Appendix

ORGANIZATION

Staff

			[e-mail address]
Director			
Kyuya	YAKUSHI	Professor (- March 1994)	
Nobuhiro	KOSUGI	Professor (April 1994 -)	kosugi@ims.ac.jp
Scientific Staff			
Light Source			
Goro	ISOYAMA	Associate Professor (- March 1994) Adjunct Professor from Osaka Unv. (April 1994 - September 1994)	
Hiroyuki	HAMA	Associate Professor (January 1995 -) Research Associate (- January 1995)	hama@kekvax.kek.jp
Beam Line			
Masao	KAMADA	Associate Professor	kamada@ims.ac.jp
Toyohiko	KINOSHITA	Associate Professor (October 1994 -)	toyohiko@ims.ac.jp
Atsunari	HIRAYA	Research Associate	hiraya@ims.ac.jp
Shin-ichiro	TANAKA	Research Associate	stanaka@ims.ac.jp
Shin-ichi	KIMURA	Research Associate	kimura@ims.ac.jp
Technical Staff			
Kusuo	SAKAI	Section Chief Engineer	ksakai@ims.ac.jp
Osamu	MATSUDO	Section Chief Engineer	matsudo@ims.ac.jp
Toshio	KINOSHITA	Unit Chief Engineer	kinosita@ims.ac.jp
Masami	HASUMOTO	Engineer	hasumoto@ims.ac.jp
Jun-ichiro	YAMAZAKI	Engineer	yamazaki@ims.ac.jp
Eiken	NAKAMURA	Engineer	eiken@ims.ac.jp
Secretary			
Hisayo	HAGIWARA		hagiwara@ims.ac.jp

Guest Scientist

Kazumichi	NAKAGAWA	Adjunct Associate Professor from Kobe Univ.	nakagawa@kobe-u.ac.jp
Yong Q.	CAI	JSPS Foreign Research Fellow (January 1995 -)	ycai@ims.ac.jp
Sayumi	HIROSE	Toyota Research Fellow (April 1994 -)	hirose@ims.ac.jp

Graduate Student

Naoshi	TAKAHASHI	(April 1994 -)	naoshi@ims.ac.jp
Kazuhiko	KIMURA	(April 1994 -)	kmrkzhk@ims.ac.jp

Representative of Beam Lines (January 1995)

BL1A	Nobuhiro	KOSUGI	Dept. Vacuum UV Photoscience
BL2A	Nobuhiro	KOSUGI	Dept. Vacuum UV Photoscience
BL2B2	Koichiro	MITSUKE	Dept. Vacuum UV Photoscience
BL3B	Koichiro	MITSUKE	Dept. Vacuum UV Photoscience
BL4A	Tsuneo	URISU	Dept. Vacuum UV Photoscience
BL4B	Tsuneo	URISU	Dept. Vacuum UV Photoscience
BL6A2	Masao	KAMADA	UVSOR
BL6B	Kyuya	YAKUSHI	Dept. Molecular Assemblies
BL8B2	Nobuhiro	KOSUGI	Dept. Vacuum UV Photoscience
Others	Masao	KAMADA	UVSOR
	Toyohiko	KINOSHITA	UVSOR

Steering Committee (April 1994 - March 1996)

Nobuhiro	KOSUGI	IMS Chairman
Noriaki	ITO	Nagoya Univ. (- March 1995)
Akito	KAKIZAKI	Univ. of Tokyo
Toshio	KASUGA	KEK
Tadashi	MATSUSHITA	KEK
Toshiaki	OHTA	Univ. of Tokyo
Inosuke	KOYANO	Himeji Inst. of Technology
Toshio	IBUKI	Kyoto Univ. of Education
Kazumichi	NAKAGAWA	Kobe Univ., IMS
Norio	MORITA	IMS
Yoshiyasu	MATSUMOTO	IMS
Koichiro	MITSUKE	IMS
Masao	KAMADA	IMS
Toyohiko	KINOSHITA	IMS
Hiroyuki	HAMA	IMS

JOINT STUDIES (fiscal year 1994)

Special Project	: 2
Cooperative Research	: 28
Cooperative Research (invited)	: 9
Use of Facility	: 126
Use of Facility (Private Company)	: 1
Workshop on VUV beam lines	: 1
Workshop on Beam Dynamics and Free Electron Laser	: 1
User's time	: 37 weeks

LIST OF REPRESENTATIVE OF COOPERATIVE RESEARCH (fiscal year 1994)

Chiba Univ.	Hino, S.	Ueno, N.		
Ehime Univ.	Nagaoka, S.			
Fukui Univ.	Fukui, K.	Nakagawa, H.		
Gakushuuin Univ.	Arakawa, I.			
Himeji Inst. of Technology	Koyano, I.			
Hiroshima Univ.	Hosokawa, S.	Tabayashi, K.		
Hokkaido Univ.	Kawasaki, M.	Matsushima, T.	Sato, S.	
Iwaki Meisei Univ.	Kanda, K.			
Kagawa Univ.	Itoh, H.	Kawase, M.		
Kanazawa Univ.	Naoé, S.			
Kansai Medical Univ.	Kihara, H.			
Kobe Univ.	Nakagawa, K.	Nanba, T.	Ohta, H.	Sakurai, M.
Kyoto Univ.	Asano, M.	Hayashi, T.	Kan'no, K.	Tanaka, T.
	Yoshida, S.			
Kyoto Univ. of Education	Hashimoto, S.	Ibuki, T.	Murata, T.	
Kyushu Univ.	Takebe, H.			
Maritime Safety Academy	Fujita, M.			
Mie Univ.	Nasu, H.			
Miyazaki Univ.	Kurosawa, K.			
Nagoya Univ.	Goto, T.	Ishii, H.	Mori, M.	Morita, S.
	Ouchi, Y.	Seki, K.	Shobatake, K.	Taniguchi, M.
	Yamashita, K.			
Nagoya Inst. of Technology	Yamada, M.			
Naruto Univ. of Education	Matsukawa, T.			
Osaka Univ.	Aritome, H.	Hiraki, A.	Inoue, K.	Isoyama, G.
	Kasai, T.	Kobayashi, H.	Kobayashi, M.	Oyama, H.

