

Publications

<Paper>

1. “Counterion effects on nano-confined metal–drug–DNA complexes”, Nupur Biswas, Sreeja Chakraborty, Alokmay Datta, Munna Sarkar, Mrinmay K. Mukhopadhyay, Mrinal K. Bera and Hideki Seto, *Beilstein J. Nanotechnol.* **7**, 62–67 (2016).
2. “Strong charge density wave fluctuation and sliding state in PdTeI with quasi-1D PdTe chains”, Hechang Lei, Kai Liu, Jun-ichi Yamaura, Sachiko Maki, Youichi Murakami, Zhong-Yi Lu, Hideo Hosono, *Phys. Rev. B* **93**, 121101(R):1-5 (2016).
3. “Mechanism of Spontaneous Blebbing Motion of an Oil-Water Interface: Elastic Stress Generated by a Lamellar-Lamellar Transition”, Yutaka Sumino, Norifumi L. Yamada, Michihiro Nagao, Takuya Honda, Hiroyuki Kitahata, Yuri B. Melnichenko, and Hideki Seto, *Langmuir*, **32**(12), 2891-2899 (2016).
4. “Gritty surface sample holder invented to obtain correct XAFS spectra for concentrated materials by fluorescence yield”, Hitoshi Abe, Yasuhiro Niwa, Masao Kimura, Youichi Murakami, Toshiharu Yokoyama, and Hideo Hosono, *Analytical Chemistry* **88**, 3455-3458 (2016).
5. “Observation of momentum-resolved charge fluctuations proximate to the charge-order phase using resonant inelastic x-ray scattering”, M. Yoshida, K. Ishii, M. Naka, S. Ishihara, I. Jarrige, K. Ikeuchi, Y. Murakami, K. Kudo, Y. Koike, T. Nagata, Y. Fukada, N. Ikeda and J. Mizuki, *Scientific Report* **6**, 23611:1-8 (2016).
6. “Multiple charge density wave transitions in the anti-ferromagnets $RNiC_2$ ($R=Gd,Tb$)”, S. Shimomura, C. Hayashi, N. Hanasaki, K. Ohnuma, Y. Kobayashi, H. Nakao, M. Mizumaki, and H. Onodera, *Phys. Rev. B* **93**, 165108:1-11 (2016).
7. “High oxidation tolerance of Ru nanoparticles on $12CaO\cdot7Al_2O_3$ electride”, Hitoshi Abe, Yasuhiro Niwa, Masaaki Kitano, Yasunori Inoue, Youichi Murakami, Toshiharu Yokoyama, Michikazu Hara, and Hideo Hosono, *J. Phys. Chem. C*, **120** (16), 8711–8716 (2016).
8. “Electrical and structural properties of $BaCe_{0.85}Ru_{0.05}Y_{0.10}O_{3-\delta}$ thin film prepared by RF magnetron sputtering”, Masanori Ochi, Takashi Tsuchiya, Shohei Yamaguchi, Takaaki Suetsugu, Naoya Suzuki, Masaki Kobayashi, Makoto Minohara, Koji Horiba, Hiroshi Kumigashira, and Tohru Higuchi, *Jpn. J. Appl. Phys.* **55**, 06GJ02:1-4 (2016).
9. “Electronic structure of c-axis controlled α - Fe_2O_3 thin film probed by soft-X-ray spectroscopy”, Kinya Kawamura, Naoya Suzuki, Takashi Tsuchiya, Shohei Yamaguchi, Masanori Ochi, Takaaki Suetsugu, Makoto Minohara, Masaki Kobayashi, Koji Horiba, Hiroshi Kumigashira, and Tohru Higuchi, *Jpn. J. Appl. Phys.* **55**, 06GJ04:1-4 (2016).
10. “Electron–Ion Mixed Conduction of $BaCe_{0.90}Y_{0.10}O_{3-\delta}$ Thin Film Generated by Ru Substitution”, Masanori Ochi, Takashi Tsuchiya, Shohei Yamaguchi, Takaaki Suetsugu, Naoya Suzuki, Masaki Kobayashi, Makoto Minohara, Koji Horiba, Hiroshi Kumigashira, and Tohru Higuchi, *J. Phys. Soc. Jpn.* **85**, 034705 (2016).
11. “Correlated electronic states of $SrVO_3$ revealed by angle-resolved photoemission spectroscopy”, T. Yoshida, M. Kobayashi, K. Yoshimatsu, H. Kumigashira, and A. Fujimori, *J. Electron Spectr. Rel. Phenom.* **208**, 11-16 (2016).
12. “Depth-resolved X-ray magnetic circular dichroism measurement by a multi-anode microchannel plate detector combined with polarization switching”, K. Amemiya, M. Sakamaki, S. Kishimoto, T. Kosuge, K. Nigorikawa, M. Tanaka, T. Uchida, M. Saito, M. Ikeno, and K. Nakayoshi, *J. Phys.: Conf. Ser.* **712**, 012033:1-4 (2016).
13. “Electrical and structural properties of $TiO_{2-\delta}$ thin film with oxygen vacancies prepared by RF magnetron sputtering using oxygen radical”, Kinya Kawamura, Naoya Suzuki, Takashi Tsuchiya, Yuichi Shimazu, Makoto Minohara, Masaki Kobayashi, Koji Horiba, Hiroshi Kumigashira, and Tohru Higuchi, *Jpn. J. Appl. Phys.* **55**, 06GJ08:1-4 (2016).
14. “Metal-insulator transition of valence-controlled VO_2 thin film prepared by RF magnetron sputtering using oxygen radical”, Takaaki Suetsugu, Yuichi Shimazu, Takashi Tsuchiya, Masaki Kobayashi, Makoto Minohara, Enju Sakai, Koji Horiba, Hiroshi Kumigashira, and Tohru Higuchi, *Jpn. J. Appl. Phys.* **55**, 06GJ11:1-4 (2016).
15. “Effects of c/a Anisotropy and Local Crystal Structure on Superconductivity in $AFe_2(As_{1-x}P_x)_2$ ($A = Ba_{1-y}Sr_y, Sr_{1-y}Ca_y$ and Eu)”, T. Adachi, Y. Nakamatsu, T. Kobayashi, S. Miyasaka, S. Tajima, M. Ichimiya, M. Ashida, H. Nakao, R.

