

5. 研究会・国際会議等

2011年度に理研およびJASRIが主催あるいは共催した、XFELに関連した研究会・国際会議（表1）について紹介する。

1. Kobe-Harima Institute Joint Workshop on biological applications of XFEL（6月7日）

理化学研究所内でのSACLAを利用した生物学研究についての連携を図るきっかけとして、神戸研究所と合同でのワークショップを開催した。当日はSACLAのレーザー発振が初めて観測され、その報告を受けたワークショップ会場でも歓声が上がった。

1-1 プログラム

Special Lecture on XFEL

(Doubles as RI Re-education Training Program for CDB staff)

13:00-14:00 SACLA, SPring-8 Angstrom Compact free electron Laser

Tetsuya Ishikawa (Director, Harima Institute)

Joint Workshop

14:10-14:40 SACLA Beamline & Experimental Scheme
Makina Yabashi (Group Director, SPring-8 Center)

14:40-15:10 SACLA in molecular imaging
Song Changyong (Initiative Research Scientist, SPring-8 Center)

15:10-15:40 Simulation study to examine the possibility of high-resolution biomolecular imaging with SACLA

Yasumasa Joti (XFEL Division, JASRI)

Break (20 mins)

16:00-16:30 Protein preparation with a cell-free protein synthesis system

Yoshihiro Shimizu (Unit Leader, QBiC)

16:30-17:00 Molecular dynamics simulations of the Sec translocon systems in biological membranes

Yuji Sugita (Team Leader, QBiC)

17:00-17:30 General Discussion

17:40-20:00 MIXER

1-2 概要

(1) 会議構成：講演6件

(2) 参加者数：58名

2. RIKEN-POSTECHワークショップ(7月1日～7月2日)

放射光および光学レーザーを利用した分光研究の知見をもとに、既存の放射光とは全く異なるフェムト秒の超短パルスを利用した分光研究を推進するためにXFELで行うべきサイエンスに関する議論を目的としてRIKEN-POSTECHワークショップを開催した。

2-1 プログラム

July 1 (Friday)

Inaugural Session:

9:00 - 9:30 Prof. T. Ishikawa : Introduction to SACLA, the Japanese XFEL Facility

9:30-10:00 Prof. M. Ree :Introduction to the Korean XFEL Project

10:00-10:15 Coffee Break

10:15-12:15 Oral Session (4 talks, 30 min each)

A. Fujimori (Univ. Tokyo)

J. W. Chung (POSTECH)

D. J. Huang (NSRRC)

K. Ishizaka (Univ. Tokyo)

12:15-13:30 Lunch Break

表1 理研およびJASRIの主催または共催による会議一覧

開催期間	会議名
2011年6月7日(火)	Kobe-Harima Institute Joint Workshop on biological applications of XFEL
2011年7月1日(金)～7月2日(土)	RIKEN-POSTECH ワークショップ
2011年8月29日(日)～9月1日(木)	The 4th International Workshop on FEL Science : Science Challenges of XFEL
2011年10月31日(月)～11月3日(木)	4th XFEL 3-site Meeting

13:30-15:00 Oral Session (3 talks, 30 min each)
C.-W Luo (National Chiao Tung Univ)
Taiha Joo (POSTECH)
H. Sakai (Univ. Tokyo)

15:00-15:15 Coffee Break

15:15-16:45 Oral Session (3 talks, 30 min each)
Jaehun Park (PAL)
T. Nakamura (JASRI, SPring-8)
T. K. Kim (Pusan)

16:45-17:45 XFEL Tour

18:00-19:30 Dinner

July 2 (Saturday)

9:00 - 10:30 Oral Session (3 talks, 30 min each)
Jae Young Kim (PAL)
M. Suzuki (JASRI)
H. D. Kim(PAL)

10:30-10:45 Coffee Break

10:45-12:15 Concluding Session (2 talks, 30 min each)
D. E. Kim (POSTECH)
Y. Takata (RIKEN)

Panel discussion (30 min)

A. Fujimori (Univ. Tokyo)
D-J. Huang (NSRRC, Taiwan)
Jae-young Kim (PAL)
Taiha Joo (POSTECH)
H. Sakai (Univ. Tokyo)
C.-W Luo (National Chiao Tung Univ)

