Appendices

Organization

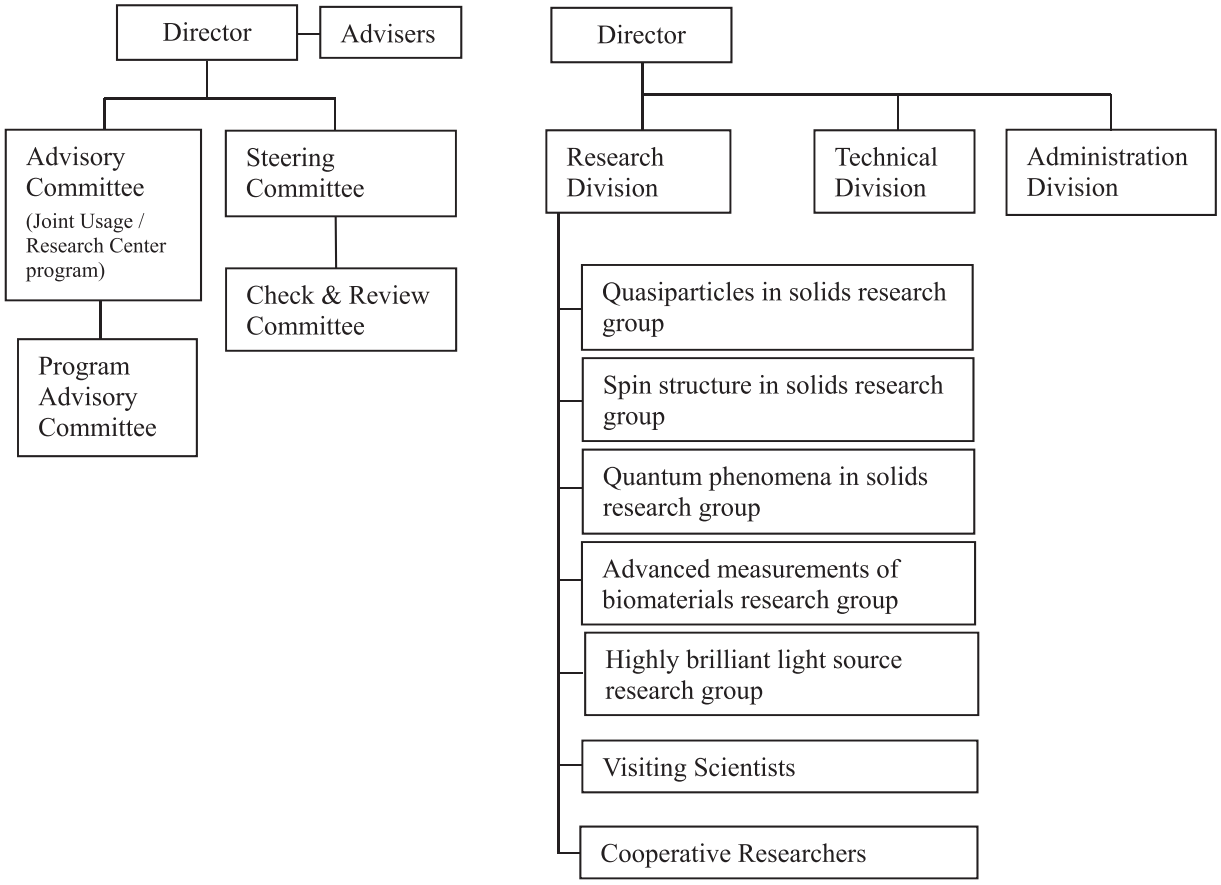

Fig. 1: Organization chart of HiSOR

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
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)
MIYAUCHI, Hiroshi	Associate Professor (Special Appointment)
Shiv Kumar	Assistant Professor
Mohamed Ibrahim	Assistant Professor
INO, Akihiro	Visiting Professor
Zhang Ke	Researcher
GOTO, Kiminori	Engineer
ARITA, Masashi	Engineer
ARAMOTO, Katsuhiko	Supervisor, Academic Support Group
SHINNO, Naoko	Secretary
SHIMOKUBO, Harumi	Secretary
MATSUYAMA, Saori	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
UENO, Satoshi	Graduate School of Integrated Sciences for Life
HAYAKAWA, Shinjiro	Graduate School of Advanced Science and Engineering
MORIYOSHI, Chikako	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
HASEGAWA, Tsukasa	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
HAYAKAWA, Shinjiro	Graduate School of Advanced Science and Engineering
SAITOH, Tomohiko	Tokyo University of Science
AMEMIYA, Kenta	High Energy Accelerator Research Organization
SAKAMOTO, Kazuyuki	Osaka University
YAGI, Shinya	Nagoya University
FUJIMORI, Shin-Ichi	Japan Atomic Energy Agency
MIZOKAWA, Takashi	Waseda University
MAKI, Yasuyuki	Kyusyu University

**Chair Person*

Visiting Scientists

AIURA, Yoshihiro	National Institute of Advanced Industrial Science and Technology
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)

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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
HAYAKAWA, Shinjiro	Graduate School of Advanced Science and Engineering

Cooperative Researchers (Visiting Researchers)

