

Title Progress in molecular X-ray absorption spectroscopy

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Date & Time Friday, March 15, 2019 3:00 p.m.

Place I²CNER hall, I²CNER Bldg. 1, Ito Campus, Kyushu University

Abstract

Molecular X-ray absorption spectroscopy has been developed according to the progress in synchrotron radiation source and beamline technology, especially from the viewpoints of spectral and spatial resolutions, photon flux, and sample handling. Gas and solid samples were only handled before, and then cluster systems became possible to measure. Now even liquid samples are allowed. In this talk, some typical examples following the progress in molecular X-ray absorption spectroscopy are shown: strong core-hole screening and ligand field effects, metal-to-ligand charge transfer transition, symmetry resolution in molecular inner-shell excitations, spin-orbit vs. exchange interactions, symmetry breakings through vibronic couplings, chemical shifts due to nearest neighbor intermolecular interactions, phase transition like phenomena in binary liquid solutions, nano-scale spectro-microscopic analysis, and so on.

About the Speaker

- 1976 Bachelor of Engineering, Kyoto University
- 1978 Master of Science, The University of Tokyo
- 1981 Doctor of Science, The University of Tokyo
- 1981 JSPS Postdoctoral Fellow
- 1982 Research Associate, The University of Tokyo
- 1988 Lecturer, The University of Tokyo
- 1989 Associate Professor, Kyoto University
- 1993 Professor, Institute for Molecular Science (IMS)
- 1994 Director, UVSOR Synchrotron Facility, IMS
- 2004 Deputy Director General, IMS (-2006, 2010-2016)
- 2018 Director General, Institute of Materials Structure Science (IMSS)

Host: Professor Atsushi Takahara

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