# Appendices

# Organization

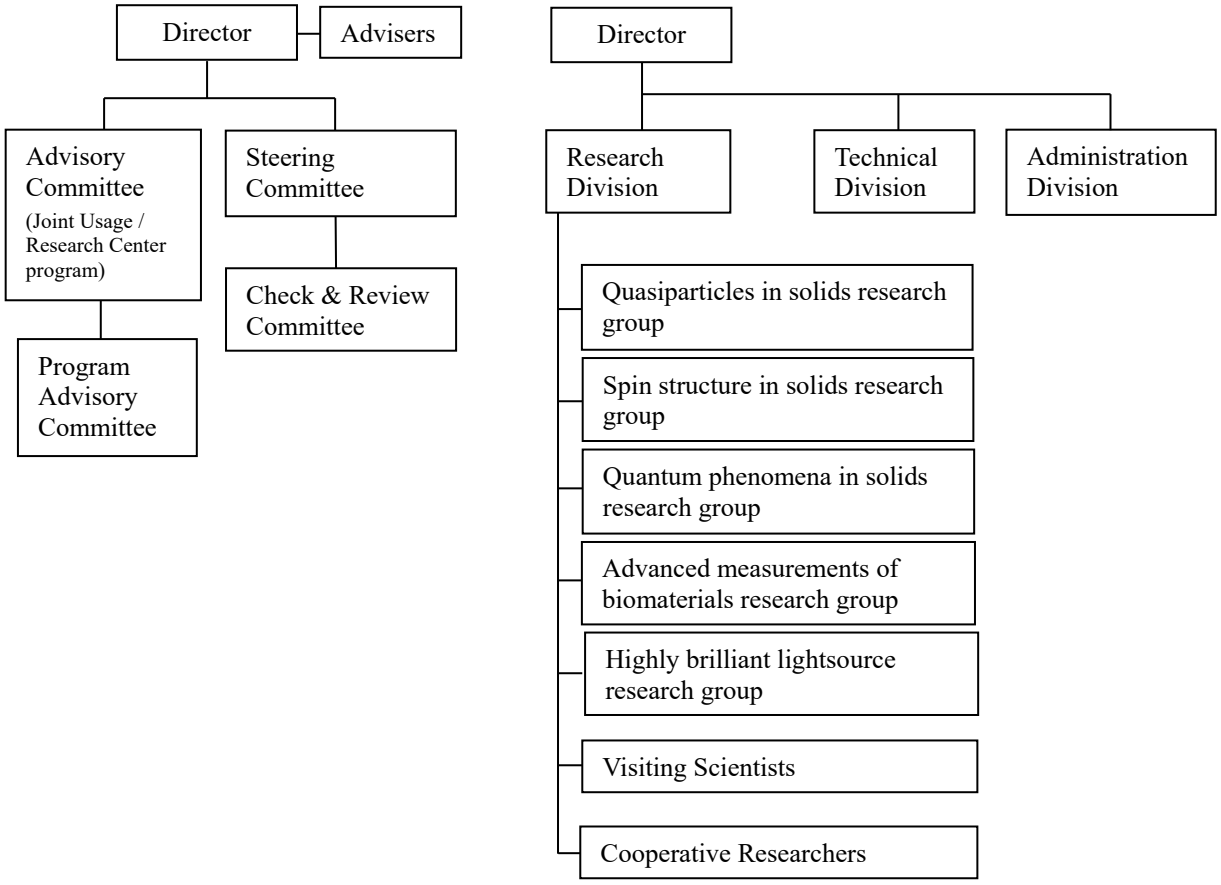


**Fig. 1**: Organization chart of HiSOR

## Director

| | |
|---|---|
| SHIMADA, Kenya | Hiroshima Synchrotron Radiation Center, HiSOR |

## Adviser

| | |
|---|---|
| OHTA, Toshiaki | Emeritus Professor, The University of Tokyo |
| KAKIZAKI, Akito | Emeritus Professor, The University of Tokyo |
| SATO, Shigeru | Emeritus Professor, Tohoku University |
| TANIGUCHI, Masaki | Emeritus Professor, Hiroshima University |
| FUJIMORI, Atsushi | Emeritus Professor, The University of Tokyo |

## Staff Members

| | |
|---|---|
| SHIMADA, Kenya | Director, Professor |
| OKUDA, Taichi | Vice Director, Professor |
| NAMATAME, Hirofumi | Professor |
| KATOH, Masahiro | Professor (Special Appointment) |
| MIYAUCHI, Hiroshi | Professor (Special Appointment) |
| SATO, Hitoshi | Associate Professor |
| SAWADA, Masahiro | Associate Professor |
| MATSUO, Koichi | Associate Professor |
| MIYAMOTO, Kouji | Associate Professor |
| IDETA, Shin-ichiro | Associate Professor |
| SHIMADA, Miho | Associate Professor (Special Appointment) |
| Mohamed Ibrahim | Assistant Professor |
| SUMIDA, Kazuki | Assistant Professor (Special Appointment) |
| INO, Akihiro | Visiting Professor |
| Amit Kumar | Researcher |
| Hou Xueyao | Researcher |
| Lu Yao | Researcher |
| GOTO, Kiminori | Technical Specialist |
| ARITA, Masashi | Technical Specialist |
| ARAMOTO, Katsuhiko | Supervisor, Academic Support Group |
| SHINNO, Naoko | Secretary |
| SHIMOKUBO, Harumi | Secretary |
| TAMURA, Yasuka | Secretary |