- Kumai, and Y. Murakami,
J. Phys. Soc. Jpn. **85**, 063705:1-4 (2016).
16. “Photoelectrochemical water splitting enhanced by self-assembled metal nanopillars embedded in an oxide semiconductor photoelectrode”,
 Seiji Kawasaki, Ryota Takahashi, Takahisa Yamamoto, Masaki Kobayashi, Hiroshi Kumigashira, Jun Yoshinobu, Fumio Komori, Akihiko Kudo & Mikk Lippmaa,
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 17. “Development of a large plano-elliptical neutron-focusing supermirror with metallic substrates”,
 S. Takeda, Y. Yamagata, N. L. Yamada, M. Hino, T. Hosobata, J. Guo, S. Morita, T. Oda, and M. Furusaka,
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 18. “Quest for the Origin of Heavy Fermion Behavior in d-Electron Systems”,
 Masanori Miyazaki, Ichihiko Yamauchi, and Ryosuke Kadono,
J. Phys. Soc. Jpn. **85**, 091009:1-11 (2016).
 19. “Thickness-dependent physical properties of $\text{La}_{1/3}\text{Sr}_{2/3}\text{FeO}_3$ thin films grown on SrTiO_3 (001) and (111) substrates”,
 Makoto Minohara, Miho Kitamura, Hiroki Wadati, Hironori Nakao, Reiji Kumai, Youichi Murakami, and Hiroshi Kumigashira,
J. Appl. Phys. **120**, 025303:1-6 (2016).
 20. “Chiral crystal-structure transformation of $\text{R}_3\text{Co}_4\text{Sn}_{13}$ (R = La and Ce)”,
 Yuka Otomo, Kazuaki Iwasa, Kazuya Suyama, and Keisuke Tomiyasu, Hajime Sagayama, Ryoko Sagayama, Hironori Nakao, Reiji Kumai, and Youichi Murakami,
Phys. Rev. B **94**, 075109:1-8 (2016).
 21. “Surface Kondo effect and non-trivial metallic state of the Kondo Insulator YbB_{12} ”,
 Kenta Hagiwara, Yoshiyuki Ohtsubo, Masaharu Matsunami, Shin-ichiro Ideta, Kiyohisa Tanaka, Hidetoshi Miyazaki, Julien E. Rault, Patrick Le Fèvre, François Bertran, Amina Taleb-Ibrahimi, Ryu Yukawa, Masaki Kobayashi, Koji Horiba, Hiroshi Kumigashira, Kazuki Sumida, Taichi Okuda, Fumitoshi Iga, and Shin-ichi Kimura,
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 22. “Tailoring Photovoltage Response at $\text{SrRuO}_3/\text{SrTiO}_3$ Heterostructures”,
 Ryu Yukawa, Susumu Yamamoto, Kazuma Akikubo, Kaori Takeuchi, Kenichi Ozawa, Hiroshi Kumigashira, and Iwao Matsuda,
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 23. “Epitaxial synthesis and physical properties of double-perovskite oxide $\text{Sr}_2\text{CoRuO}_6$ thin films”,