2-2 概要

(1) 会議構成：講演 17 件

各種パラレルセッション

(2) 参加者数：18 名

3. The 4th International Workshop on FEL Science :

Science Challenges of XFEL (8月29日～9月1日)

2009年2月にアジア・オセアニア地域でのFELサイエンスの発展を目的としたワークショップを開催し、第4回を迎える今回はオーストラリアでの開催となった。アジア・オセアニア地域におけるFELサイエンスの現状および今後の展開について議論が行われた。

3-1 プログラム

August 29 (Monday)

14:30-15:00 Check-in and Registration

Introduction & Facility Overviews (chair: R. Garret)

15:00-15:20 T. Ishikawa

15:20-15:40 K. Nugent

15:40-16:00 A. Paterson

16:00-16:20 Coherent diffraction imaging using laser based soft x-ray sources

D. - Y. Noh

16:20-16:40 Femtosecond Laser Slicing Facility for Time-resolved Research at TPS

W. K. Lau

16:40-17:00 X-ray FELs Studies at SINAP

R. Tai

17:00-19:00 Discussion

19:00-21:00 Welcome reception

August 30 (Tuesday)

Session I: Accelerators (chair: S. Goto)

9:00-9:20 Accelerator Development Project Plans at the Australian Synchrotron Light Source
G. Le Blanc

9:20-9:40 Neural Network-based systems for real-time optimizations and control

E. Meier

9:40-10:00 Intense X-ray and Gamma-ray emission from two oppositely directed electrons interaction within an undulator magnetic field

D. Zhu

10:00-10:20 The accelerator of SACLA

H. Tomizawa

10:20-11:00 Coffee break

11:00-11:20 Undulators for Compact SR/XFEL Facilities

H. Kitamura

11:20-11:40 Bunching-frequency multiplication for fast-pulse-train photoinjector

Y. - C. Huang

11:40-12:00 Commissioning progress of SDUV-FEL

J. Chen

12:00-13:30 Lunch

Session II: Molecular Imaging I (chair: Y. Joti)

13:30-13:50 TBD

13:50-14:10 Accommodating electronic damage in the determination of biomolecular structures using

	femtosecond X-ray free-electron laser sources H. M. Quiney	9:20-9:40	Simulation Study to Examine the Possibility of High-resolution Biomolecular Imaging with SACLA Y. Joti
14:10-14:30	Diffraction microscopy in molecular imaging C. Song		
14:30-14:50	Coherent X-ray diffraction microscopy of non-crystalline biological particles at cryogenic temperatures M. Nakasako	9:40-10:00	Berry-phase effects on x-ray dynamical scattering K. Sawada
14:50-15:10	Sample Preparation for Correlative Imaging with Cryo-EM and CXDM K. Yonekura	10:00-10:20	Experimental Methods in Coherent Diffractive Imaging K. Nugent
15:10-15:40	Coffee break	10:20-10:40	DIXE: Software for Coherent X-ray Diffractive Imaging N. M. Davidson
		10:40-11:10	Coffee break
	Collaborative Discussion (chair: K. Nugent)		
15:40-16:50	Summary of Discussion		Session V: Dynamics (chair: D. - Y. Noh)
17:00-19:00	Poster presentations & discussion	11:10-11:30	Multidimensional Femtosecond Spectroscopy J. A. Davis
17:30-19:00	Directors Meeting	11:30-11:50	Dissociation Dynamics of Highly Excited Molecules Y. - Y. Lee
19:00-21:00	Dinner	11:50-12:10	Probing medium range order using coherent x-ray ptychography A. Torrance
	August 31 (Wednesday)	12:10-13:30	Lunch
7:30-14:00	Excursion (Great Barrier Reef)		Session VI: Instrumentation & Closing (chair: M. Nakasako)
	Session III: Molecular imaging II (chair: C. Song)	13:30-13:50	Next Challenges of SACLA M. Yabashi
14:20-14:40	The Experimental Methods Program at CXS A. Peele	13:50-14:10	Detector and Data Acquisition System for SACLA T. Hatsui
14:40-15:00	Toward Coherent Imaging Using XFEL Y. Nishino	14:10-14:30	Mirror-based optical systems for nanofocusing and nanoimaging of hard x-rays K. Yamauchi
15:00-15:20	Phase Contrast X-ray Imaging in BL29XU J. Je	14:30-14:50	Beamline and Experimental Station of SACLA K. Tono
15:20-15:40	Development of coherent diffractive imaging G. van Riessen	14:50-15:10	Ultrafast pump and probe experiment apparatus of SACLA T. Sato
15:40-16:00	Gigantic Translation Effect occurring at the crystal interfaces Y. Kohmura	15:10-15:40	Coffee break
16:00-16:20	Biological specimens for diffractive imaging experiments using XFEL in early days N. Kunishima	15:40-16:00	S. Goto (closing)
16:20-16:40	Development and Application of High-Resolution Coherent Diffraction Microscopy using Focused Hard X-ray Beam Y. Takahashi	16:00-18:30	Poster presentations & discussion
17:00-19:00	Poster presentations & discussion	18:45-20:45	Farewell Dinner
19:00-21:00	Dinner		
	September 1 (Thursday)		3-2 概要
	Session IV: Data Analysis/Theory (chair: T. Hatsui)		(1) 会議構成：口頭発表45件 ポスターセッション
9:00-9:20	Challenges of Protein Nanocrystallography R. A. Dilanian		(2) 参加者数：55名

