

SACLA Users' Meeting 2024 Breakout Sessions

(Updated: Feb. 28, 2024)

13:15 – 15:15, March 12

Session A:

Novel opportunities of XFEL experiments with magnetic fields

Session B:

Time-resolved SFX using a belt conveyor setup at SACLA

Session A:

Novel opportunities of XFEL experiments with magnetic fields

Organizers:

A. Ikeda (The University of Electro-Communications)

Y. Kubota (SACLA)

A portable single-turn coil system (PINK-02) has been developed under the SACLA basic development program. This system enables XFEL experiments in pulsed ultrahigh magnetic fields beyond 100 T. This breakout session aims to share the current status of PINK-02 and discuss future perspectives in this research field. As an introduction, a beamline scientist will present the recent progress. Then, some researchers in the field of high magnetic field science will present their recent activities followed by a discussion on the prospects of PINK-02 with participants.

Program

13:15-13:25

Opening talk

The future of the high magnetic field science

Y. H. Matsuda (Univ. Tokyo)

13:25 - 13:35

From facility side

Recent progress of “PINK” system

Y. Kubota (SACLA)

13:35 - 14:20

From user side

Science and techniques at above 100 Tesla

A. Ikeda (UEC)

Direct evidence of magnetic field-induced metastable martensitic phase for multifunctional Heusler alloys

T. Kihara (Okayama Univ.)

Probing electronic phase transitions via 100 Tesla XRD

M. Nohara (Hiroshima Univ.)

14:20 - 15:15

Round table discussion

Chair: A. Ikeda (UEC)

Session B:

Time-resolved SFX using a belt conveyor setup at SACLA

Organizers:

E. Nango (Tohoku University)

J. Kang (SACLA)

This session will discuss a belt conveyor setup for time-resolved serial femtosecond crystallography (SFX) at SACLA. At the beginning of the session, a beamline scientist will brief participants on the specifications of the belt conveyor setup as a SACLA beamline application. After that, pioneering users will present recent demonstrations and experimental activities related to time-resolved SFX using the belt conveyor setup. We welcome participants to join the discussion to expand the capabilities of time-resolved SFX at SACLA.

Program

13:15-13:20

Introduction

Serial femtosecond crystallography using belt conveyor setups

E. Nango (Tohoku Univ.)

13:20-13:35

Facility talk

The specification and development progress of a belt conveyor setup at SACLA

J. Kang (SACLA)

13:35-14:20

User talks

Pump-probe time-resolved experiments of microbial rhodopsin

T. Fujiwara (Tohoku Univ.)

Visualization of substrate binding to an enzyme by mixing two droplets on a tape

F. Luo (JASRI)

Anaerobic sample handling with a belt conveyor system at SACLA

S. Nagano (Tottori Univ.)

14:20-15:15

Discussion

Chair: E. Nango (Tohoku Univ.)