## Steering Committee

| | |
|---|---|
| SHIMADA, Kenya* | HiSOR |
| OKUDA, Taichi | HiSOR |
| NAMATAME, Hirofumi | HiSOR |
| KATOH, Masahiro | HiSOR |
| SATO, Hitoshi | HiSOR |
| SAWADA, Masahiro | HiSOR |
| MATSUO, Koichi | HiSOR |
| MIYAMOTO, Kouji | HiSOR |
| IDETA, Shin-ichiro | HiSOR |
| KURIKI, Masao | Graduate School of Advanced Science and Engineering |
| TATE, Shinichi | Graduate School of Advanced Science and Engineering |
| YABUTA, Hikaru | Graduate School of Advanced Science and Engineering |
| YOKOYA, Takayoshi | Okayama University |

| | |
|---|---|
| DAIMON, Hiroshi | Toyota Physical and Chemical Institute |

**Chair Person*

## Check & Review Committee

| | |
|---|---|
| SHIMADA, Kenya | HiSOR |
| OKUDA, Taichi* | HiSOR |
| NAMATAME, Hirofumi | HiSOR |
| KATOH, Masahiro | HiSOR |
| SATO, Hitoshi | HiSOR |
| SAWADA, Masahiro | HiSOR |
| MATSUO, Koichi | HiSOR |
| MIYAMOTO, Kouji | HiSOR |
| IDETA, Shin-ichiro | HiSOR |
| DAIGO, Souichi | Academic Support Group |
| ARAMOTO, Katsuhiko | Academic Support Group |

**Chair Person*

## Advisory Committee

| | |
|---|---|
| SHIMADA, Kenya | HiSOR |
| OKUDA, Taichi | HiSOR |
| KIMURA, Akio | Graduate School of Advanced Science and Engineering |
| NAMATAME, Hirofumi* | HiSOR |
| KATOH, Masahiro | HiSOR |
| SATO, Hitoshi | HiSOR |
| SAWADA, Masahiro | HiSOR |
| MATSUO, Koichi | HiSOR |
| MIYAMOTO, Kouji | HiSOR |
| IDETA, Shin-ichiro | HiSOR |
| ABUKAWA, Tadashi | Tohoku University |
| ISHIZAKA, Kyoko | The University of Tokyo |
| KIMURA, Shin-ichi | Osaka University |
| TOBIYAMA, Makoto | High Energy Accelerator Research Organization |
| AIURA, Yoshihiro | National Institute of Advanced Industrial Science and Technology |
| SENO, Yoshiki | Kyushu Synchrotron Light Research Center |
| QIAO, Shan | Shanghai Institute of Microsystems and Information Technology, Chinese Academy of Sciences |
| MATOBA, Yasuyuki | Yasuda Women's University |
| YOKOYAMA, Toshihiko | Institute for Molecular Science |
| KINOSHITA, Toyohiko | Japan Synchrotron Radiation Research Institute |

**Chair Person*

## Program Advisory Committee

| | |
|---|---|
| SHIMADA, Kenya | HiSOR |
| OKUDA, Taichi | HiSOR |
| SATO, Hitoshi | HiSOR |
| SAWADA, Masahiro | HiSOR |
| MATSUO, Koichi | HiSOR |
| MIYAMOTO, Kouji* | HiSOR |
| SAITOH, Tomohiko | Tokyo University of Science |
| AMEMIYA, Kenta | High Energy Accelerator Research Organization |
| SAKAMOTO, Kazuyuki | Osaka University |
| FUJIMORI, Shin-Ichi | Japan Atomic Energy Agency |
| MIZOKAWA, Takashi | Waseda University |
| MAKI, Yasuyuki | Kyusyu University |

**Chair Person*

## Visiting Scientists

| | |
|---|---|
| IWASAWA, Hideaki | National Institutes for Quantum and Radio Science and Technology |
| IZUMI, Yudai | National Institutes for Quantum and Radio Science and Technology |
| DONATH, Markus | University of Münster |
| QIAO, Shan | Chinese Academy of Sciences Shanghai Institute of Microsystems and Information Technology |
| ZHOU, Xingjiang | Institute of Physics, Chinese Academy of Sciences |
| SOKOLOV, Nikolai | Ioffe Physical-Technical Institute of the Russian Academy of Sciences |
| SHIKIN, Alexander | St. Petersburg University |

## Cooperative Research Staffs (Faculty Members)

| | |
|---|---|
| INUI, Masanori | Graduate School of Advanced Science and Engineering |
| KUROIWA, Yoshihiro | Graduate School of Advanced Science and Engineering |
| MORIYOSHI, Chikako | Graduate School of Advanced Science and Engineering |
| YABUTA, Hikaru | Graduate School of Advanced Science and Engineering |
| SEKITANI, Tetsuji | Graduate School of Advanced Science and Engineering |
| OKADA, Kazumasa | Graduate School of Advanced Science and Engineering |
| NAKAJIMA, Nobuo | Graduate School of Advanced Science and Engineering |
| WADA, Shin-ichi | Graduate School of Advanced Science and Engineering |

| | |
|---|---|
| YOSHIDA, Hiroaki | Graduate School of Advanced Science and Engineering |
| ISHIMATSU, Naoki | Graduate School of Advanced Science and Engineering |
| TANAKA, Arata | Graduate School of Advanced Science and Engineering |
| HIKICHI, Yousuke | Town & Gown Promotion Joint Research Course |

## Cooperative Researchers (Visiting Researchers)

| | |
|---|---|
| MIMURA, Kojiro | Osaka Prefecture University |
| YOKOYA, Takayoshi | Okayama University |
| MURAOKA, Yuji | Okayama University |
| WAKITA, Takanori | Okayama University |
| SENBA, Shinya | Ube National College of Technology |
| TANIDA, Hajime | Japan Atomic Energy Agency |
| YAMAGUCHI, Katsuhiko | Fukushima University |
| ISHIHARA, Yuichiro | Higashihiroshima City |

