

Publications

<Paper>

1. "Cr- and Mo-Doping Effects on Structural and Orbital Order Phase Transition in Spinel-Type MnV_2O_4 ", Kazuhiro Hemmi, Ryuichiro Fukuta, Ece Uykur, Shigeki Miyasaka, Setsuko Tajima, Akiko Nakao, Hironori Nakao, Reiji Kumai, and Youichi Murakami, *J. Phys. Soc. Jpn. Suppl. B* **81**, SB030:1-4 (2012).
2. "Correlation between Tc and Transport Properties in $PrFeP_{1-x}As_xO_{0.9}F_{0.1}$ ", Akira Takemori, Satoshi Saijo, Shinnosuke Suzuki, Shigeki Miyasaka, Setsuko Tajima, Akiko Nakao, Hironori Nakao, Reiji Kumai, and Youichi Murakami, *J. Phys. Soc. Jpn. Suppl. B* **81**, SB043:1-4 (2012).
3. "Investigation of electronic states of infinite-layer $SrFeO_2$ epitaxial thin films by x-ray photoemission and absorption spectroscopies", A. Chikamatsu, T. Matsuyama, Y. Hirose, H. Kumigashira, M. Oshima, and T. Hasegawa, *J. Electron Spectr. Rel. Phenom.* **184**, 547-550 (2012).
4. "Depth profiling the potential in perovskite oxide heterojunctions using photoemission spectroscopy", M. Minohara, K. Horiba, H. Kumigashira, E. Ikenaga, and M. Oshima, *Phys. Rev. B* **85**, 165108:1-6 (2012).
5. "In-situ observation of magnetic anisotropy energy of alternately layered FeNi thin films", M.Sakamaki and K.Amemiya, *e-journal of Surface Science and Nanotechnology* **10**, 97-99 (2012).
6. "Observation of Structural Change in the Novel Ferromagnetic Metal–Insulator Transition of $K_2Cr_8O_{16}$ ", Akiko NAKAO, Yuki YAMAKI, Hironori NAKAO, Youichi MURAKAMI, Kunihiro HASEGAWA, Masahiko ISOBE, and Yutaka UEDA, *J. Phys. Soc. Jpn.* **81**, 054710:1-6 (2012).
7. "Observation of magnetic moments at the interface region in magnetic tunnel junctions using depth-resolved x-ray magnetic circular dichroism", S.Tsunegi, Y.Sakuraba, K.Amemiya, M.Sakamaki, E.Ozawa, A.Sakuma, K.Takanashi, and Y.Ando, *Phys. Rev. B* **85**, 180408:1-4 (2012).
8. "Utility of the inverse partial fluorescence for electronic structure studies of battery materials ", H. Wadati, A. J. Achkar, D. G. Hawthorn, T. Z. Regier, M. P. Singh, K. D. Truong, P. Fournier, G. Chen, T. Mizokawa, and G. A. Sawatzky, *Appl. Phys. Lett.* **100**, 193906:1-3 (2012).
9. "First-principles calculations of spontaneous polarization for TTF-QBrCl₃", S. Ishibashi, S. Horiuchi, R. Kumai, and K. Terakura, *Phys. Status Solidi B*, **249**, 1008–1011 (2012).
10. "Electronic Ferroelectricity in a Molecular Crystal with Large Polarization Directing Antiparallel to Ionic Displacement", Kensuke Kobayashi, Sachio Horiuchi, Reiji Kumai, Fumitaka Kagawa, Youichi Murakami, and Yoshinori Tokura, *Phys. Rev. Lett.* **108**, 237601:1-5 (2012). Highlighted Articles Viewpoint, *Physics* **5**, 63 (2012).
11. "Sub-nm Resolution Depth Profiling of the Chemical state and Magnetic Structure of Thin Films by the Depth-Resolved X-ray Absorption Spectroscopy Technique", K.Amemiya, *Phys. Chem. Chem. Phys.* **14**, 10477-10484 (2012).
12. "REXS contribution to electronic ordering investigation in solids", T.A.W. Beale, G. Beutier, S.R. Bland, A. Bombardi, L. Bouchenoire, O. Bunău, S. Di Matteo, J. Fernandez-Rodriguez, J.E. Hamann-Borrero, J. Herrero-Martin, V.L.R. Jacques, R.D. Johnson, A. Juhin, T. Matsumura, C. Mazzoli, A.M. Mulders, H. Nakao, J. Okamoto, S. Partzsch, A.J. Princep, V. Scagnoli, J. Stremper, C. Vecchini, Y. Wakabayashi, H.C. Walker, D. Wermeille and Y. Yamasaki, *Eur. Phys. J. Special Topics* **208**, 89-98 (2012).