MIMURA, Kojiro	Osaka Prefecture University
YOKOYA, Takayoshi	Okayama University
MURAOKA, Yuji	Okayama University
WAKITA, Takanori	Okayama University
YAGI, Shinya	Nagoya University
SENBA, Shinya	Ube National College of Technology
TANIDA, Hajime	Japan Atomic Energy Agency
YAMAGUCHI, Katsuhiko	Fukushima University
WAKIDA, Takanori	Hiroshima Prefectural Board of Education
ISHIHARA, Yuichiro	Higashihiroshima City

List of publications

1. Z. Wang, Z. Hao, Y. Yu, Y. Wang, S. Kumar, X. Xie, M. Tong, Ke Deng, Y.-J. Hao, X.-M. Ma, Ke Zhang, C. Liu, M. Ma, J. Mei, G. Wang, E. F. Schwier, K. Shimada, F. Xu, C. Liu, W. Huang, J. Wang, T. Jiang, C. Chen, "Fermi velocity reduction of Dirac fermions around the Brillouin zone center in In_2Se_3–bilayer graphene heterostructures", *Adv. Mater*. **33**, 2007503/8p (2021).
2. M. Singh, S. Kumar, M. Alam, V. K. Gangwar, L. Ghosh, D. Pal, R. Singh, P. Shahi, P. Chaudhary, K. Shimada, S. Chatterjee, "Evidence of surface and bulk magnetic ordering in Fe and Mn doped $Bi_2(SeS)_3$ topological insulator", *Appl. Phys. Lett.* **118**, 132409 (2021).
3. K. Ali, H. S. Zen, H. Ohgaki, T. Kii, T. Hayakawa, T. Shizuma, H. Toyokawa, M. Fujimoto, Y. Taira, M. Katoh, "Three-dimensional nondestructive isotope-selective tomographic imaging of Pb-208 distribution via nuclear resonance fluorescence", *Appl. Sciences-Basel* **11**, 3415 (2021).
4. Q. Wang, F. Huang, Y. Cui, H. Yoshida, L. Wen, Y. Jin, "Influences of formation potential on oxide film of TC4 in 0.5 M sulfuric acid", *Appl. Surf. Sci.* **544**, 148888 (2021).
5. T. Yilmaz, X. Tong, Z. Dai, J. T. Sadowski, E. F. Schwier, K. Shimada, S. Hwang, K. Kisslinger, K. Kaznatcheev, E. Vescovo, B. Sinkovic, "Emergent flat band electronic structure in a VSe2/Bi2Se3 heterostructure", *Commun. Mater*. **2**, 11/8p (2021).
6. S. Cho, W. Jung, J. Hong, B. Kim, G. Han, M. Leandersson, T. Balasubramanian, M. Arita, K. Shimada, J. H. Shim, C. Kim, S. R. Park, "Observation of Dresselhaus type spin splitting of zinc blende structure semiconductors by circular dichroic photoemission study", *Current Appl. Phys.* **30**, Oct-96 (2021).
7. A. Kumar, M. Kumar, P. C. Sati, M. K. Srivastava, S. Ghosh, S. Kumar, "Structural, magnetic and optical properties of diluted magnetic semiconductor (DMS) phase of Ni modified CuO nanoparticles", *Current Appl. Phys*. **32**, 24-35 (2021).
8. T. Matsuo, K. Nakatani, T. Setoguchi, K. Matsuo, T. Tamada, Y. Suenaga, "Secondary structure of human de novo evolved gene product NCYM analyzed by vacuum-ultraviolet circular dichroism", *Front. Oncol.* **11**, 688852 (2021).
9. M. Ye, K. Kuroda, M. M. Otrokov, A. G. Ryabishchenkova, Q. Jiang, A. Ernst, E. V. Chulkov, M. Nakatake, M. Arita, T. Okuda, T. Matsushita, L. Tóth, H. Daimon, K. Shimada, Y. Ueda, A. Kimura, "Persistence of the topological surface states in Bi_2Se_3 against Ag intercalation at room temperature", *J. Phys. Chem. C* **125**, 1784−1792 (2021).