# List of publications


1. Y. El Halmouch, H. A. H. Ibrahim, N. M. Dofdaa, M. E. M. Mabrouk, M. M. El-Metwally, T. Nehira, K. Ferji, Y. Ishihara, K. Matsuo, M. I. A. Ibrahim. Complementary spectroscopy studies and potential activities of levan-type fructan produced by Bacillus paralicheniformis ND2. *Carbohydr. Polym.* **311**, 120743/14p (2023).
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3. Y. Izumi, K. Matsuo, A. Yokoya. Secondary structural analyses of histone H2A-H2B proteins extracted from heated cells. *Chirality* **35**(3), 165-171 (2023).
4. M. Kumashiro, K. Matsuo. Characterization of membrane-interaction mechanisms of proteins using vacuum-ultraviolet circular dichroism spectroscopy. *Chirality* **35**(11), 826-837 (2023).
5. S. Hosokawa, H. Sato, Y. Tezuka, J. I. Adachi, K. Kimura, K. Hayashi, S. Kohara, H. Tajiri, K. Kobayashi, A. Koura, F. Shimojo. Atomic and electronic structures on a mordenite zeolite. *e-J. Surf. Sci. Nanotech.* **22**(1), 25-31 (2023).
6. S. Kera, F. Matsui, K. Tanaka, Y. Taira, T. Araki, T. Ohigashi, H. Iwayama, M. Fujimoto, H. Matsuda, E. Salehi, M. Katoh. Prospects required for future light-source facilities: a case of UVSOR synchrotron facility. *Electron. Struct.* **5**, 034001/9p (2023).
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9. E. Salehi, M. Hosaka, M. Katoh. Time structure of undulator radiation. *J. Adv. Simul. Sci. Eng.* **10**(1), 164-171 (2023).
10. K. Nishikubo, M. Hasegawa, Y. Izumi, K. Fujii, K. Matsuo, Y. Matsumoto, A. Yokoya. Structural study of wild-type and phospho-mimic XRCC4 dimer and multimer proteins using circular dichroism spectroscopy. *Int. J. Radiat. Biol.* **99**(11), 1684-1691 (2023).

11. R. Suzuki, R. Kakihara, H. Ishii, T. Miyahara, Y. Maniwa, K. Yanagi, H. Iwasawa, K. Shimada, H. Namatame, M. Taniguchi. Photoemission study of one-dimensional electronic states of (6,5), (6,6), and (7,4) single-walled carbon nanotubes. *J. Phys. Soc. Jpn.* **92**(2), 024703/6p (2023).
12. H. Im, M. Iwataki, M. Tsunekawa, T. Watanabe, H. Sato, M. Nakatake, S.-i. Kimura. Variation of strong correlation effects in A-site ordered perovskites CaCu3Ti4-xRuxO12: Photoemission and inverse photoemission studies. *J. Phys. Soc. Jpn.* **92**(4), 044701/4p (2023).
13. K. Sumida, S. Higaki, H. Sato, D. Tsuru, K. Miyamoto, T. Okuda, Y. Kuroiwa, C. Moriyoshi, K. Takase, T. Oguchi, A. Kimura. One-dimensional band structure in quasi-two-dimensional h-Mo4O11 revealed by angle-resolved photoelectron spectroscopy and first-principles calculations. *J. Phys. Soc. Jpn.* **92**(8), 084706/6p (2023).
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20. M. Holtmann, P. Krüger, K. Miyamoto, T. Okuda, K. Shimada, M. Donath. Surface electronic structure of Re(0001): A spin-resolved photoemission study. *Phys. Rev. B* **107**(16), 165420/11p (2023).
21. H. Anzai, A. Hariki, H. Sato, M. Arita, T. Zhuang, K. Hiraoka. Observation of temperature-dependent Fermi surface evolution at the valence transition of YbInCu4. *Phys. Rev. B* **108**(7), 075116/8p (2023).
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24. K. Sumida, Y. Fujita, W. Zhou, K. Masuda, I. Kawasaki, S. Fujimori, A. Kimura, Y. Sakuraba. Role of on-site Coulomb interactions in the half-metallic Weyl ferromagnet candidate thin-film Co2FeSi. *Phys. Rev. B* **108**(24), L121408/6p (2023).
25. R. Itaya, Y. Toichi, R. Nakanishi, N. Ebara, Y. Nakata, K. Kasai, K. Kuroda, M. Arita, I. Yamamoto, K. Fukutani, K. Sakamoto. Creation of a p-type TlBiSe2 using photo-induced doping. *Phys. Rev. Mater.* **7**(11), 114201/6p (2023).
26. H. Iwasawa, T. Ueno, Y. Yoshida, H. Eisaki, Y. Aiura, K. Shimada. Quantitative measure of correlation strength among intertwined many-body interactions. *Phys. Rev. Research* **5**(4), 043266/10p (2023).
27. M. Alam, D. Kumar, S. Kumar, M. Sawada, K. Shimada, S. Chatterjee. Maxwell–Wagner polarization and mixed ferromagnetic and antiferromagnetic state in Eu2CoMnO6. *Phys. Stat. Solidi B* **260**(12), 2300305/8p (2023).
28. M. I. A. Ibrahim, X. Solimando, L. Stefan, G. Pickaert, J. Babin, C. Arnal-Herault, D. Roizard, A. Jonquieres, J. Bodiguel, M. Averlant-Petit. A lysine-based 2:1-[a/aza]-pseudopeptide series used as additives in polymeric membranes for CO2 capture: synthesis, structural studies, and application. *RSC Advances* **13**, 10051–10067 (2023).

29. T. Kaneyasu, Y. Hikosaka, S. Wada, M. Fujimoto, H. Ota, H. Iwayama, M. Katoh. Time domain double slit interference of electron produced by XUV synchrotron radiation, *Sci. Rep.* **13**, 6142/8p (2023).
30. H. Iwasawa, K. Sumida, S. Ishida, P. Le Fèvre, F. Bertran, Y. Yoshida, H.Eisaki, A. F. Santander-Syro, T. Okuda. Exploring spin-polarization in Bi-based high-Tc cuprates, *Sci. Rep.* **13**, 13451/7p (2023).
31. Y. Hikosaka, T. Kaneyasu, S. Wada, H. Kohguchi, H. Ota, E. Nakamura, H. Iwayama, M. Fujimoto, M. Hosaka, M. Katoh. Frequency-domain interferometry for the determination of time delay between two extreme-ultraviolet wave packets generated by a tandem undulator, *Sci. Rep.* **13**, 10292/8p (2023).
32. S. Wada, H. Ohta, A. Mano, Y. Takashima, M. Fujimoto, M. Katoh. Young's double-slit experiment with undulator vortex radiation in the photon-counting regime, *Sci. Rep.***13**, 22962/8p (2023).
33. S. A. Abdel Ghani, M. I. A. Ibrahim, M. A. Shreadah, A. A.M. El-Sayed, M. A. Aly-Eldeen. Ecological risk assessment of selected contaminants in seawater, sediment and some fish species from Alexandria beaches, South-Eastern Mediterranean Sea, Egypt, *Environ. Nanotechnol. Monit. Manag.* **20**, 100873/16p (2023).
34. H. M. El-Sayed, M. I. A. Ibrahim, A. Abou Shagar, A. R. Elgendy. Geophysical and hydrochemical analysis of saltwater intrusion in El-Omayed, Egypt: Implications for sustainable groundwater management, *Egypt. J. Aquat. Res*. **49**, 478-489 (2023)

