

Appendix

*3rd JSSRR Wakate Workshop on Next Generation Light Sources
~ Future Science Developed by Advanced Ring-type Light Source ~*

Okazaki Conference Center

August 7, 2006

13:00 - **(I) Interim report of the advanced ring-type light sources committee**
Y. Amemiya (Univ. Tokyo)

13:30 - **(II) Project of the advanced ring-type light source – ERL project in Japan**

Coordinator: N. Kumagai (JASRI)
Outline: H. Kawata (KEK-PF)
Machine: S. Sakanaka (KEK-PF)
Electron gun: R. Hajima (JAEA)
Superconducting RF cavity: T. Furuya (KEK)

15:00 - **Coffee Break**

15:20 - **(III) Science developed by advanced ring-type light source**

III-1 Life science

Coordinator: S. Wakatsuki (KEK-PF)
Speaker: S. Takeda (National Cardiovascular Center)
G. Kurisu (Univ. Tokyo)
M. Yamamoto (RIKEN)

Topics ~FEL~

17:00 - **Present status of SCSS** T. Ishikawa (RIKEN)

17:15 - **Present status of FEL - UVSOR-II** M. Hosaka (UVSOR)

18:00 - **Banquet**

August 8, 2006

9:00 - **III-2 Materials science**

Coordinator: H. Kawata (KEK-PF)
Speaker: Y. Inada (KEK-PF)
S. Shimomura (Keio Univ.)
S. Koshihara (Tokyo Inst. Tech)

10:30 - **III-3 Imaging**

Coordinator:

Y. Kagoshima (Univ. Hyogo)

Speaker:

A. Momose (Univ. Tokyo)

K. Hirano (KEK-PF)

12:00 - **(IV) Overall discussion**

Coordinator:

Y. Amemiya (Univ. Tokyo)

Panelist:

N. Kumagai (JASRI)

N. Igarashi (KEK-PF)

H. Kawata (KEK-PF)

Y. Kagoshima (Univ. Hyogo)

The workshop was organized by The Japanese Society for Synchrotron Radiation Research and was sponsored by UVSOR.



The 66th Okazaki Conference
International Workshop on Soft X-ray Raman
Spectroscopy and Related Phenomena (IWSXR)

Okazaki Conference Center

Advisory Committee Members:

Hiroki Nakamura, Director General of IMS, Japan

Joseph Nordgren, Councilor of IMS, Uppsala University, Sweden

Marc Simon, LCP-MR, France

Local Organizing Committee:

Nobuhiro Kosugi, IMS, Japan (Chair)

Hiromi Okamoto, IMS, Japan (Vice Chair)

Eiji Shigemasa, IMS, Japan

Takaki Hatsui, IMS, Japan

August 17, 2007

13:00 - **Registration & Coffee**

14:00 - **Opening Remarks**

Session 1. Fundamental Aspects

Chair: Nobuhiro Kosugi

14:10 - **Resonant Soft X-ray Emission for Materials Science
and Chemical Physics**

Joseph Nordgren
Uppsala Univ., Sweden

15:00 - **High resolution soft X-ray emission spectroscopy
of transition metal compounds and heme proteins**

Shik Shin
Univ.Tokyo/RIKEN/SPrin
g-8, Japan

Coffee Break

16:20 - **Advances in X-ray Raman Spectroscopy in both
Resonant and Non-Resonant Applications**

Uwe Bergmann
Stanford Univ., U.S.A

17:10 - **Visualizing and controlling picometric quantum
ripples in molecules**

Kenji Ohmori
IMS, Japan

18:10-20:00 **Get-Together Party**

August 18, 2007

8:10 - 9:00 **Breakfast (Poster Room)**

9:00 - **Welcome Address**

Hiroki Nakamura
Prof., Director-General of
IMS

Session 2. Molecules & Raman effects

Chair: Takaki Hatsui

- 9:10 - **Resonant inelastic X-Ray scattering around the chlorine K shell of the HCl molecule: role played by the nuclear dynamics in the tender X-Ray region** Marc Simon
LCP-MR, France
- 9:50 - **Theoretical Simulations of Resonant Inelastic X-Ray Scattering Spectra in K-shell Cl Core-Excited Chlorinated Molecules** Stephane Carniato
LCP-MR, France
- 10:30 - **Resonant X-ray Raman scattering: Doppler effect versus scattering, role of the detuning and the shape of the spectral function** Victor Kimberg
IMS, Japan
- 11:10 - **Vibrational and thermal effects in resonant inelastic X-ray scattering** Alexander Föhlich
Hamburg Univ., Germany