10. K. Anand, A. Pal, M. Alam, S. Dan, S. Kumar, S. Ghosh, S. Kumari,A. Das, M. Sawada, A. Mohan, S. Chatterjee, “Emergence of metamagnetic transition, re-entrant cluster glass and spin phonon coupling in Tb_2CoMnO_6”, *J. Phys.: Condens. Matter*, **33**, 275802 (2021).
11. P. J. Grenz, D. Thonig, M. Holtmann, K. Miyamoto, S. Kumar, E. F. Schwier, T. Okuda, J. Henk, M. Donath, “Adlayer influence on Dirac-type surface state at W(110)”, *J. Phys.: Condens. Matter*, 33, 285504 (2021).
12. V. K Gangwar, S. Kumar, M. Singh, P. Singh, L. Ghosh, D. Pal, P. Shahi, Y. Uwatoko, E. F. Schwier, K. Shimada, D. K. Sharma, S. Kumar, S. Chatterjee, “Observation of antiferromagnetic ordering from muon spin resonance study and the Kondo effect in a Dy-doped Bi_2Se_3 topological insulator”, *J. Phys. D: Appl. Phys.* **64**, 455302/10p (2021).
13. S. Michimura, M. Kosaka, A. Machida, R. Numakura, R. Iizuka, S. Katano, Y. Imai, N. Shirakawa, Y. Yamasaki, H. Nakao, H. Sato, S. Ueda, K. Mimura, “Charge-ordered state and low-dimensional magnetic fluctuations in Yb_5Ge_4 single crystal”, *J. Phys. Soc. Jpn*. **90**, 044703/12p (2021).
14. Y. Matsuzawa, T. Morita, M. Arita, A. Giampietri, V. Kandyba, A. Barinov, A. Takahashi, Y. Nagakubo, T. Adachi, Y. Koike, A. Fujimori, N. L. Saini, T. Mizokawa, “Fermi surface geometry and inhomogeneous electronic states in $Pr_{1.3-x}La_{0.7}Ce_xCuO_4$ (x=0.05) with small superconducting volume fraction”, *J. Phys. Soc. Jpn*. **90**, 54704 (2021).
15. D. Ootsuki, H. Okamura, S. Mitsumoto, Y. Ikemoto, T. Moriwaki, M. Arita, T. Yoshida, K. Kudo, H. Ishii, M. Nohara, T. Mizokawa, “Pressure induced spectral redistribution due to Te-2 dimer breaking in $AuTe_2$”, *J. Phys. Soc. Jpn*. **90**, 114705/5p (2021).
16. A. Dhingra, T. Komesu, S. Kumar, K. Shimada, L. Zhang, X. Hong, P. A. Dowben, “Electronic band structure of iridates”, *Mater. Horizons* **8**, 2151-2168 (2021).
17. T. Umezawa, N. Mizutani, K. Matsuo, Y. Tokunaga, F. Matsuda, T. Nehira, “Assignment of absolute configuration of bromoallenes by vacuum-ultraviolet circular dichroism (VUVCD)”, *Molecules* **26**, 1296 (2021).
18. B. V. Senkovskiy, A. V. Nenashev, S. K. Alavi, Y. Falke, M.n Hell, P. Bampoulis, D. V. Rybkovskiy, D. Yu. Usachov, A. V. Fedorov, A. I. Chernov, F. Gebhard, K. Meerholz, D. Hertel, M. Arita, T. Okuda, K. Miyamoto, K. Shimada, F. R. Fischer, T. Michely, S. D. Baranovskii, K. Lindfors, T. Szkopek, A. Grüneis, “Tunneling current modulation in atomically precise graphene nanoribbon heterojunctions”, *Nature Commun.* **12**, 2542/11p (2021).

19. Y. Hikosaka, T. Kaneyasu, M. Fujimoto, H. Iwayama, M. Katoh, “Reply to 'Comment on "Coherent control in the extreme ultraviolet and attosecond regime by synchrotron radiation”, *Nature Commun*. **12**, 3782 (2021).
20. Y. Wang, Y. Jin, L. Wang, Z. Hao, C. Liu, Y.-J. Hao, X.-M. Ma, S. Kumar, E. F. Schwier, K. Shimada, C. Liu, J. Mei, H. Xu, C. Chen, “Evidence of Weyl fermions in a-$RuCl_3$”, *Phys. Rev. B* **103**, 035150/9p (2021).
21. T. Morita, Y. Matsuzawa, S. Kumar, E. F. Schwier, K. Shimada, R. Higashinaka, T. D. Matsuda, Y. Aoki, N. L. Saini, T. Mizokawa, “Evolution of the Fermi surface in superconductor $PrO_{1-x}F_xBiS_2$ (x=0.0, 0.3, and 0.5) revealed by angle-resolved photoemission spectroscopy”, *Phys. Rev. B* **103**, 094510/6p (2021).
22. S. Xiao, Y. Li, Y. Li, X. Yang, S. Zhang, W. Liu, X. Wu, B. Li, M. Arita, K. Shimada, Y. Shi, S. He, “Direct evidence of electron-hole compensation for extreme magnetoresistance in topologically trivial YBi”, *Phys. Rev. B* **103**, 115119/9p (2021).
23. X.-M. Ma, Y. Zhao, Ke Zhang, S. Kumar, R. Lu, J. Li, Q. Yao, J. Shao, F. Hou, X. Wu, M. Zeng, Y.-J. Hao, Z. Hao, Y. Wang, X.-R. Liu, H. Shen, H. Sun, J. Mei, K. Miyamoto, T. Okuda, M. Arita, E. F. Schwier, K. Shimada, Ke Deng, C. Liu, J. Lin, Y. Zhao, C. Chen, Q. Liu, C. Liu, “Realization of a tunable surface Dirac gap in Sb-doped $MnBi_2Te_4$”, *Phys. Rev. B* **103**, L121112/8p (2021).
24. Y. Wang, Y. Qian, M. Yang, H. Chen, C. Li, Z. Tan, Y. Cai, W. Zhao, S. Gao, Ya Feng, S. Kumar, E. F. Schwier, L. Zhao, H. Weng, Y. Shi, G. Wang, Y. Song, Y. Huang, K. Shimada, Z. Xu, X. J. Zhou, G. Liu, “Spectroscopic evidence for the realization of a genuine topological nodal-line semimetal in LaSbTe”, *Phys. Rev. B* **103**, 125131/10p (2021).
25. R. Ono, A. Marmodoro, J. Schusser, Y. Nakata, E. F. Schwier, J. Braun, H. Ebert, J. Minár, K. Sakamoto, P. Krüger, “Surface band characters of the Weyl semimetal candidate material $MoTe_2$ revealed by one-step angle-resolved photoemission theory”, *Phys. Rev. B* **103**, 125139/8p (2021).
26. H. Bentmann, H. Maaß, J. Braun, C. Seibel, K. A. Kokh, O. E. Tereshchenko, S. Schreyeck, K. Brunner, L. W. Molenkamp, K. Miyamoto, M. Arita, K. Shimada, T. Okuda, J. Kirschner, C. Tusche, H. Ebert, J. Minár, F. Reinert, “Profiling spin and orbital texture of a topological insulator in full momentum space”, *Phys. Rev. B* **103**, L161107/6p (2021).
27. O. Kubo, S. Kinoshita, H. Sato, K. Miyamoto, R. Sugahara, S. Endo, H. Tabata, T. Okuda, M. Katayama, “Kagome-like structure of germanene on Al(111)”, *Phys. Rev. B* **104**, 85404/6p (2021).
28. A. M. Shikin, D. A. Estyunin, N. L. Zaitsev, D. Glazkova, I. I. Klimovskikh, S. O.