## List of Accepted Research Proposals

23AG001 Kojiro Mimura Osaka Metropolitan University
Fe 3d electronic state in covalent-chain antiferromagnets TlFeX2 (X = S, Se) investigated by resonant photoemission spectroscopy

23AG002 Ying Jin University of Science and Technology Beijing
Ex-situ soft x-ray absorption investigation towards passivation behavior of Titanium Alloys by Hydrogen charging and Tensioning

23AG003 Takashi Komesu University of Nebraska-Lincoln
Electronic Structure Investigations of ferromagnetic Pd Overlayers on Cr2O3 Single Crystals

23AG005 Akifumi Higashiura Hiroshima University
Analysis of intraparticle structure to elucidate the formation mechanism of encapsulin particles

23AG006 Koichi Matsuo Hiroshima University
Membrane-bound structure and amyloid fibril formation analysis of α-synuclein peptide

23AG007 Koichi Matsuo Hiroshima University
Structural change of α1 acid glycoprotein induced by the membrane interaction

23AG008 Dmitry Estyunin Saint-Petersburg state university
Modification of electronic structure of an intrinsic magnetic topological insulator (Mn1-x, Ax)Bi2Te4 by substituting Mn with non-magnetic elements A=(Ge, Pb, Sn).

23AG009 Hiroaki Anzai Osaka Metropolitan University
Observation of Kondo resonance peak in the photoemission spectra of quadruple perovskite oxides

23AG010 Hiroaki Anzai Osaka Metropolitan University
Direct observation of the heavy-fermion bands in YbXCu4(X=Ag, In)

23AG011 Mohamed Ibrahim Hiroshima University
Structural and conformational elucidations of carrageenan polysaccharides gels induced by different stimuli using circular dichroism spectroscopy

23AG012 Abdelrahman Mosaad Khattab Al-Azhar University
Structural and conformational studies of surfactin-derived bacteria using circular dichroism

23AG013 Hitoshi Sato Hiroshima University
Electronic structure of new 4f chiral magnet studied by angle resolved photoemission spectroscopy II

23AG014 Hitoshi Sato Hiroshima University
Angle resolved photoemission spectroscopy of new 4f chiral magnet

23AG015 Hitoshi Sato Hiroshima University
Study on spin texture of new 4f chiral magnet Yb(Ni1-xCux)3Al9

23AG016 Meng Wang CEMS, RIKEN
XAS and XMCD study of the magnetic states in RuO2/CoFe2O4 and IrO2/CoFe2O4 interface.

23AG017 Yasuyuki Maki Kyushu University
Effect of glucose on the thermal stability of proteins

23AG018 Shinjiro Hayakawa Hiroshima University
Ca K-edge EXAFS spectroscopy and in situ observation of phase transformation among calcium carbonate polymorphs

23AG019 Takayoshi Yokoya Okayama University
Electronic structure study of functional materials at BL-5 (FY2023 A)

23AG020 Akari Takayama Waseda University
Topological proximity effect in Sb/Bi heterojunction studied by spin-resolved ARPES

23AG021 Shilong Wu Institute of Physics, Chinese Academy of Sciences
High resolution ARPES study of type IV Dirac band structures in superconducting SrAgBi.

23AG022 Guodong Liu Institute of Physics, Chinese Academy of Sciences
A study on the topological nature of superconductor SnAs by using high-resolution ARPES

23AG023 Guodong Liu Institute of Physics, Chinese Academy of Sciences
A study on the nature of correlated Flat band and 2D Dirac fermions in the magnetic kagome metal FeSn by using spin-resolved ARPES

23AG024 Baojie Feng Institute of Physics, Chinese Academy of Sciences
Exploration of flat bands in low-dimensional tellurides

23AG025 Baojie Feng Institute of Physics, Chinese Academy of Sciences
ARPES study of a candidate Weyl semimetal

23AG026 Zhang Ke University of Electronic and Technology of China (UESTC)
Revealing the band structure of emerging superconducting nickelates $La_{0.8}Sr_{0.2}NiO_2$ and $Nd_{0.8}Sr_{0.2}NiO_2$ by high resolution ARPES

23AG027 Hikaru Yabuta Hiroshima University
Structural analysis of prebiotic depsipeptides by circular-dichroism spectroscopy

23AG028 AVERLANT-PETIT Marie Christine — Unversité de Lorraine/CNRS
Structural and conformational studies of peptide-based hydrogels: influence on self-assembling

23AG029 Masahiro Sawada — Hiroshima University
Magnetic coupling between transition metals through monolayer hexagonal boron nitride

23AG030 Kenta Kuroda — Hiroshima University
Study of topological electronic structures in atomic-layer magnetic thin films

23AG031 Kenta Kuroda — Hiroshima University
Systematic investigations of many-body interaction in low-carrier rare-earth monopnictides

23AG032 Kenta Kuroda — Hiroshima University
Study of spin-orbit coupled electronic structures in antiferromagnets

23AG033 Kentaro Fujii — National Institutes for Quantum and Radiological Science and Technology
Observation of nuclear creation process of liquid-liquid phase separation using VUV-CD spectroscopy