 K. Watarai, K. Yoshimatsu, K. Horiba, H. Kumigashira, O. Sakata, and A. Ohtomo,
J. Phys.: Condens. Matter **28**, 236005:1-7 (2016).
 24. “Metal-insulator transition and pseudogap in $\text{Bi}_{1.76}\text{Pb}_{0.35}\text{Sr}_{1.89}\text{CuO}_{6+\delta}$ high- T_c cuprates”,
 M. Miyazaki, R. Kadono, M. Hiraiishi, A. Koda, K. M. Kojima, Y. Fukunaga, Y. Tanabe, T. Adachi and Y. Koike,
Phys. Rev. B **94**, 115123 :1-5 (2016).
 25. “Influence of \mathbf{k}_\perp -broadening on ARPES spectra of the (110) and (001) surfaces of SrVO_3 films”,
 T. Mitsuhashi, M. Minohara, R. Yukawa, M. Kitamura, K. Horiba, M. Kobayashi, and H. Kumigashira,
Phys. Rev. B **94**, 125148:1-8 (2016).
 26. “Ce Core-Level Spectroscopy, and Magnetic and Electrical Transport Properties of Lightly Ce-Doped YCoO_3 ”,
 Yoshihiko Kobayashi, Tsuyoshi Koike, Mario Okawa, Ryohei Takayanagi, Shohei Takei, Makoto Minohara, Masaki Kobayashi, Koji Horiba, Hiroshi Kumigashira, Akira Yasui, Eiji Ikenaga, Tomohiko Saitoh, and Kichizo Asai,
J. Phys. Soc. Jpn. **85**, 114704:1-8 (2016).
 27. “Epitaxial growth and electric properties of $\gamma\text{-Al}_2\text{O}_3$ films on $\beta\text{-Ga}_2\text{O}_3$ substrates”,
 Mai Hattori, Takayoshi Oshima, Ryo Wakabayashi, Kohei Yoshimatsu, Kohei Sasaki, Takekazu Masui, Akito Kuramata, Shigenobu Yamakoshi, Koji Horiba, Hiroshi Kumigashira, and Akira Ohtomo,
Jpn. J. Appl. Phys. **55**, 1202B6:1-5 (2016).
 28. “Phonon-dressed two-dimensional carriers on the ZnO surface”,
 R. Yukawa, K. Ozawa, S. Yamamoto, H. Iwasawa, K. Shimada, E. F. Schwier, K. Yoshimatsu, H. Kumigashira, H. Namatame, M. Taniguchi, and I. Matsuda,
Phys. Rev. B **94**, 165313:1-5 (2016).
 29. “Unswollen layer of cross-linked polyisoprene at the solid interface”,
 S. Shimomura, M. Inutsuka, N. L. Yamada, and K. Tanaka,
Polymer, **105**, 526–531 (2016).
 30. “Hubbard band or oxygen vacancy states in the correlated electron metal SrVO_3 ”,
 S. Backes, T. C. Rödel, F. Fortuna, E. Frantzeskakis, P. Le Fèvre, F. Bertran, M. Kobayashi, R. Yukawa, T. Mitsuhashi, M. Kitamura, K. Horiba, H. Kumigashira, R. Saint-Martin, A. Fouchet, B. Berini, Y. Dumont, A. J. Kim, F. Lechermann, H. O. Jeschke, M. J. Rozenberg, R. Valentí, and A. F. Santander-Syro,
Phys. Rev. B **94**, 241110(R) :1-7(2016).