Filnov, A. G. Rybkin, E. F. Schwier, S. Kumar, A. Kimura, N. Mamedov, Z. Aliev, M. B. Babanly, K. Kokh, O. E. Tereshchenko, M. M. Otrokov, E. V. Chulkov, K. A. Zvezdin, A. K. Zvezdin, "Sample-dependent Dirac-point gap in $MnBi_2Te_4$ and its response to applied surface charge: A combined photoemission and ab initio study", *Phys. Rev. B* **104**, 115168/11p (2021).

29. K. T. Ritter, K. Miyamoto, T. Okuda, M. Donath, "Rashba-type splitting of the Au(110) surface state: a combined inverse and direct photoemission study", *Phys. Rev. B* **104**, L161101/6p (2021).
30. X. Wang, D. Geng, D. Yan, W. Hu, H. Zhang, S. Yue, Z. Sun, S. Kumar, E. F. Schwier, K. Shimada, P. Cheng, L. Chen, S. Nie, Z. Wang, Y. Shi, Y.-Q. Zhang, K. Wu, B. Feng, "Observation of topological edge states in the quantum spin Hall insulator $Ta_2Pd_3Te_5$", *Phys. Rev. B* **104**, L241408/5p (2021).
31. R. Lu, H. Sun, S. Kumar, Y. Wang, M. Gu, M. Zeng, Y.-J. Hao, J. Li, J. Shao, X.-M. Ma, Z. Hao, Ke Zhang, W. Mansuer, J. Mei, Y. Zhao, C. Liu, Ke Deng, W. Huang, B. Shen, K. Shimada, E. F. Schwier, C. Liu, Q. Liu, C. Chen, "Half-magnetic topological insulator with magnetization-induced Dirac gap at a selected surface", *Phys. Rev. X* **11**, 011039/9p (2021).
32. T. Kaneyasu, Y. Hikosaka, M. Fujimoto, H. Iwayama, M. Katoh, "Electron wave packet interference in atomic inner-shell excitation", *Phys. Rev. Lett*. **126**, 113202/6p (2021).
33. R. C. Vidal, H. Bentmann, J. I. Facio, T. Heider, P. Kagerer, C. I. Fornari, T. R. F. Peixoto, T. Figgemeier, S. Jung, C. Cacho, B. Büchner, J. van den Brink, C. M. Schneider, L. Plucinski, E. F. Schwier, K. Shimada, M. Richter, A. Isaeva, F. Reinert, "Orbital complexity in intrinsic magnetic topological insulators $MnBi_4Te_7$ and $MnBi_6Te_{10}$", *Phys. Rev. Lett*. **126**, 176403/7p (2021).
34. J. Dai, E. Frantzeskakis, N. Aryal, K. W. Chen, F. Fortuna, J. E. Rault, P. Le Fevre, L. Balicas, K. Miyamoto, T. Okuda, E. Manousakis, R. E. Baumbach, A. F. Santander-Syro, "Experimental observation and spin texture of Dirac node arcs in tetradymite topological metals", *Phys. Rev. Lett*. **126**, 196407/6p (2021).
35. K. Zhang, S. Zhao, Z. Hao, S. Kumar, E. F. Schwier, Y. Zhang, H. Sun, Y. Wang, Y. Hao, X. Ma, C. Liu, L. Wang, X. Wang, K. Miyamoto, T. Okuda, C. Liu, J. Mei, K. Shimada, C. Chen, Q. Liu, "Observation of spin-momentum-layer locking in a centrosymmetric crystal", *Phys. Rev. Lett.* **127**, 126402/7p (2021).
36. S. Ideta, S. Johnston, T. Yoshida, K. Tanaka, M. Mori, H. Anzai, A. Ino, M. Arita, H. Namatame, M. Taniguchi, S. Ishida, K. Takashima, K. M. Kojima, T. P. Devereaux, S. Uchida, A. Fujimori, "Hybridization of bogoliubov quasiparticles between

adjacent CuO_2 Layers in the triple-layer cuprate $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$ studied by angle-resolved photoemission spectroscopy", *Phys. Rev. Lett*. **127**, 217004/6p (2021).