23AG034 Friedrich Reinert — Universitäet Wüerzburg
Mapping the pseudospin texture in a Kagome superconductor by means of dichroic ARPES

23AG035 Friedrich Reinert — Universitäet Wüerzburg
Electronic structure and spin texture of a Tellurium Kagome monolayer grown on Pt(111)

23AG036 Taichi Okuda — Hiroshima University
Trial to control the anisotropy of topological surface states

23AG037 Taichi Okuda — Hiroshima University
Temperature and substrate dependence of magnetic anisotropy of O/FeCo(001)film on Pd(001)

23AG038 Taichi Okuda — Hiroshima University
Topological electronic states induced by external perturbation (pressure and electric current)

23AG039 Jayita Nayak — Indian Institute of Technology Kanpur
Band structure investigation of RAlX (R: Ce, Pr, Nd, La; X: Si or Ge) semimetals

23AG040 Masashi Arita — Hiroshima University
Observation of Electron Correlation Effects in MnSi by ARPES

23AU001 Hideaki Iwasawa National Institutes for Quantum and Radiological Science and Technology
Application of measurement informatics on spin-resolved ARPES experiments

23AU002 Shilong Wu Institute of Physics, Chinese Academy of Sciences
Laser-spin-ARPES study of spin-polarized Fermi arcs in a Weyl semimetal superconductor

23AU003 Alexander Shikin Saint-Petersburg state university
Study of modification of electronic structure of MnBi2Te4 under doping with low concentrations of Pb, Ge, Sn, Si depending on the temperature and polarization of laser radiation to analyze changes in their magnetic properties

23AU004 Masahiro Kobayashi National Institute for Fusion Science
Circular dichroism analysis of molecular structure in amino acid specimen by vacuum-ultraviolet circularly-polarized light irradiation

23AU005 Tomohide Saio Institute of Advanced Medical Sciences, Tokushima University
Molecular Mechanism of Chaperone Action Characterized by Time-Resolved Vacuum-Ultraviolet Circular Dichroism Spectroscopy

23AU006 Masato Sakano The University of Tokyo
Observation of characteristic spin texture in few-layer WTe2

23AU007 Masahiro Kobayashi National Institute for Fusion Science
Circular dichroism analysis of molecular structure in amino acid metal complex specimen by vacuum-ultraviolet circularly-polarized light irradiation

23AU008 Ken Terao Osaka University
Destabilization mechanism of triple helical structure of collagen upon complexation with nanoparticles

23AU009 Alexander Shikin Saint-Petersburg state university
Modification of electronic spin structure of MnBi2Te4 doped with Pb at different concentrations for analysis of interaction between topology and magnetism

23AU010 Pramod Bhatt Bhabha Atomic Research Centre Mumbai India
Soft X-ray Absorption Spectroscopy (XAS) Study of Vanadium Hexacyanoferrate Based Open Framework Compound

23AU011 Jun Maruyama Osaka Research Institute of Industrial Science and Technology
Determination of chirality at nanopore arrangement in needle-like carbon

23AU012 Alexander Shikin Saint-Petersburg state university
Modification of the spin structure of Ge(Pb)xMn1-xBi2Te4 at the topological phase transitions

23AU013 Turgut Yilmaz University of Connecticut

Investigating the semimetal phase in TiSe2

23BG001 Chang Liu Southern University of Science and Technology
Evolution of electronic structure of itinerant-moment magnetic phase transition in the $Sr_{1-x}Ca_xCo_2P_2$ system

23BG002 Chang Liu Southern University of Science and Technology
Probing a new type of SOC-independent, momentum-dependent spin splitting effect in antiferromagnets

23BG003 Ken Terao Osaka University
Dissociation-association dynamics of double helices of the multi-helical polymer xanthan in aqueous solution

23BG004 Taichi Okuda Hiroshima University
Verification of chirality induced spin selectivity effect (CISS effect) in self-assembled chiral polymers on gold surface

23BG005 Hiroyuki Ikemoto University of Toyama
Electronic state of the chalcogen chains encapsuled in carbon nanotubes

23BG006 Mark Edmonds Monash University
Understanding the spin-texture of the topological Dirac and flat bands in ultra-thin Kagome metal $Mn_3Sn$

23BG007 Kouji Miyamoto Hiroshima University
Thickness-dependent electronic structure as the origin of the intrinsic spin Hall effect in Pt(001) thin film

23BG008 Kentaro Fujii National Institutes for Quantum and Radiological Science and Technology
Observation of nuclear creation process of liquid-liquid phase separation using VUV-CD spectroscopy

23BG009 Kentaro Fujii National Institutes for Quantum and Radiological Science and Technology
Analysis of antibody-drug conjugate in tumor cells utilizing synchrotron soft X-ray spectroscopy

23BG010 Ryota Akiyama The University of Tokyo
Investigation of the band dispersion in Yb-intercalated graphene

23BG011 Shin-ichiro Ideta Hiroshima University
ARPES study of the electronic structure on underdoped triple-layer cuprate

23BG012 Shin-ichiro Ideta Hiroshima University
Role of charge fluctuations on the electronic structure of cuprates observed by ARPES

23BG013 Marie Christine Averlant-Petit — Unversité de Lorraine/CNRS
Structural and conformational studies of peptide-based hydrogels: influence on self-assembling

23BG014 Jayita Nayak — Indian Institute of Technology Kanpur
Search for novel quantum states in axion insulators

23BG015 Akio Kimura — Hiroshima University
Origin of superconductivity in Dirac nodal-line materials with P square-net

23BG016 Takayoshi Yokoya — Okayama University
Synchrotron ARPES of nodal line semimetal candidate $LaTe_{1+x}Bi_{1-x}$

23BG017 Chaoyu Chen — Southern University of Science and Technology
Investigation of *c-f* hybridization in Quasi-1D Kondo lattice $CeCo_2Ga_8$ and $CeCo_2Al_8$