31. “Pressure effect on iron-based superconductor $\text{LaFeAsO}_{1-x}\text{H}_x$: Peculiar response of 1111-type structure”,
Kensuke Kobayashi, Jun-ichi Yamaura, Soshi Iimura, Sachiko Maki, Hajime Sagayama, Reiji Kumai, Youichi Murakami, Hiroki Takahashi, Satoru Matsuishi & Hideo Hosono,
Scientific Reports **6**, 39646:1-6 (2016).
32. “Inelastic and quasi-elastic neutron scattering spectrometers in J-PARC”,
H. Seto, S. Itoh, T. Yokoo, H. Endo, K. Nakajima, K. Shibata, R. Kajimoto, S. Ohira-Kawamura, M. Nakamura, Y. Kawakita, H. Nakagawa, T. Yamada,
Biochim. Biophys. Acta GEN **1861** 1 Part B, 3651–3660 (2017).
33. “Anion substitution in hydrogen-bonded organic conductors: Chemical pressure effect on hydrogen-bond-mediated phase transition”,
Junya Yoshida, Akira Ueda, Reiji Kumai, Youichi Murakami and Hatsumi Mori,
CrystEngComm **19**, 367-375 (2017) .
34. “Successive spatial symmetry breaking under high pressure in the spin-orbit-coupled metal $\text{Cd}_2\text{Re}_2\text{O}_7$ ”,
Jun-ichi Yamaura, Keiki Takeda, Yoichi Ikeda, Naohisa Hirao, Yasuo Ohishi, Tatsuo C. Kobayashi, and Zenji Hiroi,
Phys. Rev. B **95**, 020102(R):1-5 (2016).
35. “Resonant Photoemission and X-ray Absorption Spectroscopies of Lithiated Magnetite Thin Film”,
Takashi Tsuchiya, Kinya Kawamura, Wataru Namiki, Shoto Furuichi, Makoto Takayanagi, Makoto Minohara, Masaki Kobayashi, Koji Horiba, Hiroshi Kumigashira, Kazuya Terabe, Tohru Higuchi,
J. Jpn. J. Appl. Phys. **56**, 04CK01:1–5 (2017).
36. “Magnetoresistance effect in a conducting molecular crystal consisting of dicyano(phthalocyaninato) manganese(III)”,
Masaki Matsuda, Gosuke Yoshida, Jun-ichi Yamaura, Tamotsu Inabe, and Hiroyuki Tajima,
Dalton Transactions, 46, 1892-1897 (2017).
37. “Ce 4f electronic states of $\text{CeO}_{1-x}\text{F}_x\text{BiS}_2$ studied by soft X-ray photoemission spectroscopy”,
Takanori Wakita, Kensei Terashima, Takahiro Hamada, Hirokazu Fujiwara, Makoto Minohara, Masaki Kobayashi, Koji Horiba, Hiroshi Kumigashira, Galif Kutluk, Masanori Nagao, Satoshi Watauchi, Isao Tanaka, Satoshi Demura, Hiroyuki Okazaki, Yoshihiko Takano, Yoshikazu Mizuguchi, Osuke Miura, Kozo Okada, Yuji Muraoka, and Takayoshi Yokoya,
Phys. Rev. B **95**, 085109:1-9 (2017).
38. “Absence of magnetic long range order in $\text{Ba}_3\text{ZnRu}_2\text{O}_9$: A spin-liquid candidate in the $S=3/2$ dimer lattice”,
Ichiro Terasaki, Taichi Igarashi, Takayuki Nagai, Kenji Tanabe, Hiroki Taniguchi, Taku Matsushita, Nobuo Wada, Atsushi Takata, Takanori Kida, Masayuki Hagiwara, Kensuke Kobayashi, Hajime Sagayama, Reiji Kumai, Hironori Nakao, Youichi Murakami,
J. Phys. Soc. Jpn. **86**, 033702:1-4 (2017).
39. “Robust ferromagnetism carried by antiferromagnetic domain walls”,
Hishiro T. Hirose, Jun-ichi Yamaura, Zenji Hiroi,
Scientific Reports, 7, 42440:1-7 (2017).
40. “Strong Spin-Phonon Coupling Mediated by Single Ion Anisotropy in the All-In--All-Out Pyrochlore Magnet $\text{Cd}_2\text{Os}_2\text{O}_7$ ”,
C. H. Sohn, C. H. Kim, L. J. Sandilands, N. M. Hien, S. Y. Kim, H. J. Park, K. W. Kim, S. J. Moon, J. Yamaura, Z. Hiroi, and T. W. Noh,
Phys. Rev. Lett. **118**, 117201:1-5 (2017).