37. V. K. Gangwar, S. Kumar, M. Singh, L. Ghosh, Y. Zhang, P. Shahi, M. Muntwiler, S. Patil, K. Shimada, Y. Uwatoko, J. Sau, M. Kumar, S. Chatterjee, "Pressure induced superconducting state in ideal topological insulator $BiSbTe_3$", *Phys. Scr*. **96**, 055802/8p (2021).
38. M. Kumashiro, Y. Izumi, K. Matsuo, "Conformation of myelin basic protein bound to phosphatidylinositol membrane characterized by vacuum-ultraviolet circular-dichroism spectroscopy and molecular-dynamics simulations", *Proteins* **89**, 1251-1261 (2021).
39. D. Pal, S. Kumar, P. Shahi, S. Dan, A. Verma, V. K. Gangwar, M. Singh, S. Chakravarty, Y. Uwatoko, S. Saha, S. Patil, S. Chatterjee, "Defect induced ferromagnetic ordering and room temperature negative magnetoresistance in MoTeP", *Sci. Rep*. **11**, 9104 (2021).
40. T. Miyashita, H. Iwasawa, T. Yoshikawa, S. Ozawa, H. Oda, T. Muro, H. Ogura, T. Sakami, F. Nakamura, A. Ino, "Emergence of low-energy electronic states in oxygen-controlled Mott insulator Ca_2RuO_{4+d}", *Solid State Commun*. **326**, 114180 (2021).

List of Accepted Research Proposals

21AG001 Toshirou Hata (Hiroshima University)
Evaluation of the bio-mediated calcium carbonate into the soil pore with XAFS analysis

21AG002 Yuji Muraoka (Okayama University)
Verification of room temperature ferromagnetic property in Q-carbon by using X-ray MCD method

21AG003 Hitoshi Yamaoka (RIKEN SPring-8 Center)
Angle-resolved photoelectron spectroscopy study on (Ce, La)Ru_2Al_{10} systems

21AG004 Baojie Feng (Institute of Physics, Chinese Academy of Sciences)
Topological band structure of a breathing Kagome lattice

21AG005 Satoshi Asaoka (Hiroshima University)
Adsorption mechanisms of phosphate onto coal fly ash-blast furnace cement composite for septic tanks

21AG006 Takashi Komesu (University of Nebraska-Lincoln)
The electronic structure investigation of Pd overlayers on Cr_2O_3 single crystals

21AG007 Yasumasa Hikosaka (University of Toyama)
Ion time-of-flight mass spectrometry for ion desorption after molecular inner-shell excitation

21AG008 Hiroaki Anzai (Osaka Prefecture University)
Material dependence of the Kondo resonance peak in photoemission spectra of Yb_XCu_4 (X=Ag, Cd, In, and Sn)

21AG009 Hiroaki Anzai (Osaka Prefecture University)
Observation of the heavy-fermion behavior in quadruple perovskite oxides

21AG011 Hitoshi Sato (Hiroshima University)
Angle resolved photoemission spectroscopy of chiral magnet $YbNi_3Al_9$

21AG012 Hitoshi Sato (Hiroshima University)
Angle resolved photoemission spectroscopy of valence transition compounds $YbInCu_4$

21AG013 Yudai Izumi (Hiroshima University)
Secondary structure analysis of chromatin using VUV-CD spectroscopy

21AG014 Alexander Shikin (Saint Petersburg State University)
Modulation of Dirac gap in $MnBi_2Te_4$ and $MnBi_4Te_7$ as competition between the contributions of magnetic exchange interaction and magnetoelectric response

21AG015 Masahiro Sawada (Hiroshima University)
Magnetic properties at an interface between magnetic monatomic layers and hexagonal boron nitride

21AG016 Masahiro Sawada (Hiroshima University)
Magnetic coupling between transition metal layers through monolayer hexagonal boron nitride

21AG017 Masahiro Sawada (Hiroshima University)
Magnetic properties and structures of magnetic surface clusters

21AG018 Masahiro Sawada (Hiroshima University)
XMCD studies for interfaces between magnetic layers and transition metal oxides grown

on graphene/h-BN

21AG019 Koichi Matsuo (Hiroshima University)
Structural stability of proteins induced by disaccharides

21AG020 Koichi Matsuo (Hiroshima University)
VUVCD measurements of monosaccharides

21AG021 Koichi Matsuo (Hiroshima University)
Interaction study of MBP and liposome membrane

21AG022 C. S. Yadav (Indian Institute of Technology Mandi)
Comparative ARPES study of transition metal doped topological compounds $M_{0.05}Bi_{1.95}Se_3$ (M = Au, Pt, and Pd)

21AG023 Jayita Nayak (Indian Institute of Technology Kanpur)
Investigation of electronic structure of topological semimetal $SrAl_2Si_2$ and $EuAl_2Si_2$.

