THE INTERNATIONAL CHEMICAL CONGRESS OF
PACIFIC BASIN SOCIETIES
Honolulu, Hawaii, USA ,DCEMBER 15-20, 2020

Solutions to the Energy- and Environmental-Related Problems by Cutting-Edge Accelerator-Based Techniques(#389, Dec 19-20,2020)

Orgnaied by

Tsun-Kong (T.K.) Sham
University of Western Ontario, Canada

Lin Chen
Northwestern University and Argonne National Laboratory, USA

Hiroshi Kondoh
Keio University
Tokyo, Japan

Kiyotaka Asakura
Hokkaido University, Japan

Call for Papers
Any papers related to the topics are accepted oral or poster presentations.

An accelerator is a big instrument to accelerate charged particles to higher energy which emit the various kinds of beams such as photon(synchrotron radiation, x-ray free electron laser) neutron, muon and positiron. These accelerator-based beams have become powerful and important charactrization techniques of chemical substances in material, biological, environmental sciences. We have discussed the fundamental and applications of the accelerator base beam science for more than 20 years in this PACIFICHEM conference. For recent 5 years, these beam techniques have made tremendous progesses in various fields of chemistry and opened a variety of new sciences. In this symposium we focus on the developement of the accelerator based beam technology and its application to energy- and environmental-problems. Petroleum is used as energy sources and feedstocks. However, the petroleum will soon be exhausted and it is a main cause for CO2 emission and global warming. In the middle of 21 century we have to go out of the petroleum dependent society and enter the renewable energy dependent society. That requires revolutional developments of new materials which convert energy much more efficiently. The target materials are secondary battery, fuel cell, low friction motor, high power magnet, high performance catalyst, and so on. For this purpose accelerator-based beam methods will play an important and central role in advanced characterization in their nanoscopic region with ultrafast chase of chemical reactions or quantative and state analysis of dilute samples. We review these recent outcomes concerning energy- and environmental-problems solved by accelerator based beam technology and discuss the future directions.

Invited speakers

Dr.	David	Osborn	USA
Dr.	Junko	Yano	USA
Dr.	Xiaoyi	Zhang	USA
Prof.	Renske	van der Veen	USA
Prof.	Munira	Kahlil	USA
Prof.	Ning	Yang	Singapore
Prof	Jun	Sugiyama,	Japan
Prof.	Hye Ryung	Byon	Korea
Prof.	Robert	Lamb	Canada

Conact askr@cat.hokudai.ac.jp