13. "Resonant soft X-ray scattering studies of multiferroic YMn_2O_5 ", S. Partzsch, S.B. Wilkins, E. Schierle, J.E. Hamann-Borrero, H. Wadati, V. Soltwisch, J.P. Hill, E. Weschke, D. Souptel, B. Buchner and J. Geck, *Eur. Phys. J. Special Topics* **208**, 133-139 (2012).
14. "Charge-order driven proton arrangement in a hydrogen-bonded charge-transfer complex based on a pyridyl-substituted TTF derivative", S. C. Lee, A. Ueda, H. Kamo, K. Takahashi, M. Uruichi, K. Yamamoto, K. Yakushi, A. Nakao, R. Kumai, K. Kobayashi, H. Nakao, Y. Murakami, and H. Mori, *Chem. Commun.*, **48**, 8673-8675 (2012).
15. "Perpendicular magnetic anisotropy in a Pt/Co/Pt ultrathin film arising from a lattice distortion induced by ion irradiation", M.Sakamaki, K.Amemiya, M.O.Liedke, J.Fassbender, P.Mazalski, I.Sveklo, and A.Maziewski, *Phys. Rev. B* **86**, 024418:1-5 (2012).

16. "Local structure of LiCoO₂ nanoparticles studied by Co K-edge x-ray absorption spectroscopy",
L Maugeri, A Iadecola, B Joseph, L Simonelli, L Olivi, M Okubo, I Honma, H Wadati, T Mizokawa and N L Saini,
J. Phys.: Condens. Matter **24**, 335305:1-5 (2012).
17. "Self-Energy on the Low- to High-Energy Electronic Structure of Correlated Metal SrVO₃",
S. Aizaki, T. Yoshida, K. Yoshimatsu, M. Takizawa, M. Minohara, S. Ideta, A. Fujimori, K. Gupta, P. Mahadevan, K. Horiba, H. Kumigashira, and M. Oshima,
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18. "Probing the Role of Co Substitution in the Electronic Structure of Iron Pnictides",
G. Levy, R. Sutarto, D. Chevrier, T. Regier, R. Blyth, J. Geck, S. Wurmehl, L. Harnagea, H. Wadati, T. Mizokawa, I. S. Elfimov, A. Damascelli, and G. A. Sawatzky,
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19. "Electronic Structure of SrTi_{0.99}Sc_{0.01}O₃ Thin Film by High-Resolution Soft-X-ray Spectroscopy",
T. Okumura, T. Inoue, Y. Tasaki, E. Sakai, H. Kumigashira, and T. Higuchi,
J. Phys. Soc. Jpn. **81**, 094705:1-4(2012).
20. "Iron Resonant Photoemission Spectroscopy on Anodized Hematite Points to Electron Hole Doping during Anodization",
Artur Braun, Qianli Chen, Dorota Flak, Giuseppino Fortunato, Krisztina Gajda-Schranz, Michael Gr tzel, Thomas Graule, Jinghua Guo, Tzu-Wen Huang, Zhi Liu, Anastasiya V. Popelo, Kevin Sivula, Hiroki Wadati, Pradeep P. Wyss, Liang Zhang, and Junfa Zhu,
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21. "Evolution of magnetic phases in single crystals of SrFe_{1-x}Co_xO₃ solid solution",
Y. W. Long, Y. Kaneko, S. Ishiwata, Y. Tokunaga, T. Matsuda, H. Wadati, Y. Tanaka, S. Shin, Y. Tokura, and Y. Taguchi,
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22. "Orbital states of V trimers in BaV₁₀O₁₅ detected by resonant x-ray scattering",
K. Takubo, T. Kanzaki, Y. Yamasaki, H. Nakao, Y. Murakami, T. Oguchi, and T. Katsufuji,
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23. "Epitaxially Stabilized EuMoO₃: A New Itinerant Ferromagnet",
Y. Kozuka, H. Seki, T. C. Fujita, S. Chakraverty, K. Yoshimatsu, H. Kumigashira, Masaharu Oshima, M. S. Bahramy, R. Arita, and M. Kawasaki,
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24. "Three-way switching in a cyanide-bridged [CoFe] chain",
Norihisa Hoshino, Fumichika Iijima, Graham N. Newton, Norifumi Yoshida, Takuya Shiga, Hiroyuki Nojiri, Akiko Nakao, Reiji Kumai, Youichi Murakami & Hiroki Oshio,
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25. "XAFS and XMCD spectra at the surface and interface of ultrathin films observed by the depth-resolved XAFS/XMCD technique",
K. Amemiya and M. Sakamaki,