21AG025 Munisa Nurmamat (Hiroshima University)
High-resolution ARPES studies of quasi-one-dimensional transition metal chalcogenides

21AG026 Yoshihisa Matsumoto (Tokyo Institute of Technology)
Analysis of the combined effects of heat and variant on the secondary structure of DNA repair proteins

21AG027 Yasuyuki Maki (Kyushu University)
Effect of sucralose on the stability of protein structure

21AG028 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

21AG029 Hiroyuki Ikemoto (University of Toyama)
Electronic state of the chalcogen chains encapsuled in carbon nanotubes

21AG030 Daiki Ootsuki (Kyoto University)
Systematic investigations of many-body interaction between localized and itinerant electrons in cerium monopnictides with unusual magnetic properties

21AG031 Kenta Kuroda (University of Tokyo)
Systematic investigations of many-body interaction between localized and itinerant electrons in cerium monopnictides with unusual magnetic properties

21AG032 Munisa Nurmamat (Hiroshima University)
Spin-resolved ARPES studies of quasi-one-dimensional topological surface states of layered tellurides

21AG033 Shin-ichi Wada (Hiroshima University)
Evaluation of molecular conductivity probed by electron spectroscopy

21AG034 Shin-ichi Wada (Hiroshima University)
Conductivity evaluation of aromatic molecules probed by soft X-ray absorption spectroscopy

21AG035 Shin-ichi Wada (Hiroshima University)
Soft X-ray spectroscopy of substrate supported lipid membranes

21AG036 Hiroaki Yoshida (Hiroshima University)

Soft x-ray photoelectron spectroscopy of vitamins molecules included in cyclodextrins

21AG037 Hiroaki Yoshida (Hiroshima University)

Soft x-ray absorption spectroscopy of vitamins molecules included in cyclodextrins

21AG038 Akio Kimura (Hiroshima University)

Exploration of spin-polarized topological nodal lines in Fe based ferromagnetic alloys

21AG039 Akio Kimura (Hiroshima University)

Low energy ARPES of antiferromagnetic Weyl semimetals

21AG040 Akio Kimura (Hiroshima University)

Synchrotron radiation ARPES study of Dirac nodal line superconductor candidate $ZrP_{2-x}Se_x$

21AG041 Akio Kimura (Hiroshima University)

Identification of orbital symmetries in band structures of rare earth compounds with odd parity order

21AG042 Masahiro Sawada (Hiroshima University)

ARPES measurements of Ti_2O_3 films whose lattice strain controlled by the film thickness

21AG043 Koji Miyamoto (Hiroshima University)

Electronic structure of Bi/Ni on MgO(001)

21AG044 Shinjiro Hayakawa (Hiroshima University)

Development of a rod shaped device for conversion electron yield measurements and its application for polarization dependent XAFS measurements

21AG045 Jens Ruediger Stellhorn (Hiroshima University)

Structure of a novel amorphous organic inorganic hybrid tin cluster ex hibiting nonlinear optical effects by low energy XAFS measurements

21AU001 Shinya Hosokawa (Kumamoto University)

Valence-band electronic states of Gd-TM metallic glass alloys having thermal rejuvenation effect II

21AU002 Baojie Feng (Institute of Physics, Chinese Academy of Sciences)

ARPES study of topological electronic structures in niobium tellurium chloride

21AU003 Jens Ruediger Stellhorn (Hiroshima University)

The local environment of S in chalcogenide-based solid state electrolytes by low-energy XAFS measurements

21AU004 Hideaki Iwasawa (National Institutes for Quantum and Radiological Science and Technology)

Uncovering oxygen isotope effects on multiple kinks in optimally-doped Bi2212

21AU005 Kazuyuki Sakamoto (Osaka University)

Investigation of the origin of photo-induced doping on $TlBiSe_2$

21AU006 Sutiman Bambang Sumitro (Brawijaya University)

CD spectroscopy-based of astaxanthin-metal ions complexes as efforts to improve the rheology of glycated albumin

21AU007 Shinya Hosokawa (Kumamoto University)

Conduction-band electronic states of Gd-TM metallic glass alloys having thermal rejuvenation effect II

21AU008 Sakura Takeda (Nara Institute of Science and Technology)
Spin polarization of valence electrons beneath Si(001) surface

21AU009 Koichi Matsuo (Hiroshima University)
Time-resolved measurements of membrane-induced structural change of protein

21AU010 Masaaki Sugiyama (Kyoto University)
Structural analysis of ER protein foldase by vacuum ultraviolet circular dichroism spectroscopy

21AU011 Koichi Matsuo (Hiroshima University)
Conformation change of Magainin2 depending on the characteristics of membrane

21AU012 Mohamed Ibrahim (Hiroshima University)
Synchrotron radiation circular dichroism study of exopolysaccharides from marine microbes

21AU013 Taichi Okuda (Hiroshima University)
Study of the electronic structure of the chiral crystal $NbSi_2$

21AU014 Akio Kimura (Hiroshima University)
High-resolution ARPES of rare earth compounds with odd parity order

Symposium

The 26th Hiroshima International Symposium on Synchrotron Radiation
March 10–11, 2022, Faculty Club, Hiroshima University

Workshop

第26回HiSOR研究会「生体分子の構造機能研究におけるキラル分光の新しい可能性」
2022年3月8日　広島大学学士会館＋ZOOM

HiSOR Seminar

- Mohamed Ibrahim (HiSOR)Nov. 9. 2021
  Overview of Past & Current Scientific Researches for Prominent Future Studies at HiSOR
  Nov. 9. 2021
- Takahiro Shimojima (RIKEN CEMS)
  Visualizing the ultrafast phenomena by pump-probe transmission electron microscopy
  Oct. 26. 2021
- Kenta Kuroda (The Institute for Solid State Physics, The University of Tokyo)
  Putting more information on spin-ARPES: from meV energy-resolution to fs time-resolution
  July 26. 2021
- Fumihiko Matsui (UVSOR Synchrotron Facility, Institute for Molecular Science)
  Introduction to the contrarian usage of two-dimensional photoelectron spectroscopy
  June 28. 2021