Osaka City Univ. Fujii. Y. Ishiguro, E. Masuoka, T.

Osaka Dental Univ. Tsujibayashi, T.

Osaka Electro-Commun. Univ. Ohno, N.

Univ. of Osaka Prefecture Ichikawa, K. Soda, K.

Osaka National Research Inst. Kitamura, N. Nishii, J.

Rikkyo Univ. Kubota, S.

Univ. of Ryukyus Ejiri, A.

Saga Univ. Ogawa, H.

Shinshu Univ. Itoh, M.

Tohoku Univ. Hattori, T. Ikezawa, M. Suzuki, T. Takahashi, T. Watanabe, M.

Tohoku Gakuin Univ. Awano, T.

Univ. of Tokyo Iwasa, Y. Okano, T.

Tokyo Inst. of Technology Hatano, Y. Hikida, T. Hosono, H.

Tokyo Gakugei Univ. Hasegawa, S.

Tokyo Metropolitan Univ. Nishida, H.

Tottori Univ. Ouchi, I.

Toyohashi Univ. of Technology Yoshida, A.

Utsunomiya Univ. Nakai, S.

Wakayama Univ. Miyanaga, T.

Waseda Univ. Ohki, M.

Yamagata Univ. Yoshinari, T.

IMS

Asaka, S.	Hasegawa, S.	Hayashi, K.	Hiraya, A.
Kamada, M.	Kawazoe, H.	Kimura, S.	Kosugi, N.
Matsumoto, Y.	Mitsuke, K.	Miyazaki, H.	Nishio, M.
Rull, F.	Tanaka, S.	Ueda, N.	Urisu, T.

UVSOR Workshop
on
Present Status and Future Plans
of
VUV Beam Lines
for Solid-State Research

November 4, 1994 (at Room #101)

13:00-	(General Features)	
Opening address		N. Kosugi(IMS)
Present status and plans of VUV beam lines		M. Kamada(IMS)
VUV beam lines of INSSOR		S. Shin(Tokyo Univ.)
VUV beam lines of Photon Factory		T. Miyahara(KEK)
VUV beam lines of BESSY		T. Kinoshita(IMS)
15:10-15:30	(Coffee Break)	
15:30-	(Photoelectron Spectroscopy)	
Present and future of BL2B1 and 6A2		S. Tanaka(IMS)
Present and future of BL8B2		K. Seki(Nagoya Univ.)
Status of high-resolution photoelectron spectroscopy		T. Takahashi(Tohoku Univ.)
Status of spin-resolved photoelectron spectroscopy		T. Kinoshita(IMS)
Constant-deviation monochromator at BL8B1		A. Hiraya(IMS)
New project at BL5A		M. Kamada(IMS)
New undulator for circular polarization		S. Kimura(IMS)
17:45-	(Free Discussion)	

(Remarks by T. Omata(Kanagawa Univ.), S. Hino(Chiba Univ.), Y. Ouchi(Nagoya Univ.), K. Fukui(Fukui Univ.), T. Matsukawa(Naruto Univ.), and I. Ouchi(Tottori Univ.))

18:30-20:30 (Party)

November 5, 1994 (at Room #101)

9:00- (Seya Region)

Present status of BL1B and BL7B	M. Hasumoto(IMS)
Future plans of BL1B and BL7B	S. Tanaka(IMS)
2-photon spectroscopy	M. Itoh(Shinsyu Univ.)
Expectancy from exciton physics	T. Hayashi(Kyoto Univ.)
Expectancy in the window region	K. Nakagawa(Kobe Univ.)
Proposal for BL7B	H. Nakagawa(Fukui Univ.)

10:55- (Free Discussion)

(Remarks by K. Kan'no(Kyoto Univ.), K. Kurosawa(Miyazaki Univ.), T. Matsumoto(Kyoto Univ.), N. Eimori(Osaka Univ.), T. Nanba(Kobe Univ.), and M. Fujita(Maritime Safety Acad.))

11:55-13:15 (Lunch)

13:15- (BL3A1 and BL5B)

Present and Future of BL3A1	M. Kamada(IMS)
Desire from irradiation experiments	H. Hayashi(IMS)
Expectancy from SR-CVD experiments	A. Yoshida(Toyohashi Univ.)
Present and future of BL5B	S. Kimura(IMS)
Needs for calibration beam line	K. Yamashita(Nagoya Univ.)
Expectancy from desorption studies	K. Mitsuke(IMS)

14:55-15:10 (Coffee Break)

15:10- (Comments and Free Discussion)

Comment from quantum electronics	H. Itoh(Kagawa Univ.)
Comment from user's side	R. Kato(Kyoto Univ.)

Free Discussion

(Remarks by M. Ashida(Kyoto Univ.), K. Mase(IMS), T. Tsujibayashi(Osaka Dental Univ.), M. Mori(Nagoya Univ.), and M. Watanabe(Tohoku Univ.))

