

First Circular

International Symposium on Novel Energy Nanomaterials, Catalysts and Surfaces for Future Earth -Material Research, Characterization and Imaging by *In situ/Operando* XAFS and X-ray Techniques-

UEC 100th Anniversary Commemorative Event

October 28 (Sat) -30 (Mon), 2017

Organized by

The University of Electro-Communications (UEC), Tokyo

<http://www.uec.ac.jp/eng>

<http://www.iwasawalab.pc.uec.ac.jp/uec.int.symp./> (under construction)

Background and objectives of the symposium

Climate change, rapid population growth, and related global issues have led to the launch of international initiatives with the aim of developing innovative science and technology to build the infrastructure for a sustainable society based on clean energy and green environment. Specifically, to meet these challenges for 'Future Earth', scientists and engineers are focusing their efforts on interdisciplinary research including energy materials, molecular and nanocatalysis, surface science and development of related energy-based science and technology.

At the University of Electro-Communications, Tokyo (UEC, Tokyo), researchers working on the 'NEDO Fuel Cell Program' are using the SPring-8 Beam Line BL36XU to create and develop cutting edge X-ray based analytical techniques including *in-situ/operando*, *time axis*, and *spatial axis* measurements. Notably, the research at UEC, Tokyo has yielded unprecedented scientific insights into the electro-physico-chemical behavior and operation of electrode nanocatalysts inside fuel cells—findings that were not possible with conventional approaches.

With this background, this international symposium was inspired in response to growing calls for a scientific platform for the global community of researchers active in materials research, characterization/imaging with synchrotron radiation *in situ/operando* XAFS, and X-ray based techniques (CT, TXM, AP-HAXPES, RIXS, XRD, etc.), to meet, share, and discuss their latest discoveries in these critical and rapidly evolving disciplines.

We look forward to your participation.

Areas covered by the symposium

Synthesis, functions, and devices

- Novel energy nanomaterials, catalysts and surfaces
- Catalysts and interfaces specifically designed for green processes
- Fuel cells, batteries, and photovoltaic devices and systems
- Electrocatalysts and photocatalysts
- Applied optics
- Other related topics

Methodology and Characterization

- XAFS; e.g. *in situ*/operando, time-resolved, imaging (spatially resolved), MD, etc.
- Imaging and visualization; e.g. synchrotron CT, TXM, etc.
- Synchrotron X-ray based techniques; e.g. AP-HAXPES, AP-XPS, RIXS, XES, XRD, etc.
- XFEL
- Theory, calculations, and simulations
- Others

Cooperation from academic societies (to be confirmed)

Catalysis Society of Japan, Japan Society for Molecular Science, Japan Society of Coordination Chemistry, The Chemical Society of Japan, The Electrochemical Society of Japan, The Institute of Electronics, Information and Communication Engineers, The Japanese Society for Synchrotron Radiation Research, The Japanese XAFS Society, The Japan Society of Applied Physics, The Physical Society of Japan, The Surface Science Society of Japan

Under the auspices of (in negotiations)

Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Ministry of Economy, Trade and Industry (METI)

New Energy and Industrial Technology Development Organization (NEDO)

Venue

The University of Electro-Communications (Building B)

1-5-1 Chofugaoka, Chofu, Tokyo 182-8585, Japan

Organizing Committee

Honorary Chair Takashi Fukuda, President

Chair Yasuhiro Iwasawa, Director, Innovation Research Center for Fuel Cells

(Former President of The Chemical Society of Japan, Catalysis Society of Japan,
and The Surface Science Society of Japan)

Vice Chair Wataru Mitsuhashi, Member of the Board of Directors

Program Chair Yasuhiro Iwasawa

International Communications Adarsh Sandhu, Advisor to UEC President

Local Chair/Secretariat Yoshihiro Yamakita

Yoshiyuki Amemiya (Univ. Tokyo), Haruhiko Andoh (METI/UEC), Kiyotaka Asakura (Hokkaido Univ.), Kazuhiko Domae (Toyota Central R&D Labs.), Ohira Eij (NEDO), Akihiro Iiyama (Yamanashi Univ.), Hideto Imai (Nissan ARC), Tetsuya Ishikawa (Riken SPring-8 Center), Hiroyuki Kanesaka (UEC/FC-Cubic), Nobuo Nakajima (UEC), Toshiaki Ohta (Ritsumeikan Univ.), Retsu Oiwa (Scienta Omicron), Hidemi Oonaka (FC-Cubic), Adarsh Sandhu (UEC), Mizuki Tada (Nagoya Univ.), Jun Takano (Honda R&D), Masaki Takata (Tohoku Univ.), Motonori Tamura (UEC), Katsumi Tanaka (UEC), Ryotaro Tanaka (JASRI), Tomoya Uruga (JASRI/UEC), Koichi Yamaguchi (UEC), Yoshihiro Yamakita (UEC), Masanori Yasui (UEC), Toshihiko Yokoyama (IMS), Hitoki Yoneda (UEC)

Program

Keynote Lectures, Invited Lectures, Contributed Papers, Posters

Abstract (one page)

Submission deadline: June 30 (Fri), 2017

Registration

Fee 20,000 JPY (Student 3,000 JPY)

Banquet

October 29 (Sun), 2017 Fee 5,000 JPY

Travel Information