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26. "Imprinting Magnetic Information in Manganites with X Rays",
M. Garganourakis, V. Scagnoli, S.W. Huang, and U. Staub, H. Wadati, M. Nakamura, V. A. Guzenko, M. Kawasaki and Y. Tokura,
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27. "High-temperature thermoelectric properties of the double-perovskite ruthenium oxide (Sr_{1-x}La_x)₂ErRuO₆",
R. Takahashi, R. Okazaki, Y. Yasui, I. Terasaki, T. Sudayama, H. Nakao, Y. Yamasaki, J. Okamoto, Y. Murakami, and Y. Kitajima,
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28. "Pseudogap-related charge dynamics in the layered nickelate R_{2-x}Sr_xNiO₄ (x~1)",
M. Uchida, Y. Yamasaki, Y. Kaneko, K. Ishizaka, J. Okamoto, H. Nakao Y. Murakami, and Y. Tokura,
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29. "Simple push coating of polymer thin-film transistors",
M. Ikawa, T. Yamada, H. Matsui, H. Minemawari, J. Tsutsumi, Y. Horii, M. Chikamatsu, R. Azumi, R. Kumai, and T. Hasegawa,
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30. "Large spin-orbit splitting and weakly anisotropic superconductivity revealed with single-crystalline noncentrosymmetric CaIrSi₃",
G. Eguchi, H. Wadati, T. Sugiyama, E. Ikenaga, S. Yonezawa, and Y. Maeno,
Phys. Rev. B **86**, 184510:1-7 (2012).
31. "Magnetism and Pressure-Induced Superconductivity of Checkerboard-Type Charge-Ordered Molecular Conductor β-(meso-DMBEDT-TTF)₂X (X = PF₆ and AsF₆)",
T. Shikama, T. Shimokawa, S. Lee, T. Isono, A. Ueda, K. Takahashi, A. Nakao, R. Kumai, H. Nakao, K. Kobayashi, Y. Murakami, M. Kimata, H. Tajima, K. Matsubayashi, Y. Uwatoko, Y. Nishio, K. Kajita, and H. Mori,
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32. "Core level and valence band spectroscopy of SrRuO₃: electron correlation vs. covalence effects",
E.B. Guedes, M. Abbate, K. Ishigami, A. Fujimori, K. Yoshimatsu, H. Kumigashira, M. Oshima, F.C. Vicentin, P.T. Fonseca, and R.J.O. Mossaneck,
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33. "Above-room-temperature ferroelectricity and antiferroelectricity in benzimidazoles",

- Sachio Horiuchi, Fumitaka Kagawa, Kensuke Hatahara, Kensuke Kobayashi, Reiji Kumai, Youichi Murakami & Yoshinori Tokura, *Nature Commun.* **3**, 1308:1-6 (2012).
34. "Temperature dependent local structure of LiCoO₂ nanoparticles determined by Co K-edge X-ray absorption fine structure",
L. Maugeri, L. Simonelli, A. Iadecola, B. Joseph, M. Okubo, I. Honma, H. Wadati, T. Mizokawa, N.L. Saini, *Journal of Power Sources* **229**, 272-276 (2013).
35. "Proximity effects and exchange bias in Co/MnF₂(111) heterostructures studied by x-ray magnetic circular dichroism",
S.M.Suturin, V.Fedorov, A.Banshchikov, D.Baranov, K.Koshmak, P.Torelli, J.Fujii, G.Panaccione, K.Amemiya, M.Sakamaki, T.Nakamura, M.Tabuchi, L.Pasquali, and N.S.Sokolov, *J. Phys.: Condens. Matter* **25**, 046002:1-9 (2013).
36. "Hydrogen bond-promoted metallic state in a purely organic single-component conductor under pressure",
Takayuki Isono, Hiromichi Kamo, Akira Ueda, Kazuyuki Takahashi, Akiko Nakao, Reiji Kumai, Hironori Nakao, Kensuke Kobayashi, Youichi Murakami & Hatsumi Mori, *Nature Commun.* **4**, 1344:1-6 (2013).
37. "Ga⁺ ion irradiation-induced changes in magnetic anisotropy of a Pt/Co/Pt thin film studied by X-ray magnetic circular dichroism",
K.Amemiya, M.Sakamaki, P.Mazalski, I.Sveklo, Z.Kurant, A.Maziewski, M.O.Liedke, J.Fassbender, A.Wawro, and L.T.Baczewski, *Eur. Phys. J. Web of Conferences* **40**, 08002:1-3 (2013).