16:40- (User's meeting)

LIST OF PUBLICATIONS(1994)

1) "Intrinsic Luminescence in Synthetic Mica Crystals"
   M. Itoh, N. Ohno and Y. Uzawa
   J. Phys. Soc. Jpn. **63** (1994) 825.
2) "FEL Experiment on the UVSOR Storage Ring"
   H. Hama, J. Yamazaki and G. Isoyama
   Nucl. Instrum. & Methods in Phys. Res. A **341** (1994) 12.
3) "Time Response of Photon-Stimulated Desorption of Excited-State Potassium Atoms from KCI and KBr"
   S. Hirose and M. Kamada
   J. Phys. Soc. Jpn. **63** (1994) 1053.
4) "Absorption Spectra of Alkali Cyanide in the Vacumm-Ultraviolet Region: Transitions to Dissociative and Predissociative States"
   H. Yasumatsu, T. Kondow, K. Suzuki, K. Tabayashi and K. Shobatake
   J. Phys. Chem. **98** (1994) 1407.
5) "L_3 Near-Edge Structure in Germanium"
   S. Naoé
   Jpn. J. Appl. Phys. **32** (1993) 794.
6) "Infrared and Transport Properties of KxC_{60}"
   A. Ugawa
   Synthetic Metals **56** (1993) 2997.
7) "Electronic Structure of Metallofullerene LaC_{82} : Electron Transfer from Lanthanum to C_{82}"
   S. Hino, H. Takahashi, K. Iwasaki, K. Matsumoto, T. Miyazaki, S. Hasegawa, K. Kikuchi and Y. Achiba
   Phys. Rev. Lett. **71** (1993) 4261.
8) "Decay Kinetics of the 4.4 eV Potoluminescence Associated with the Tow States of Oxygen-Deficient-Type Defect in Amorphous SiO_2"
   H. Nishikawa, E. Watanabe, D. Ito and Y. Ohki
   Phys. Rev. Lett. **72** (1994) 2101.
9) "Enhanced Photogeneration of E' Centers from Neutral Oxygen Vacancies in the Presence of Hydrogen in High-Purity Silica Glass"
   H. Nishikawa, R. Nakamura, Y. Ohki and Y. Hama
   Phys. Rev. B **48** (1993) 2968.

10) "Intersystem-Crossing, Momentum Relaxation and Self-trapping of Excitons in Alkali Iodides"
T. Tsujibayashi, K. Toyoda, T. Hayashi, M. Watanabe, P. Gu and K. Kan'no
J. Lumi. **58** (1994) 368.

11) "Mo-Si Multilayer as Soft X-Ray Mirrors for the Wavelengths around 20 nm Region"
D. Kim, H. W. Lee, J. J. Lee, J. H. Je, M. Sakurai and M. Watanabe
J. Vac. Sci. Technol. A **12** (1994) 148.

12) "Observation of Double Excited Rydberg States of N_2O by Positive Ion-Negative Ion Coincidence Spectroscopy"
H. Yoshida and K. Mitsuke
J. Chem. Phys. **100** (1994) 8817.

13) "Defect Creation in Hydrogenated Amorphous Silicon Films Induced by Vacuum Ultraviolet Light from Synchrotron and Undulator Radiation"
Y. Saito and A. Yoshida
Philosophical Magazine B **70** (1994) 133.

14) "Low-Energy Optical Excitation in Rare-Earth Hexaborides"
S. Kimura, T. Nanba, S. Kunii and T. Kasuya
Phys. Rev. B **50** (1994) 1406.

15) "Demonstration of Accumulated Photon Echoes by using Synchrotron Radiation"
H. Itoh, S. Nakanishi, M. Kawase, H. Fukuda, H. Nakatsuka and M. Kamada
1994 IEEE Nonlinear Optics (1994) 358.

16) "Reflection Spectra of Dense Amorphous SiO_2 in the Vacuum-UV Region"
N. Kitamura, K. Fukumi, K. Kadono, H. Yamashita and K. Suito
Phys. Rev. B **50** (1994) 132.

17) "Far-Infrared Reflectivity Spectra of the Hydrogen-Bonded Ferroelectric KH_2PO_4 Measured by Synchrotron Radiation"
S. Shin, Y. Tezuka, S. Saito, Y. Chiba and M. Ishigame
J. Phys. Soc. Jpn. **63** (1994) 2612.

18) "Kinetic-Energy Release in the Dissociation of NO^{2+}"
T. Masuoka
J. Chem. Phys. **100** (1994) 6422.

19) "Kinetic-Energy Release in the Dissociation of CO^{2+}"
T. Masuoka
J. Chem. Phys. **101** (1994) 322.

20) "Dissociation Dynamics of CH_4^+ Core Ion in the $^2A_1$ State"
K.Furuya, K. Kimura, Y. Sakai, T. Takayanagi and N. Yonekura
J. Chem. Phys. **101** (1994) 2720.

21) "Time-Resolved Measurements of Excitation Spectra for Intrinsic Emission in Alkali Iodides"
T. Matsumoto, A. Miyamoto, K. Ichinose, A. Ohnishi, K. Kan'no and T. Hayashi
J. Lumi. **58** (1994) 335.

22) "Recombination Luminescence from Self-Trapped Excitons in BaFBr"
A. Ohnishi, K. Kan'no, Y. Iwabuchi and N. Mori
Nucl. Instrum. & Methods in Phys. Res. B **91** (1994) 210.

23) "Accumulated Photon Echoes Generated by Synchrotron Radiation"
H. Itoh, S. Nakanishi, M. Kawase, H. Fukuda, H. Nakatsuka and M. Kamada
Phys. Rev. A **50** (1994) 3312.

24) "Influence of Transition-Metal Type and Content on Local-Order Properties of $Zn_{1-X}M_XS$ (M=Mn,Fe,Co) Alloys Studied using XANES Spectroscopy"
W. F. Pong, R. A. Mayanovic, K. T. Wu, P. K. Tseng, B. A. Bunker, A. Hiraya and M. Watanabe
Phys. Rev. B **50** (1994) 7371.