23BG018 Chaoyu Chen — Southern University of Science and Technology
ARPES study on magnetic hourglass candidate $CsMn_2F_6$

23BG019 Chaoyu Chen — Southern University of Science and Technology
Enhanced spin polarization of the surface state protected by non-symmorphic symmetry

23BG020 Chaoyu Chen — Southern University of Science and Technology
Spin-resolved ARPES study on altermagnet candidate $V_{1/3}NbS_2$

23BG021 Hitoshi Sato — Hiroshima University
Angle resolved photoemission spectroscopy of reference material for new 4*f* chiral magnet $YbNi_3Al_9$

23BG022 Hitoshi Sato — Hiroshima University
Angle resolved photoemission spectroscopy of $LuNi_3Al_9$; Comparison of band structure of new 4*f* chiral magnet $YbNi_3Al_9$

23BG023 Hitoshi Sato — Hiroshima University
Study on spin texture of new 4*f* chiral magnet $YbNi_3Al_9$

23BG024 Chaoyu Chen — Southern University of Science and Technology
Investigation of electronic structure and possible chiral CDW state in the natural hetero-structure material 6R-$TaS_2$

23BG025 Minoru Iwata — Kyushu Institute of Technology
Design of optical glass for evaluation of UV degradation through on-orbit exposure experiments

23BG026 Masahiro Hara — Kumamoto University
Effects of Ar ion irradiation on anatase nanoparticles converted from titanium oxide nanosheets

23BG027 Akio Kimura — Hiroshima University

Observation of nodal-links and spin-polarized surface states in Heusler-type ferromagnets

23BG028 Akio Kimura Hiroshima University

Maximization of anomalous Nernst effect in Fe based ferromagnetic alloy films

23BG029 Jens Ruediger Stellhorn Nagoya University

Structure of Tsai-type M-In-Yb quasicrystals by low-energy X-ray spectroscopy

23BG030 Jayita Nayak Indian Institute of Technology Kanpur

Band structure engineering of magnetic Weyl semimetals

23BG031 Jimin Kim Max Planck Pohang University of Science and Technology

Investigating charge density wave and Kondo lattice behavior of cerium tellurides

23BG032 Jimin Kim Max Planck Pohang University of Science and Technology

Investigating pseudogap and broken time-reversal symmetry phases from the momentum-resolved electronic structures of kagome metal, $ScV_6Sn_6$

23BG033 Shin-ichi Wada Hiroshima University

Electronic relaxation dynamics depending on molecular conductivity probed by electron spectroscopy II

23BG034 Shin-ichi Wada Hiroshima University

Soft X-ray spectroscopy of phospholipid membranes supported by self-assembled monolayers

23BG035 Shin-ichi Wada Hiroshima University

X-ray absorption spectroscopy of functional organic molecules assembled metal nanoparticles made by laser ablation

23BG036 Dmitry Estyunin Saint-Petersburg State University

Topological phase transition in the MnBi2Te4-based compounds

23BG037 Shinya Hosokawa Kumamoto University

Conduction-band electronic states of Dy-TM metallic glasses having thermal rejuvenation effect

23BG038 Shinya Hosokawa Kumamoto University

Valence-band electronic states of Dy-TM metallic glasses having thermal rejuvenation effect

23BG039 Shilong Wu Songshan Lake Materials Laboratory

Unveiling the Dresselhaus-type spin texture by SR-based spin-ARPES

23BG040 Masashi Arita Hiroshima University

ARPES study of strain-induced phase transitions in $Pb_{1-x}Sn_xTe$ and $1T\text{-}TaS_2$

23BG041 Baojie Feng Institute of Physics, Chinese Academy of Sciences

ARPES study of the phase transition in a low-dimensional telluride

23BG042 Baojie Feng Institute of Physics, Chinese Academy of Sciences
ARPES study of the band structure of iron nitride

23BU001 Subham Majumdar Indian Association for the Cultivation of Science
X-ray magnetic circular dichroism (XMCD) study in Fe doped $Cr_2$ GeC

23BU002 Yasuyuki Maki Faculty of Science, Kyushu University
Effect of sugar and sugar alcohol on the thermal stability of protein

23BU003 Alexander Shikin Saint-Petersburg State University
Modification of electronic and spin structure of $Ge(Pb)_xMn_{1-x}Bi_2Te_4$ at the topological phase transitions

23BU004 Masahiro Kobayashi National Institute for Fusion Science
Circular dichroism analysis of optical activity in amino acid specimen by polarized quantum beam irradiation

23BU005 Tetsuji Sekitani Hiroshima University
NEXAFS study of polymer/fullerene blend films

23BU006 Kazuki Sumida Hiroshima University
Spin-polarized electronic structure of carrier-tuned topological insulators

23BU007 Koichiro Yaji National Institute for Materials Science
Electronic structure of multilayer graphene on ferromagnetic substrate

23BU008 Daniel S Dessau University of Colorado Boulder
Laser spin-ARPES of topological materials.

23BU009 Koichi Matsuo Hiroshima University
Conformation change of Magainin2 depending on the spontaneous curvature of membrane

23BU010 Shin-ichiro Ideta Hiroshima University
Role of charge fluctuations on the electronic structure of cuprates observed by IPES

## Symposium

The 28th Hiroshima International Symposium on Synchrotron Radiation
March 14–15, 2024, Faculty Club, Hiroshima University

## International Conference

The 19th International Conference on Chiroptical Spectroscopy
September 17–21, 2023, JMS Aster Plaza, Hiroshima, Japan