38. "Effect of structural strain on magnetic anisotropy energy of each element in alternately layered FeNi thin films",
M.Sakamaki and K.Amemiya, *Phys. Rev. B* **87**, 014428:1-5 (2013).
39. "Gradual localization of Ni 3d states in LaNiO₃ ultrathin films induced by dimensional crossover",
E. Sakai, M. Tamamitsu, K. Yoshimatsu, S. Okamoto, K. Horiba, M. Oshima, and H. Kumigashira, *Phys. Rev. B* **87**, 075132:1-8 (2013).
40. "Resonant Photoemission Spectroscopy of the Cathode Material Li_xMn_{0.5}Fe_{0.5}PO₄ for Lithium-Ion Battery",
S. Kurosumi, K. Horiba, N. Nagamura, S. Toyoda, H. Kumigashira, M. Oshima, S. Furutsuki, S. Nishimura, A. Yamada, and N. Mizuno, *J. Power Source* **226**, 42-46 (2013).
41. "X-ray absorption and magnetic circular dichroism characterization of Fe-doped TiO_{2-δ} thin films",
E.Sakai, K.Amemiya, A.Chikamatsu, Y.Hirose, T.Shimada, T.Hasegawa, *J. Magn. Magn. Mater.* **333**, 130-133 (2013).
42. "Resonant X-ray Scattering Experiments on the Ordering of Electronic Degrees of Freedom",
Takeshi MATSUMURA, Hironori NAKAO, and Youichi MURAKAMI, *J. Phys. Soc. Jpn.* **82**, 021007:1-18 (2013).
43. "X-ray photoinduced persistent and bidirectional phase transition enabled by impurity doping in layered manganite",
Y. Yamaki Y. Yamasaki, H. Nakao, Y. Murakami, Y. Kaneko and Y. Tokura, *Phys. Rev. B* **87**, 081107:1-5 (2013).
44. "High-Temperature and Pressure-Induced Ferroelectricity in Hydrogen-Bonded Supramolecular Crystals of Anilic Acids and 2,3-Di(2-pyridinyl)pyrazine",
Sachio Horiuchi, Reiji Kumai, and Yoshinori Tokura, *J. Am. Chem. Soc.*, **135** (11), 4492–4500 (2013).

<Conference>

- 2012 Villa Conference on Complex Oxide Heterostructures (VC-COH)
April 16-19, 2012
Orlando, FL, US
 - Invited, "Metallic Quantum Well States in Artificial Structures Based on Strongly-Correlated Oxide", Hiroshi Kumigashira
- The 19th International Conference on Magnetism(ICM2012) with Strongly Correlated Electron Systems(SCES)
July 8-13, 2012
Bexco, Busan, Korea
 - Poster, "Neutron magnetic scattering study in manganite thin film system", Hironori Nakao
 - Poster, "Dopant-dependence on charge/orbital order in impurity doped layered manganites", Yuki Yamaki
- 11th International Conference on Synchrotron Radiation Instrumentation (SRI 2012)
July 9-13, 2012
Lyon Convention Centre, France
 - Poster, "Diffractometer for small angle resonant soft X-ray scattering under magnetic field", YAMASAKI Yuichi, OKAMOTO Jun, NAKAO Hironori, MURAKAMI Youichi
 - Poster, "Resonant soft X-ray scattering study of the magnetic structures in La_{1.5}Ca_{0.5}CoO₄ using an ultra-high vacuum diffractometer with a 4-slit detector system", OKAMOTO Jun, Horigane Kazumasa, NAKAO Hironori, AMEMIYA Kenta, KUBOTA Masato, MURAKAMI Youichi, YAMADA Kazuyoshi
- XAFS Theory and Nanoparticles
July 18-20, 2012
Chiba, Japan
 - Invited, "XAFS and XMCD spectra at the surface and interface of ultrathin films observed by the depth-resolved XAFS/XMCD technique", K.Amemiya and M.Sakamaki
 - Poster, "Layer-resolved Magnetic Anisotropy Energy in FeNi thin films", M.Sakamaki and K.Amemiya
- The 15th International Conference on X-ray Absorption Fine Structure (XAFS-XV)
July 22-28, 2012
Beijing, China
 - Poster, "Magnetic Anisotropy and Interfacial

- Magnetization in Ni/FeMn Thin Films Studied by the Depth-Resolved XMCD”,
K.Amemiya and M.Sakamaki
- Poster, “Correlation between magnetic anisotropy and surface structure in alternately layered FeNi thin films”,
M.Sakamaki and K.Amemiya