25) "Beamsplitting and Polarization Properties of Cr/C Transmission Multilayers Close to the Carbon K-edge"
F. Schäfers, A. Furuzawa, K. Yamashita, M. Watanabe and J. H. Underwood
Phys. of X-ray Multilayer Structures **6** (1994) 155.

26) "Pressure Effect in Surface Phonon State of Microcrystalline NaCl"
T. Nanba, T. Matsuya and M. Motokawa
J. Phys. Soc. Jpn. **63** (1994) 3886.

27) "Optical Characteristics of SiO_2 formed by Plasma-Enhanced Chemical-Vapor Deposition of Tetraethoxysilane"
K. Ishii, Y. Ohki and H. Nishikawa
J. Appl. Phys. **76** (1994) 5418.

28) "Optical Measurements and Band Calculations of FeSi"
H. Ohta, S. Kimura, E. Kulatov, V. Halilov, T. Nanba, M. Motokawa, M. Sato and K. Nagasaka
J. Phys. Soc. Jpn. **63** (1994) 4206.

29) "Observation of Anisotropic Angular Distribution of Ionic Fragments in the Dissociation of CO^{2+}"
T. Masuoka
Phys. Rev. A **50** (1994) 2298.

30) "Ultraviolet Photoelectron Spectra of C_{78} and C_{96}"
S. Hino, H. Takahashi, K. Iwasaki, T. Miyazaki, K. Kikuchi and Y. Achiba
Chem. Phys. Lett. **230** (1994) 165.

31) "Synchrotron-Radiation Photoemission study of *In-situ* Synthesized DCNQI(*N,N*-Dicyanoquinonediimine)-Cu Salts"
A. Tanaka, A. Chainani, T. Miura, T. Takahashi, T. Miyazaki, S. Hasegawa and T. Mori
Solid State Commun. **93** (1995) 1.

32) "Intermolecular Energy-Band Dispersion in Oriented Thin Films of bis (1,2,5-thiadiazolo)-*p*-quinobis (1,3-dithiole) by Angle-Resolved Photoemission"
S. Hasegawa, T. Mori, K. Imaeda, S. Tanaka, Y. Yamashita, H. Inokuchi, H. Fujimoto, K. Seki and N.Ueno
J. Chem. Phys. **100** (1994) 6969.

33) "Electron Affinity of Single-Crystalline Chemical-Vapor-Deposited Diamond Studied by Ultraviolet Synchrotron Radiation"
N. Eimori, Y. Mori, A. Hatta, T. Ito and A. Hiraki
Jpn. J. Appl. Phys. **33** (1994) 6312.

34) "Metallic Na Formation in NaCl Crystals by Electron and VUV Photon Irradiation"
S. Owaki, S. Koyama, M. Takahashi, T. Okada, R. Suzuki and M. Kamada
EURODIM 94

35) "Platinum/Carbon Multilayer Reflectors for Soft-X-Ray Optics"
G. S. Lodha, K. Yamashita, T. Suzuki, I. Hatsukade, K. Tamura, T. Ishigami, S. Takahama and Y. Namba
Appl. Opt. **33** (1994) 5869.

36) "Core Electron Absorption Spectra of Films"
I. Ouchi, I. Nakai, M. Kamada and S. Tanaka
Pog. Polymer Phys. Jpn. **36** (1993) 413.

37) "Time Response of Sputtering of Excited-State Sodium Atoms from NaCl and NaF Irradiated with Synchrotron Radiation"
M. Kamada and S. Hirose
Nucl. Instrum. & Methods in Phys. Res. B **91** (1994) 619.

38) "Electronic Structure of Hole-Doped $Sr_{1+x}La_{1-x}FeO_4$ Studied by UPS and XAS"
T. Omata, K. Ueda H. Hosono, T. Miyazaki, S. Hasegawa, N. Ueda and H. Kawazoe
Phys. Rev. B **49** (1994) 10202.

39) "Ultraviolet Photoelectron Spectra of C_{78} and C_{96}"
S. Hino, H. Takahashi, K. Iwasaki, T. Miyazaki, K. Kikuchi and Y. Achiba
Chem. Phys. Lett. **230**(1994) 165.

40) "Single-and Double-Photoionization Cross Section of Carbon Dioxide (CO_2) and Ionic Fragmentation of CO_2^+ and CO_2^{2+}"
T. Masuoka
Phys. Rev. A **50** (1994) 3886.

41) "Low Temperature Growth of ZnTe by Synchrotron Radiation using Metalorganic Sources"
M. Ikejiri, T. Ogata, H. Nishio and A. Yoshida
J. Vac. Sci. Technol. A **12** (1994) 278.

42) "Synchrotron Radiation Excited Growth of ZnTe using Metalorganic Sources"
T. Ogata, S. I. Gheyas, M. Ikejiri, H. Ogawa and M. Nishio
J. Cryst. Growth (1994) (in press).

43) "Construction of a System for Novel Low-temperature Growth of II-VI Compound Semiconductors using Synchrotron Radiation"
T. Ogata, S. I. Gheyas, M. Ikejiri, H. Ogawa and M. Nishio
Rev. Sci. Instrum. **66** (1995) (in press).

44) "Observation of Micro-Macro Temporal Structure and Saturation Mechanism on the UVSOR Free Electron Laser"
H. Hama, J. Yamazaki, T. Kinoshita, K. Kimura and G. Isoyama
Nucl. Instrum. & Methods in Phys. Res. A (1995) (in press).

45) "Optical Spectra of CeAs and LaAs"
S. Kimura, F. Arai, Y. Haga, T. Suzuki and M. Ikezawa
Physica B (1995) (in press).