## HiSOR Seminar

- July 23. 2024
  分岐・環状構造でひろがる高分子溶液の科学
  Ken Terao (Osaka University)
- July 22. 2024
  微細加工共用設備「試作コインランドリ」の活動紹介
  Kentaro Totsu (Tohoku University)
- June 21. 2024
  Competing charge density waves in a van der Waals antiferromagnet CeTe3
  Yuita Fujisawa (Hiroshima University)
- Dec. 11. 2023
  Transferring Chiral Information between Objects with different dimensions
  Reiko Oda (Institute of Chemistry and Biology of Membranes and Nano-objects (CNRS) / Tohoku University)
- Nov. 30. 2023
  Nobumasa Funamori (Institute of Materials Structure Science, High Energy Accelerator Research Organization)
- Nov. 14. 2023
  Hiroki Wadati (University of Hyogo)
- Nov. 8. 2023
  Two-dimensional heavy fermion in a monoatomic-layer Kondo lattice YbCu2
  Shin-ichi Kimura (Osaka University and Institute for Molecular Science)
- Oct. 13. 2023
  Surface-sensitive property of photoemission spectroscopy analyzed by the photoemission simulator SPADExp: observation of electronic structures with broken screw-rotational symmetry
  Hiroaki Tanaka (The University of Tokyo)
- Sep. 22. 2023

Synchrotron Radiation (Vacuum UltraViolet) Circular Dichroism Spectroscopy for Elucidating Protein Structure and Function

Bonnie A. Wallace (Birkbeck University of London)

- Aug. 4. 2023

  Strongly Anisotropic Spin and Orbital Rashba Effect at a Tellurium - Noble Metal Interface

  Begmuhammet Geldiyev (University of Würzburg)

- July 19. 2023

  Combining the Power of High-Throughput Ab Initio Calculations and Machine Learning towards Materials Informatics

  Gian-Marco Rignanese (Université catholique de Louvain (Belgium))

- June. 9. 2023

  レーザー離散円偏光変調によるキラル物質の高速光イメージング分析

  Tetsuya Narushima (Ministry of Education, Culture, Sports, Science and Technology (MEXT))

# The 28th Hiroshima International Symposium on Synchrotron Radiation

Hirofumi Namatame

Hiroshima Synchrotron Radiation Center, Hiroshima University

On March 14th and 15th, 2024, we hosted the 28th Hiroshima International Symposium on Synchrotron Radiation, themed "Materials Science using VUV-SX Synchrotron Radiation: Towards the HiSOR II Project." The symposium aimed to encourage international and interdisciplinary exchanges of information in materials science utilizing synchrotron radiation, and to explore the future direction of research using VUV-SX light and suitable light sources.

The two-day event kicked off with opening remarks from Mr. Takeshi YAMAMOTO (Deputy Director of the University Research Facilitation Division, Research Promotion Bureau, Ministry of Education, Culture, Sports, Science and Technology [MEXT], Japan) and Prof. Atsushi SUGETA (Executive Vice President for Research, Hiroshima University, Japan). Following these introductions, Prof. K. Shimada, Director of HiSOR, gave an overview of HiSOR's activities. After the opening session, invited speakers shared recent scientific findings on various topics (see the list of invited speakers).

- High-resolution ARPES
- Spin ARPES
- Soft X-ray magnetic circular dichroism of nanomaterials
- VUV-CD spectroscopy of biomolecules
- Light source accelerators and insertion devices

List of invited speakers:

- Han Woong YEOM (Pohang University of Science and Technology(POSTECH), Korea)
- Manuel VALVIDARES (ALBA Synchrotron Light Source, Spain)
- Daniel S. DESSAU (University of Colorado, USA)
- Walid MALAEB (Lebanese American University, Lebanon)
- Frank WIEN (Synchrotron SOLEIL, France)
- Shaukat KHAN (Technische Universität Dortmund, Germany)
- Naoyuki MAEJIMA (Institute for Molecular Science, Japan)

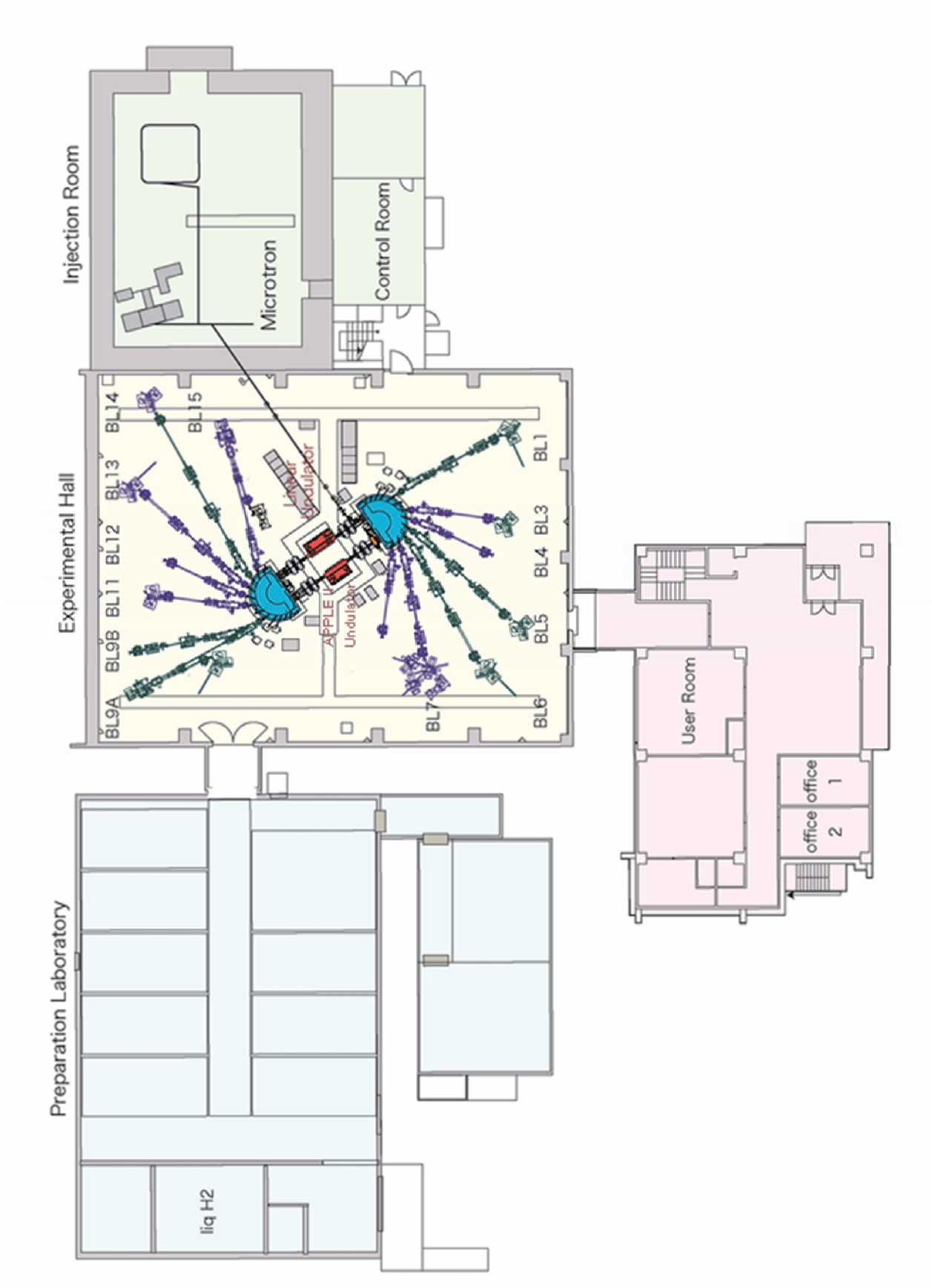
In addition to the oral presentations, an on-site poster session was held, featuring 32 presenters, including 18 students. Most of the results shared were from joint research conducted during fiscal year 2023. The best student poster awards were selected based on evaluations by all participants, excluding students. Four students from Hiroshima University were recognized during the closing session for their outstanding posters.