4. 4th XFEL 3-site Meeting (10月31日～11月3日)

2007年より開催しているXFELの三極ミーティング(SLAC, European-XFEL/DESY, SACLA)の第4回目を日本にて開催した。今回は三極だけに留まらず、PAL、PSI (Swiss-FEL)からも参加があった。世界各国でのXFEL施設の現状についての情報交換および今後の研究の展開について議論が行われた。

4-1 プログラム

31th Oct. (Mon)

Welcome

9:00～9:10 Opening

T. Ishikawa (RIKEN)

Facility report

9:10～9:35 Status of SACLA

Y. Otake (RIKEN)

9:35～10:00 Status of LCLS

J. Hastings (LCLS)

10:00～10:25 Status of European XFEL

M. Altarelli (E-XFEL)

10:25～10:45 Status of FLASH

J. Feldhaus (DESY)

Break

10:55～11:10 Status of PAL

L. S. Ko (PAL/POSTECH)

11:10～11:30 Status of Swiss FEL

M. Aiba (PSI)

Summary and Progress from 3rd Meeting

11:30～11:45 Accelerator WG

W. Decking (DESY)

H. Tanaka (RIKEN)

11:45～12:10 Photon WG

T. Tschentsher (E-XFEL)

Lunch

13:30～15:00 Facility Tour

15:00～18:00 Parallel Working Groups (E & P)

E-WG

Session 1: COTR related phenomena

Session 2: Undulator beamline related issues

Session 3: Beam diagnostic system related issues

Session 4: Laser stability & operation related issues

Session 5: Wakefield effects

P-WG

Common session

Talks from each session

Session1: Intensity diagnostics

Session2: Temporal diagnostics & stabilization (duration & jitter); seeding with external sources (HHG etc.)

Session3: Spatial diagnostics, incl. focusing & damage

Session4: Thin crystal, self-seeding optics, crystal optics applications

Session5: S2E simulation

Split into parallel sessions

Dinner

1st Nov. (Tue)

9:00～12:00 Parallel Working Groups (cont'd)

Lunch

13:30～15:30 Working Group Summary (E & P)

E-WG

P-WG

15:30～16:30 Joint Sessions

Session 1: Self Seeding Scheme

Session 2: Temporal

17:00～18:30 Transportation to Takarazuka

Group Sessions & Reception

2nd Nov. (Wed)

9:00～10:30 Joint Sessions (cont'd) & Summary

11:00～16:00 Free discussions

18:00～21:00 Summary Sessions & Reception

3rd Nov. (Thu)

Check out & Transportation to Airport

4-2 概要

(1) 会議構成：口頭発表9件

各種パラレルセッション

(2) 参加者数：77名

研究推進部企画課