46) "Base site of Magnesium Oxide Dispersed on Silica as Active Sites for CO Photooxidation"
H. Yoshida, T. Tanaka, K. Nakatsuka, T. Funabiki and S. Yoshida
Proceedings of the international symposium on Acid-Base Catalysis II, Sapporo,December 2-4, 1993, in Acid-Base Catalalysis II, ed. H. Hattori, M. Misono and Y. Ono, Kodansha
Elsevier, Tokyo, (1994) 473-478.

47) "Na K-Edge XAFS Study of Sodium Loaded on Alumina"
S. Hasegawa, M. Morooka, H. Aritani, H. Yoshida and T. Tanaka
Jpn. J. Appl. Phys. **32** (1993) 508.

48) "A XANES Study on the Dehydration Process of Magnesium Hydroxide"
T. Yoshida, T. Tanaka, H. Yoshida, S. Takenaka, T. Funabiki, S. Yoshida and T. Murata
Physica B (1995) (in press).

in Japanese

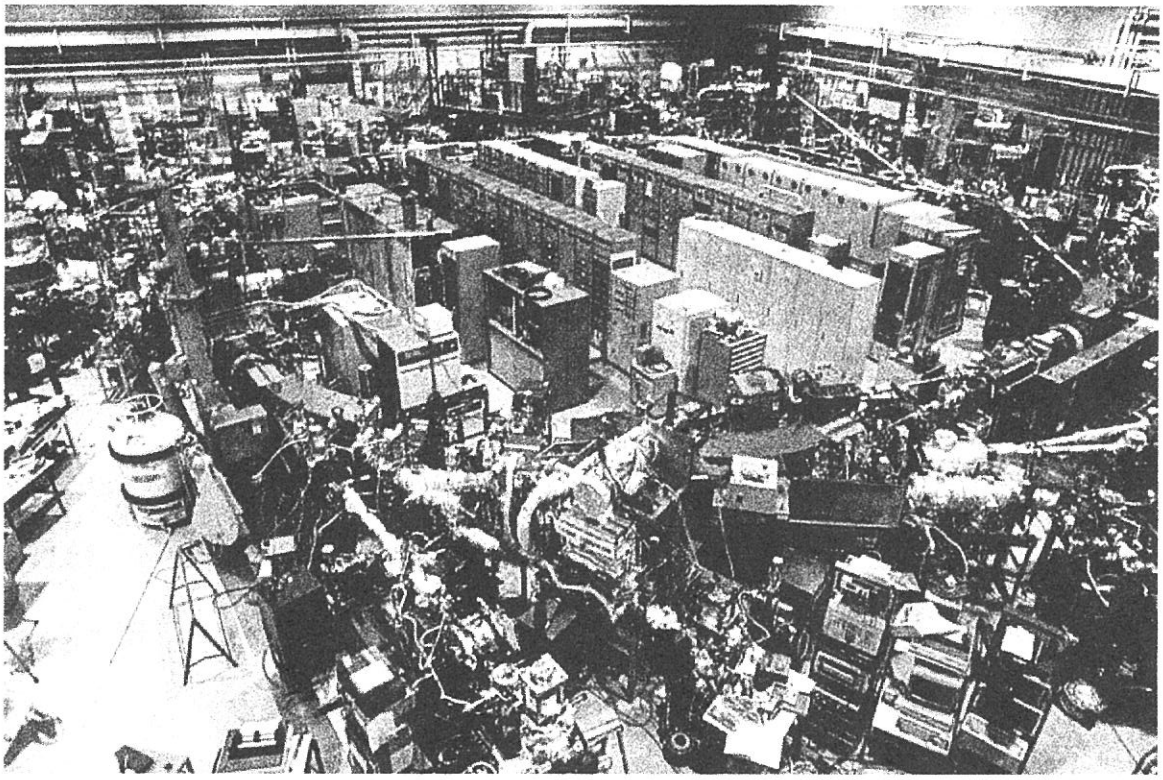
1) "Far-Infrared Spectroscpic Study of Adsorbed Species on Surfaces"
T. Nanba
HYOMEN KAGAKU **15** (1994) 152.

2) "Intermolecular Energy-Band Dispersion of BTQBT Thin Films"
S. Hasegawa, N. Ueno and K. Seki
HOSYAKO **7** (1994) 119.

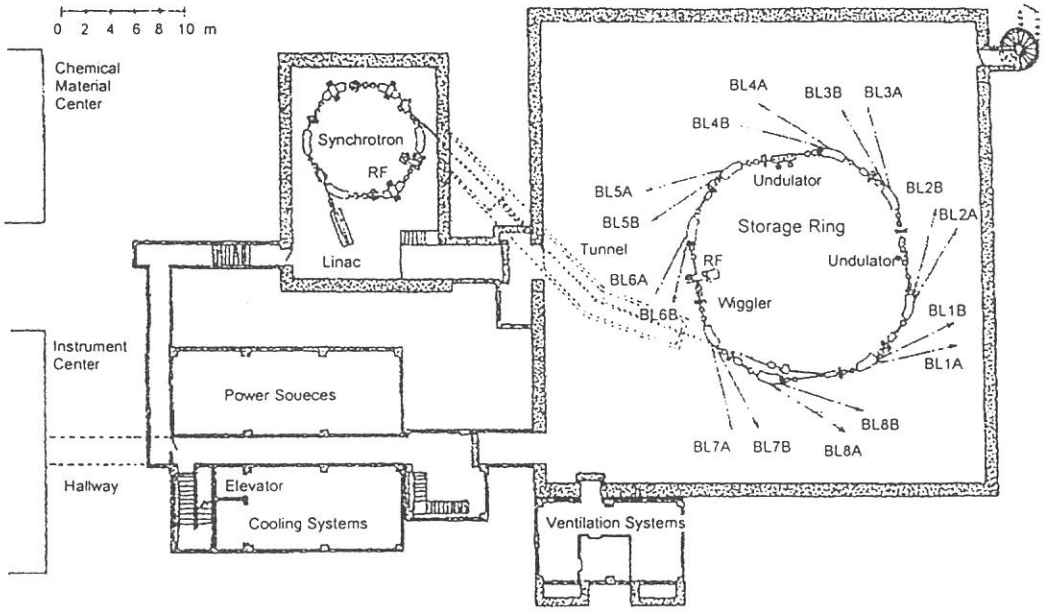
3) "Angle-Resolved Ultraviolet Photomission Studies of Functional Organic Molecular Thin Films"
S. Hasegawa, H. Ishii and N. Ueno
HYOMEN KAGAKU **15** (1994) 575.

