moderate electronegativity. Hydrogen atoms chemisorbed on metal-oxide surfaces exert significant effects on the surface electronic structure by donating or accepting electrons from surfaces. Such chemisorbed hydrogen often undergoes surface and/or subsurface diffusion sometimes participating in important chemical reactions. Molecular hydrogen, on the other hand, reveals nuclear quantum effects in its rotational motion and nuclear-spin state, which are of importance in astrochemistry and hydrogen liquefaction. In this presentation, I would like to introduce our recent studies on the electronic states of hydrogen-adsorbed metal oxides and the rotational and nuclear-spin dynamics on metal and ice surfaces.

<Contact>

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