Following the symposium, the invited international speakers served as reviewers for the scientific research activities, providing an international review of the

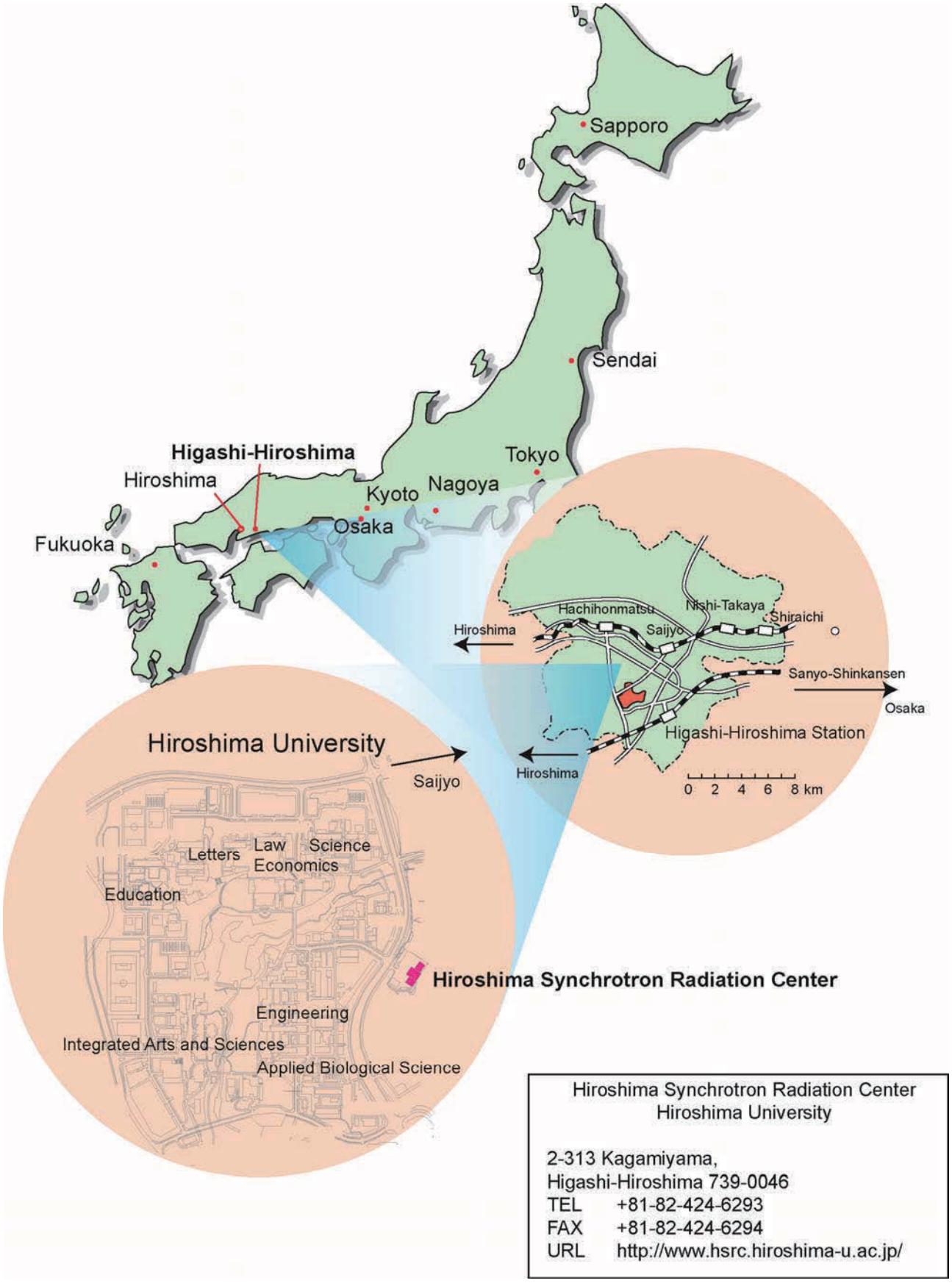
synchrotron radiation research at the center.

The symposium was a success, with 63 participants in total: 49 from on-campus, 6 from off-campus, and 12 from overseas. As the symposium chair, I would like to express my sincere thanks to all participants for their contributions, and to The Physical Society of Japan, the Particle Accelerator Society of Japan, and the Japanese Society for Synchrotron Radiation for their support in organizing this event.

# Plan of the Building



# Location

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