- Tsukuba Nanotechnology Symposium 2012 (TNS'12)
July 22-28, 2012
Tsukuba, Japan
 - Invited, “Magnetic and crystalline structures of ultrathin films studied by X-ray absorption spectroscopy”,
K.Amemiya and M.Sakamaki
 - HZB Seminar
July 31, 2012
HZB, Berlin, Germany
 - Oral, “Resonant Soft X-Ray Scattering Studies of Multiferroic YMnO₃ Thin Films”,
Hiroki Wadati
 - EMPA Seminar
August 2, 2012
EMPA, Dubendorf
 - Oral, “X-RAY PHOTOEMISSION AND SCATTERING OF SrFeO₃”,
Hiroki Wadati
 - The Seventh Multifunctional Materials Workshop (MFM-7)
August 5-9, 2012
Gamboa, Panama
 - Invited, “Metallic Quantum Well States in Artificial Structures Based on Strongly-Correlated Oxide”,
Hiroshi KUMIGASHIRA
 - XXIst International Symposium on the Jahn-Teller Effect
August 26-31, 2012
Tsukuba, Japan
 - Invited, “Impurity effect on orbital ordering in layered manganite - X-ray Photo-induced Phase Transition -”,
Y. Murakami
 - Joint European Magnetic Symposia (JEMS 2012)
September 9-14, 2012
Parma, Italy
 - Poster, “Ga⁺ ion-induced changes in magnetic anisotropy of Pt/Co/Pt thin films studied by x-ray magnetic circular dichroism”,
K.Amemiya, M.Sakamaki, P.Mazalski, I.Sveklo, Z.Kurant, A.Maziewski, M.O.Liedke, J.Fassbender, A.Wawro, and L.T.Baczewski
 - Poster, “Ga⁺ ion-induced lattice distortion and magnetic anisotropy in Pt/Co/Pt thin film”,
M.Sakamaki, K.Amemiya, M.O.Liedke, J.Fassbender, P.Mazalski, I.Sveklo, and A.Maziewski
 - IUCr Commission on High Pressure 2012 Meeting
September 23-27, 2012
Mito, Japan
 - Invited, “Pressure-Induced Ferroelectricity of Acid-Base Supramolecules”,
Reiji KUMAI
 - The 21th International Colloquium on Magnetic Films and Surfaces (ICMFS 2012)
September 24-28, 2012
Shanghai, China
 - Poster, “Temperature Dependence of Interface Magnetization in Cu/Ni/Cu(100) Observed by the Depth-Resolved X-ray Magnetic Circular Dichroism Technique”,
K.Amemiya and M.Sakamaki
 - Poster, “Layer-resolved Magnetic Anisotropy Energy and Surface Structure in FeNi Thin Films”,
M.Sakamaki and K.Amemiya
 - IUMRS-ICEM 2012
September 27, 2012
Yokohama, Japan
 - Invited, “Complementary Use of Quantum Beams for Materials Science”,
Y. Murakami
 - International Workshop on Correlated Electrons at Surfaces and Interfaces
October 1-4, 2012
Wurzburg, Germany
 - Invited, “Creation and Control of Metallic Quantum Well States in Artificial Structures of Strongly-Correlated Oxide”,
Hiroshi KUMIGASHIRA
 - 222nd Meeting of ECS Prime2012 (Symposium E11: Non-Volatile Memories)
October 10-11, 2012
Honolulu, Hawaii, US
 - Invited, “Direct Observation of Redox Reactions during Resistance Switching by using Synchrotron Radiation Spectroscopy”,
Hiroshi KUMIGASHIRA
 - International Conference of the Asian Union of Magnetism Societies 2012
October 2-5, 2012
Nara, Japan
 - Invited, “Resonant Soft X-Ray Scattering Studies of Multiferroic YMnO₃ Thin Films”,
Hiroki Wadati
 - Seminar in Waterloo University
October 22, 2012
Waterloo, Canada
 - Invited, “Resonant Soft X-Ray Scattering Studies of Multiferroic YMnO₃ Thin Films”,
Hiroki Wadati
 - Energy Materials Nanotechnology (EMN) West meeting
January 7-10, 2013
Houston, USA
 - Invited, “Gradual localization of Ni 3d states in LaNiO₃ ultrathin films induced by dimensional crossover”,
Enju Sakai and H. Kumigashira
 - 40th Conference on the Physics&Chemistry of Surface&Interface
January 20-24, 2013
Waikoloa, Hawaii, US
 - Invited, “Unusual behavior of quantum-well subbands in transition-metal oxide thin films”,
Hiroshi KUMIGASHIRA