4) "Ion-Pair Formation from Superexcited Molecules"
K. Mitsuke
HOSYAKO **7** (1994) 309.

5) "Stimulated Ultraviolet Emission in BaF_2 Crystals under Core-Level Excitation"
H. Itoh and K. Itoh
OYOBUTURI **63** (1994) 721.

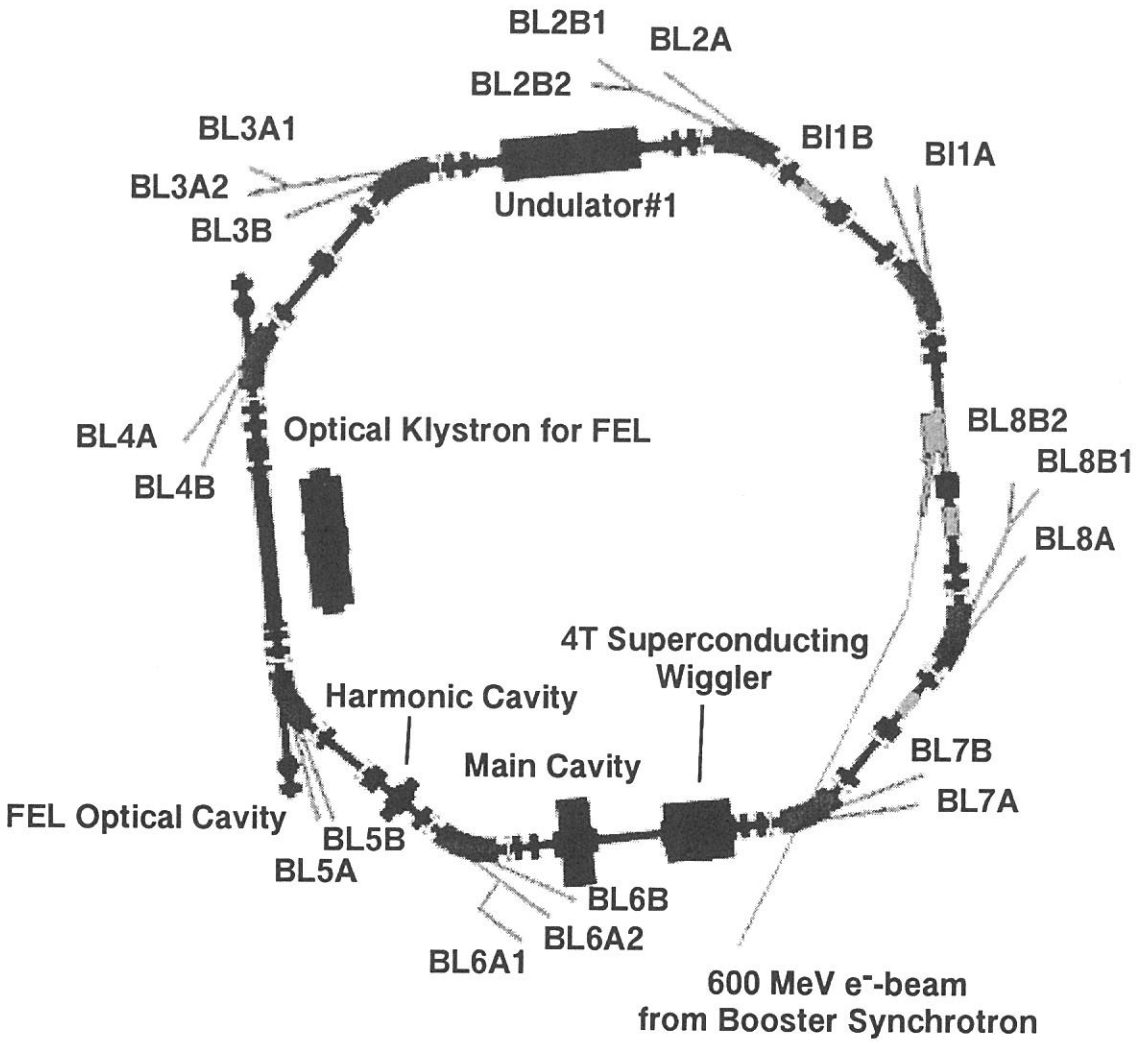


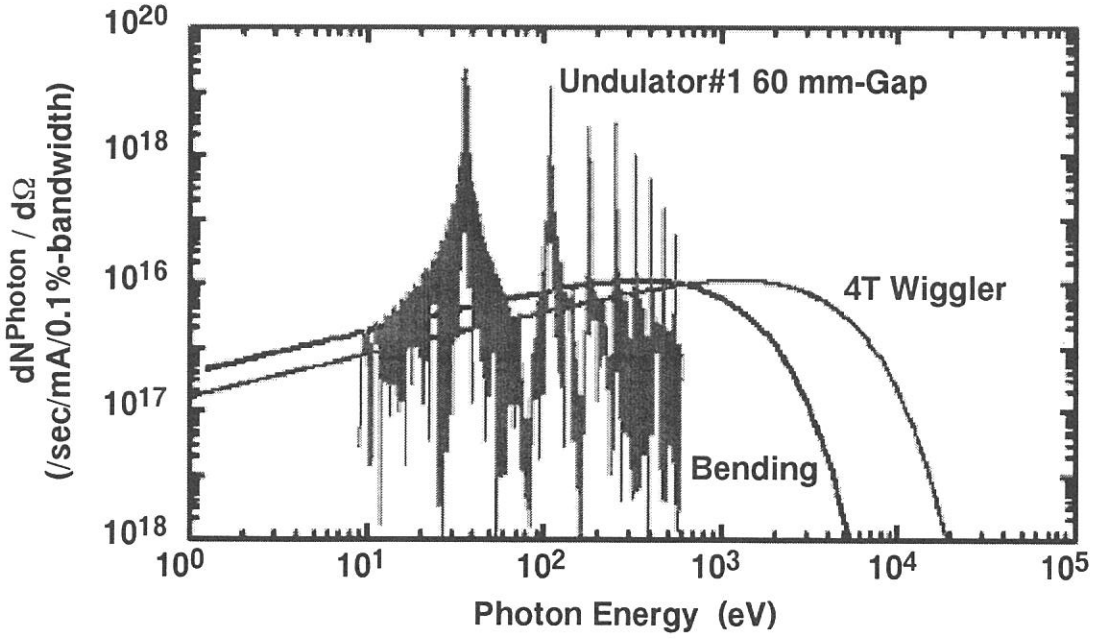
A picture of the experimental hall of the UVSOR facility.



Ground plan of the basement of the UVSOR facility.

The UVSOR 750 MeV Storage Ring





On-Axis Photon Intensity with 750 MeV-Electrons

Accelerator Complex

Injector Linac

Energy	15 MeV
Energy spread	~ 1.6 %
Frequensy	S-band 2.856 GHz
Acceleration	$2\pi/3$ traveling wave
Length	2.5 m (from gun to exit)
Klystron power	~ 1.8 MW

Booster Synchrotron

Lattice type	FODO
Energy	600 MeV
Beam current	32 mA (8-bunch filled)
Circumference	26.6 m
Super cell	6
Bending radius	1.8 m
Betatron number	2.25 (horizontal) 1.25 (vertical)
Momentum compaction α	0.138
Harmonics	8
RF frequency	90.115 MHz
Repetition rate	2.6 Hz

Storage Ring

Lattice type	Chasman-Green
Energy	750 MeV