11:50-12:00 **Conference Photo**

August 18, 2007

Session 3. Poster Session

12:00-14:00 **with lunch and coffee (Poster Room)**

Session 4. Materials Science and Experimental Techniques

Chair: Eiji Shigemasa

- 14:00 - **Resonant inelastic soft-x-ray scattering studies of nanostructured strong correlated materials** Jinghua Guo
ALS, LBNL, U.S.A.
- 14:50 - **Theory of Resonant Inelastic X-ray Scattering at Transition Metal L_{2,3} edge: dd Excitation, Charge-Transfer Effects and Their Interplay** Munetaka Taguchi
RIKEN/SPring-8, Japan
- 15:30 - **Resonant inelastic x-ray scattering spectroscopy for advanced XAFS studies** Hisashi Hayashi
Japan Women's Univ.
Japan
- Coffee Break**
- 16:50 - **Development of a high performance slit-less spectrometer and a liquid flow cell for soft X-ray emission spectroscopy** Takashi Tokushima
RIKEN/SPring-8, Japan

- 17:20 - **Development and performance of a transmission-grating spectrometer for soft X-ray emission studies** Takaki Hatsui
IMS, Japan
- 18:00 - **Preparing for resonant soft x-ray Raman spectroscopy at SOLEIL** Coryn Hague
LCP-MR, France

18:50-20:30 **Conference Dinner**

August 19, 2007

8:10 - 9:00 **Breakfast (Poster Room)**

Session 5. Water and Solutions

Chair: Hiromi Okamoto

- 9:00 - **Theoretical and experimental x-ray investigations of liquid water structure** Lars G.M. Pettersson
Stockholm Univ, Sweden
- 9:50 - **Theoretical study of two-dimensional Raman spectroscopy: Anharmonic dynamics and local hydrogen bond network structure in liquid and solid water** Shinji Saito
IMS, Japan
- 10:30 - **A molecular dynamics study of vibrational relaxation of solute molecule in solution** Susumu Okazaki
IMS, Japan
- 11:10 - **Non-linear ultrafast X-ray spectroscopy; Theoretical challenges** Shaul Mukamel
Univ. California, Irvine,
U.S.A.

11:50-12:00 **Closing Remarks**



Workshop on Research for VUV Luminescence

Institute for Molecular Science

November 17, 2006

Chairperson: A. Yoshikawa (Tohoku Univ.)

Opening Remarks (Research for VUV Luminescence) M. Itoh (Shinshu Univ.)

1.

2. **UV/VUV Luminescence Measurements in UVSOR**

K. Fukui (Fukui Univ.)

3. **EUV Light Source Excited by High-Power Laser**

H. Komori (EUVA)

Chairperson :

Y. Kayanuma (Osaka Pref. Univ.)

4. **Deep-UV Luminescence in Alkali Chlorides Doped with Iodine Ions**

I. Akimoto (Wakayama Univ.)

5. **Soft-X Ray Luminescence of Titanium Oxides**

Y. Tezuka (Hiroasaki Univ.)

6. **Ultra Fast Relaxation Dynamics in Condensed Matter Induced by Core Excitation: Competition between Localization and Non-Localization**

S. Tanaka (Osaka Pref. Univ.)

Short Tour to UVSOR and Banquet

November 18, 2006

Chairperson : N. Sarukura (Osaka Univ.)

7. **Amorphous VUV Transparent Materials**

K. Kajiwara (ERATO-SORST)

8. **Single Crystal Growth of Fluorides for VUV Luminescent Materials**

A. Yoshikawa (Tohoku Univ.)

9. **Development of Nano-Strip Gas Counter and Its Application to VUV Region**

H. Takahashi (Tokyo Univ.)

Chairperson :

K. Fukui (Fukui Univ.)

10. **Evaluation of Materials Using Electronic Transitions by VUV Light Excitation**

M. Ohta (Niigata Univ.)

11. **Development of On-Axis Discharge-Excitation-Type UV/VUV Laser and Rare-Gas Dimer Laser**

T. Kanno (Osaka Univ.)

12. **Prospect of VUV Luminescent Materials**

N. Sarukura (Osaka Univ.)

13. **Concluding Remarks**

M. Itoh (Shinshu Univ.)

UVSOR Mini-Workshop on

“Present status and future perspective of research and development for free electron lasers (FEL)~ attitudes towards practical utilization of XFEL ~”

Institute for Molecular Science, March 13, 2007

First Session 13:00 - 15:15

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| | Coordinator | E. Shigemasa (UVSOR) |
| 13:00 - | Preface | N. Kosugi (UVSOR) |
| 13:35 - | Beam characteristic of prototype accelerator and present status of fundamental design for the XFEL machine at SPring-8 | H. Tanaka (RIKEN) |
| 14:05 - | Seeding FEL experiments using the prototype accelerator at SPring-8 | T. Hara (RIKEN) |
| 14:35 - | Property of FEL light, and current/future aspect of FEL beamlines | M. Yabashi (JASRI) |
| 14:55 - | Transfer of high-stability timing signal in XFEL and its measurement system | K. Tamasaku (RIKEN) |
| 15:15 - | Coffee Break | |