The 26th Hiroshima International Symposium on Synchrotron Radiation

Taichi Okuda

Hiroshima Synchrotron Radiation Center, Hiroshima University

We have held the 26th Hiroshima International Symposium on Synchrotron Radiation entitled “Materials Science using VUV-SX Synchrotron Radiation ---towards the HiSOR II project”, aiming to promote the international and interdisciplinary exchange of information about materials science utilizing synchrotron radiation and to consider the direction of future researches using VUV-SX light and appropriate light sources for that.
Although the 25th symposium was held completely online because of the COVID-19 pandemic, the 26th symposium was held in a hybrid format of both online and face-to-face meetings. The two days program was started with a greeting from Prof. M. Abe, vice president of Hiroshima University followed by an overview of HiSOR activity by Prof. K. Shimada, the director of HiSOR. After the opening session, the recent scientific results on the following topics were presented by invited speakers (see the list of invited speakers).

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

The list of invited speakers

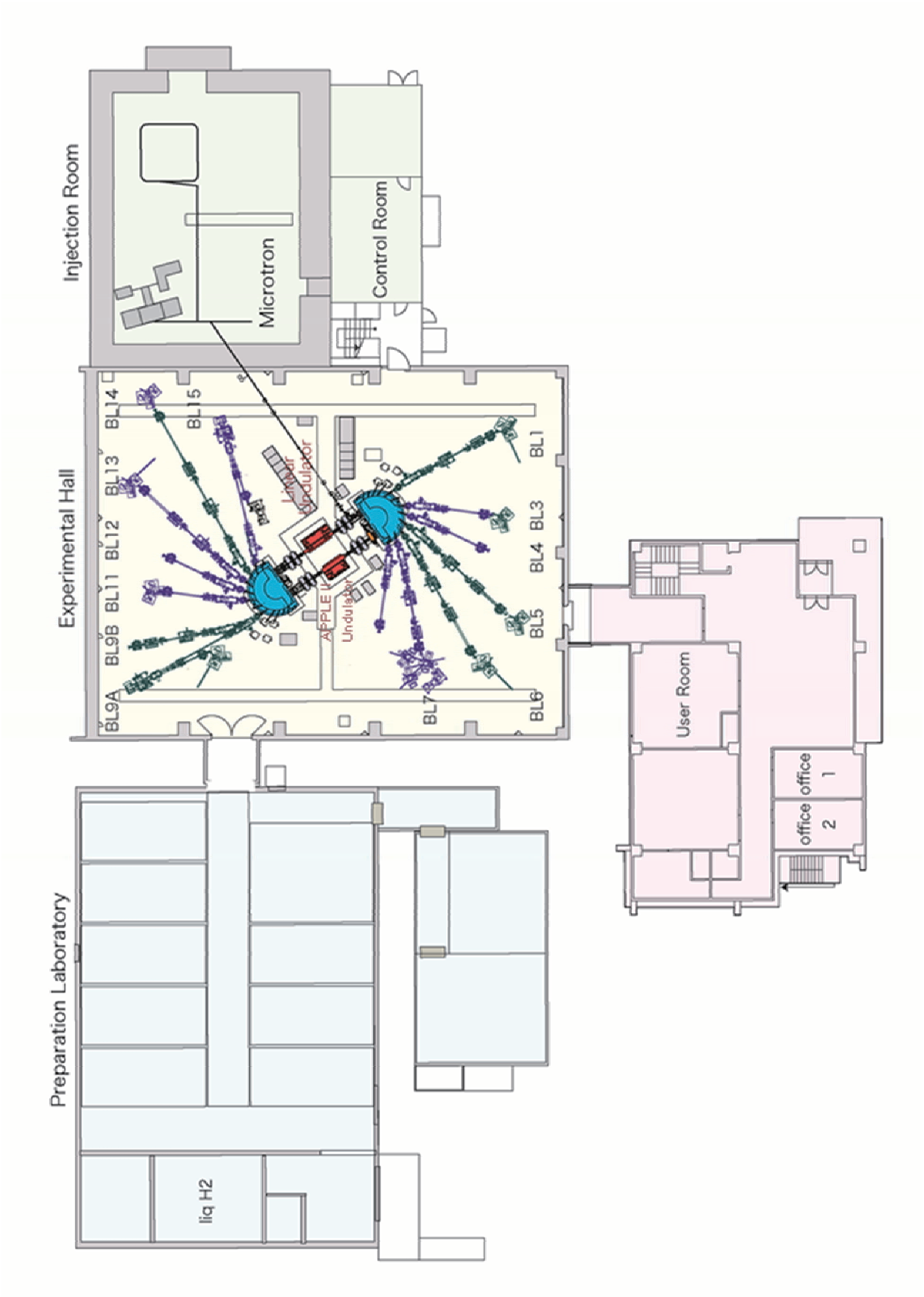
- Toru ASAHI (Waseda University, Japan)
- Ilya BELOPOLSKI (RIKEN, Japan)
- Chaoyu CHEN (Southern University of Science and Technology, China)
- Masahiro KATOH (Hiroshima University, Japan)
- Jayita NAYAK (Indian Institute of Technology Kanpur, India)
- Goro SHIBATA (Tokyo University of Science, Japan)
- Kazuki SUMIDA (Japan Atomic Energy Agency, Japan)
- Yoshifumi TAKASHIMA (Nagoya University, Japan)
- Yoshihiko TOGAWA (Osaka Prefecture University, Japan)
- Yuichi YAMASAKI (National Institute for Materials Science, Japan)
- Akinari YOKOYA (National Institutes for Quantum Science and Technology, Japan)