Critical energy	425 eV
Circumference	53.2 m
Super cell	4
Bending radius	2.2 m
Betatron tune	3.16 (horizontal) 2.64 (vertical)
Momentum compaction α	0.032
Harmonics	16
RF frequency	90.115 MHz
RF voltage	50 kV
Emittance	1.15×10^{-7} πm rad 1.15×10^{-8} πm rad
Beam size	0.39 mm (horizontal) 0.27 mm (vertical)
Bunch Length	170 ps (at zero current)
Beam current	Multi-bunch 200 mA Single-bunch 50 mA
Lifetime (Multi-bunch)	4 h at 200 mA 9 h at 100 mA

Additional equipments

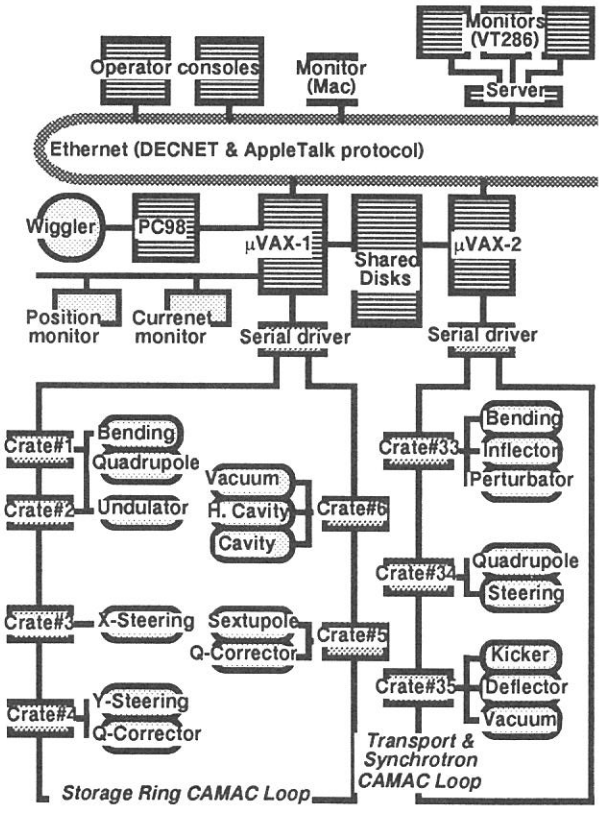
Higher-harmonic cavity	3×90.115MHz
Superconducting Wiggler	4T maximum
Undulator	for SR
Optical Klystron	for FEL

Control System

Preface: Based on Dual-host system with CAMAC loop and friendly man-machine interface

Architecture

CPU	2 μ-VAXs (3400)
OS	VMS
Connection	DECNET & Local Cluster
Operator console	2 VAX-Stations (DEC-Window)
Status monitors	VT286s + Macintoshes
Interface	CAMAC serial loop GPIB for beam monitors RS232C for host cpu of Wiggler
Language	Fortran, C, Pascal



Scheme of Accelerator Control System "UCOSS"

