

Mini-Symposium on Innovative Visualization for Materials Science

11th December, 2023

Noyori Materials Science Laboratory, 2F Lecture Room

This mini-symposium supported by the World Research Unit (B-1) at Nagoya University (reaction infography) and JST CREST project (innovative measurement and analysis) aims to discuss the innovative utilization and application of recent visualization techniques (operando analysis, imaging, informatics, simulation etc.) for materials science.

Program

09:30-09:40 Mizuki Tada (Nagoya Univ)

09:40-10:10 Hirosuke Matsui (Nagoya Univ.)

“3D Spectroimaging of Adhesion Reaction and Degradation in Rubber/Brass Composite”

10:10-10:40 Hiroaki Iguchi (Nagoya Univ.)

“Controlling Electronic Properties of Coordination Polymers by Guest Desorption”

10:40-11:40 Jun Huang (Sydney Univ.)

“Cooperating Microscopy and Spectroscopy to Visualize Nanocatalyst Surface and Structure Dynamics”

【Photo · Lunch】

13:00-14:00 Tomofumi Tada (Kyushu Univ.)

“Frontiers of Computational Materials Exploration Based on First Principles Calculations”

(第一原理計算とその周辺計算技術を用いた材料探索手法の最前線)

14:00-14:30 Satoshi Muratsugu (Nagoya Univ.)

“Redox Property and Catalysis Derived from Synergistic Effect of Multiple Transition Metals on Cerium Oxides”

(酸化セリウム表面の複合遷移金属協働効果を利用した酸化還元特性と触媒特性)

14:30-15:00 Yasuhiko Igarashi (Tsukuba Univ.)

“Multi-frame Image Super Resolution for Microscopic Spectroscopic Images”

(スパースモデリングを用いたマルチフレーム超解像による放射光顕微分光画像への展開)

15:15-16:15 Shunsuke Muto (Nagoya Univ.)

“Seeking True Collaboration between Electron Microscopy and X-ray Spectroscopy by Materials Informatics”

(データ駆動科学が繋ぐ電子顕微鏡と放射光分光の真の連携を求めて)

16:15-16:45 Dam Hieu Chi (JAIST)

“Innovative Visualization of Material Space: Quantifying Uncertainty and Material Similarity for Intuitive Discovery”

16:45-17:15 Nozomu Ishiguro (Tohoku Univ.)

“Operando Visualization of Electrochemical Events in the Cathode/Anode Layers in Thin-Film-Type All-Solid-State Lithium-Ion Batteries by X-ray Spectroimaging”

17:15-17:45 Ryotaro Matsuda (Nagoya Univ.)

“Molecular Trapping and Photoreactions in the Nanospace of Porous Metal Complexes”

(多孔性金属錯体のナノ空間における分子捕捉と光反応)