Second Session 15:30 - 17:45

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|---------|--|----------------------|
| | Coordinator | N. Kosugi (UVSOR) |
| 15:30 - | Outline of joint project proposal for utilization of XFEL, submitted by four research groups in IMS | E. Shigemasa (UVSOR) |
| 15:45 - | Present status of research and development for FEL at UVSOR | M. Katoh (UVSOR) |
| 16:15 - | Anticipation for pump-probe experiments with ultra short X-ray pulses | T. Hatsui (IMS) |
| 16:45 - | Tracking of ultrafast photochemical reaction with high harmonic generation laser pulses: present situation and future outlook | A. Hishikawa (IMS) |
| 17:15 - | General discussion on the XFEL project | |
| 18:00 - | Banquet | |

Organic Thin Films Studied by Synchrotron Radiation

“ Historical Review of BL8B2 and Future Prospects ”

Institute for Molecular Science

March 22, 2007

09:20 - **Opening remarks**

Chairman

S. Kera (Chiba Univ.)

09:25 - **Construction and early days of BL8B2**

K. Seki (Nagoya Univ.)

09:40 - **Electronic structure of organic functional thin films and their interfaces studied by angle resolved ultraviolet photoelectron spectroscopy: Previous output from the Nagoya university group**

H. Ishii (Chiba Univ.)

Coffee break

11:00 - **Observation of the electronic structure at the organic insulator / metal interface with XAFS**

M. Kiguchi (Hokkaido Univ.)

11:30 - **Possibility of the Fermi Level Control by VUV-Induced Doping of an Organic Thin Film**

M. Ono (Chiba Univ.)

Lunch

Chairman

H. Yamane (Nagoya Univ.)

13:00 - **Quantitative determination of molecular orientation for organic thin film : ARUPS and IAC approximation**

K. Okudaira (Chiba Univ.)

14:00 - **Anisotropic distribution of photoemission intensity from valence states of well-ordered organic films**

S. Kera (Chiba Univ.)

14:30 - **NEXAFS Spectroscopy As an Analytical Tool : Examples of NEXAFS analysis at SR Center of Ritsumeikan Univ.**

H. Oji (JASRI)

15:20 - **Photoelectron spectroscopy of fullerenes, from the dawn to now**

S. Hino (Ehime Univ.)

Get together party

March 23, 2007

- Chairman** H. Yamane (Nagoya Univ.)
- 09:00 - **Transport and spectroscopic measurements of interfaces between magnetic electrodes and organic semiconductors** T. Shimada (Tokyo Univ.)
- 09:30 - **Angle resolved X-ray photoemission studies of metal/organic interfaces: depth profiles and diffusion coefficients** H. Yoshida (Kyoto Univ.)
- 10:00 - **Photo- and thermo-responsive effect on the characteristics of organic thin films studied by photoelectron spectroscopy** S. Tanaka (Shimane Univ.)
- Coffee break**
- 10:50 - **Development of new inverse photoemission spectroscopy system for organic materials and study on electronic structure of ionic liquid** K. Kanai (Nagoya Univ.)
- 11:20 - **Undulator soft-x-ray beamline BL3U and the soft x-ray emission spectrometer: Present Status** T. Hatsui (IMS)
- Lunch**
- Chairman** R. Sumii (UVSOR)
- 13:00 - **Photoemission study of quasi-one-dimensional organic molecular solids** T. Ito (UVSOR)
- 13:30 - **Intramolecular energy-band dispersion in the oligomer films of polyethylene and polytetrafluoroethylene studied by angle-resolved photoemission with synchrotron radiation** D. Yoshimura (SAGA-LS)
- 14:00 - **Intermolecular energy-band dispersion in oriented films of organic semiconductors** H. Yamane (Nagoya Univ.)
- 14:30 - **Electronic structure of a Pentacene ultra-thin film** K. Sakamoto (Chiba Univ.)
- Coffee break**
- 15:20 - **Panel discussion**

UVSOR Lunch Seminar

FY2006

- June 14 Mr. Norikazu FUSE, Graduate School of Science and Engineering, Waseda University
Characterization of polymer nanocomposites by photoluminescence
- Oct. 4 Prof. Toshihiko YOKOYAMA, Department of Molecular Structure, Institute for Molecular Science
Ultraviolet threshold photoemission magnetic circular dichroism using UVSOR-II FEL for
photoemission electron microscopy
- Oct 11 Dr. Masahito HOSAKA, UVSOR Facility, Institute for Molecular Science
FEL experiments at UVSOR-II
- Oct. 18 Dr. Shigeru KODA, Saga Light Source (SAGA-LS)
Present Status of SAGA-LS
- Mar. 28 Dr. Yoko SAKURAI, UVSOR Facility, Institute for Molecular Science
Infrared reflection absorption spectroscopy using synchrotron radiation
- Mar. 28 Mr. Yusuke SUZUMURA, Graduate School of Engineering, Nagoya University
Orbit stabilization at UVSOR-II