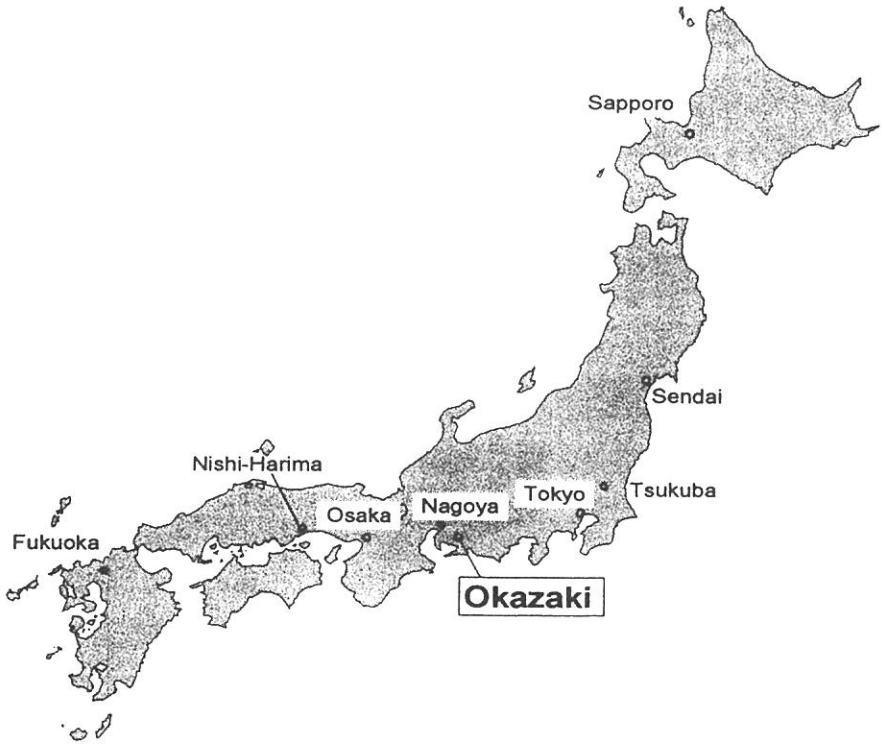
Beam Lines at UVSOR

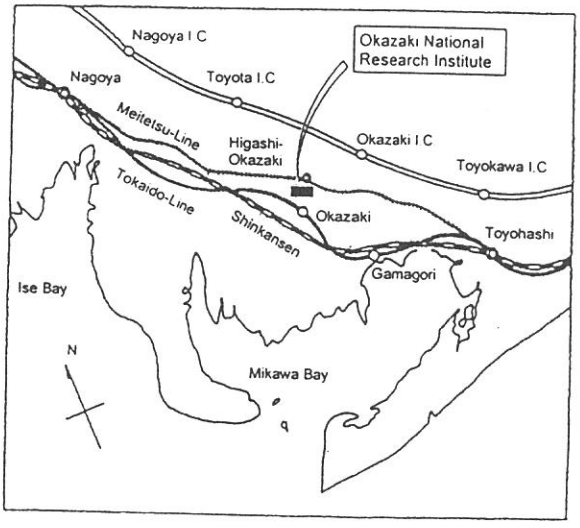
Beam Line	Monochromator, Spectrometer	Wavelength Region	Acceptance Angle (mrad) Horiz.	Vert.	Experiment
BL1A	Double Crystal	21 - 3 Å	4	1	Solid
BL1B	1-m Seya-Namioka	6500 - 300 Å	60	6	Solid
BL2A	1-m Seya-Namioka	4000 - 300 Å	40	6	Gas
BL2B1	2-m Grasshopper	600 - 15 Å	10	1.7	Solid, Surface & Gas
BL2B2	1-m Seya-Namioka	2000 - 300 Å	20	6	Gas
BL3A1	None (Filter, Mirror)		(U) 0.3	0.3	Solid & Irradiation
BL3A2	2.2-m Consant Deviation	1000 - 100 Å	10	4	Gas & Solid
	Grazing Incidence		(U) 0.3	0.3	
BL3B	3-m Normal Incidence	4000 - 300 Å	20	6	Gas
BL4A	None		6	6	Irradiation
BL4B	None		8.3	6	Irradiation
BL5A	None		(OK)		FEL
BL5B	Plane Grating	2000 - 20 Å	10	2.2	Calibration, Gas & Solid
BL6A1	Martin-Puplett	2000 - 30 μm	80	60	Solid
BL6A2	Plane Grating	6500 - 80 Å	10	6	Solid & Surface
BL6B	FT-IR	200 - 1.7 μm	70	25	Solid
BL7A	Double Crystal	15 - 8 Å	2	0.3	Solid
		15 - 2 Å	(W) 1	0.15	
BL7B	1-m Seya-Namioka	6500 - 300 Å	40	8	Solid
BL8A	None (Filter)		25	8	Irradiation, User's Instrum.
BL8B1	15-m Constant Deviation Grazing Incidence	400 - 20 Å	10	1.5	Gas & Solid
BL8B2	Plane Grating	6500 - 80 Å	10	6	Solid

U: with an undulator
W: with a wiggler
OK: with an optical klystron

LOCATION

Ultraviolet Synchrotron Orbital Radiation (UVSOR) Facility, Institute for Molecular Science (IMS) is located ar Okazaki. Okazaki (population 320,000) is 260 km southwest of Tokyo, and can be reached by train in about 3 hours from Tokyo via New Tokaido Line (Shinkansen) and Meitetsu Line.





ADDRESS

UVSOR Facility
Institute for Molecular Science
Myodaiji, Okazaki 444, JAPAN

Tel +81-564-55-7402 (Secretary, UVSOR)
+81-564-52-6101 (UVSOR)
Fax +81-564-54-7079 (UVSOR)
Telex 4537475 KOKKEN J (IMS)