In addition to these oral presentations, the poster session was also held online, in which 32 presenters including 20 students presented their results which are mainly obtained in the joint usage and research in the fiscal year 2021.

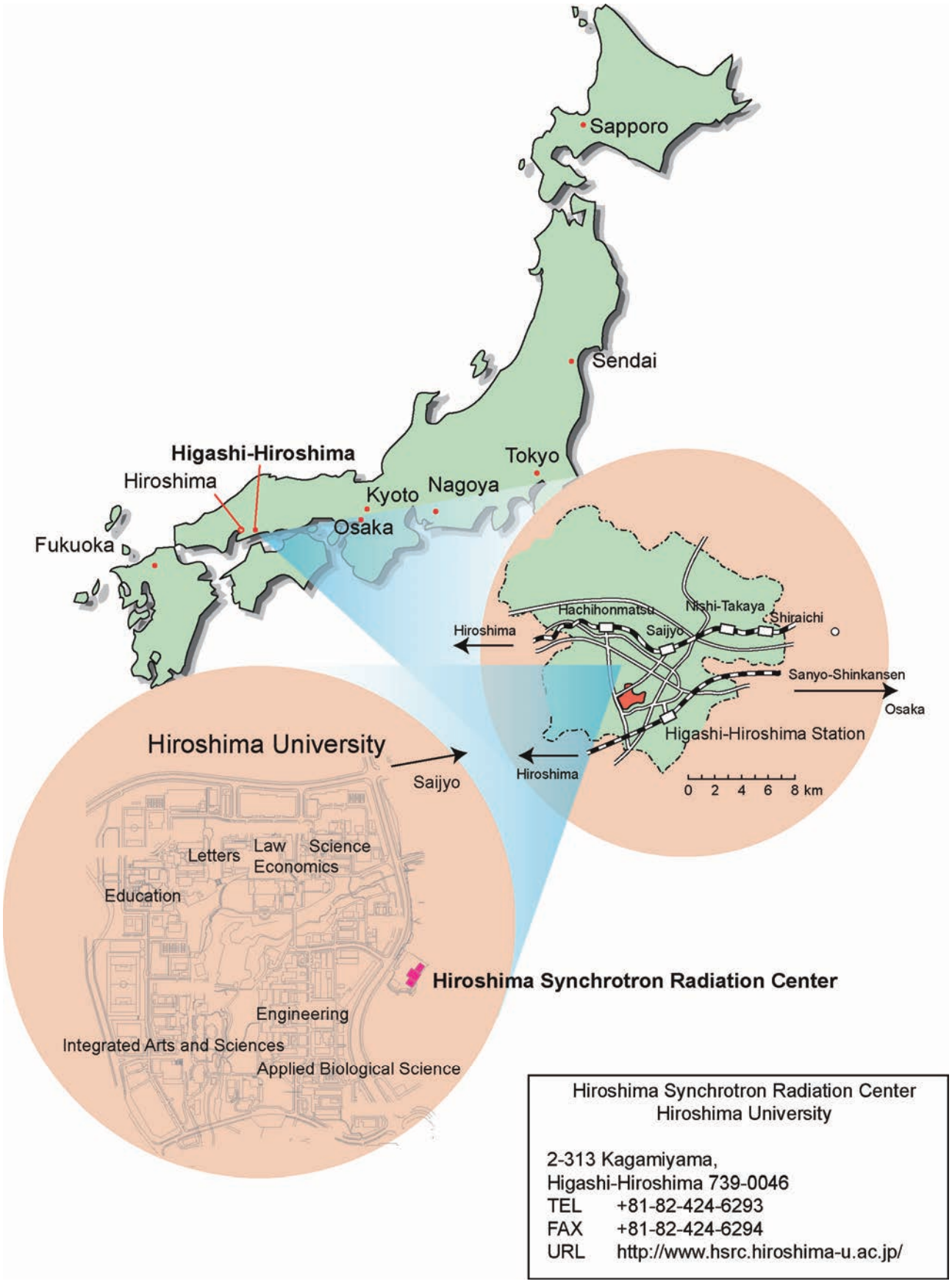
Among them, the best student poster awards were selected by evaluation by all the participants except for students. And four students were awarded (Hiroshima University 3 and Osaka University 1) in the closing session.

The symposium ended successfully and the total participants were 74 (53 on-campus, 21 off-campus, and 10 from abroad). Finally, I, the chair of the symposium, would like to thank all the participants for their contributions as well as Higashi-Hiroshima city and the Japanese Society for Synchrotron Radiation for their support of this symposium.

Plan of the Building



Location



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