<Conference>

EMN Croatia Meeting

May 4-7, 2016

Hotel Neptun, Dubrovnik, Croatia

- Invited “In situ angle-resolved photoemission study on manganite thin films”
Koji Horiba

International Conference on Low-Energy Electrodynamics in Solids, 2016

May 29-June 3, 2016

Hotel LAFORET Biwako, Japan

- Poster “Angle-resolved photoemission study of electronic structure of BaFe_2As_2 in the electronic “nematic” phase”
K. Koshiishi, L. Liu, K. Okazaki, H. Suzuki, J. Xu, M. Horio, Y. Nonaka, H. Kumigashira, K. Ono, M. Nakajima, S. Ishida, K. Kihou, C. H. Lee, A. Iyo, H. Eisaki, S. Uchida and A. Fujimori

Spectroscopies in Novel Superconductors

June 19-24, 2016

Stuttgart Ludwigsburg, Germany

- Poster “Coherent phonons and transient electronic states in BaFe_2As_2 observed by time- and angle-resolved photoemission spectroscopy using extreme-ultraviolet higher harmonic generation”
H. Suzuki, K. Okazaki, T. Yamamoto, T. Someya, M. Okada, K. Koshiishi, M. Fujisawa, T. Kanai, N. Ishii, M. Nakajima, H. Eisaki, K. Ono, H. Kumigashira, J. Itatani, A. Fujimori and S. Shin
- Poster “Momentum dependence of the self-energy in high-Tc cuprates revealed by angle-resolved photoemission spectroscopy”
T. Yoshida, D. Shimonaka, A. Fujimori, H. Kumigashira, K. Ono, S. Komiya, Y. Ando
- Invited “Suppressed antiferromagnetism and enlarged superconducting phase in protect-annealed electron-doped cuprates”

A. Fujimori, M. Horio, Y. Mori, A. Takahashi, T. Konno, T. Ohgi, H. Sato, T. Yoshida, H. Suzuki, G. Shibata

2016 EMN Prague Meeting

June 21-24, 2016

Prague, Czech Republic

- Invited “Origin of the Anomalous Mass Enhancement of the Subbands in Strongly-Correlated Oxide Quantum Well Structures”
Masaki Kobayashi

39th International Conference on Vacuum Ultraviolet and X-ray Physics (VUVX2016)

July 3-8, 2016

ETH Zurich, Switzerland

- Poster “Construction of wide-energy-range VUV-SX beamline BL-2 MUSASHI at KEK-PF”
K. Horiba, M. Minohara, T. Mitsuhashi, K. Amemiya, A. Yagishita, Y. Kitajima, A. Toyoshima, H. Tanaka, T. Kikuchi, T. Mori, Y. Saito, K. Nigorikawa, Y. Nagatani, T. Kosuge, and H. Kumigashira
- Poster “In situ angle-resolved photoemission study on K-adsorbed anatase TiO₂ (001) surfaces”
R. Yukawa, M. Minohara, T. Mitsuhashi, M. Kitamura, M. Kobayashi, K. Horiba, H. Kumigashira
- Poster “Charge transfer phenomena across the heterointerface between perovskite oxides LaNiO₃ and LaMnO₃”
Miho Kitamura, Koji Horiba, Masaki Kobayashi, Enju Sakai, Makoto Minohara, Taichi Mitsuhashi, Atsushi Fujimori, Takuro Nagai, Hiroshi Fujioka, and Hiroshi Kumigashira
- Poster “Influence of the “k_L-broadening” on ARPES spectra of the (110) surface of SrVO₃ thin films”
T. Mitsuhashi, M. Minohara, R. Yukawa, M. Kitamura, K. Horiba, M. Kobayashi, H. Kumigashira
- Oral “Isotropic kink in La_{0.6}Sr_{0.4}MnO₃ thin films studied by in situ angle-resolved photoemission spectroscopy”
K. Horiba, M. Kitamura, K. Yoshimatsu, M. Minohara, E. Sakai, M. Kobayashi, A. Fujimori, H. Kumigashira

14th International Conference on Surface X-ray and Neutron Scattering

July 10-14, 2016

Stony Brook University, USA

- Poster “Aggregation Structure and Molecular Motion of Polybutadiene Bound Rubber on Carbon Surface”
Koichiro Hori

EMN Kuala Lumpur Meeting 2016

September 12-16, 2016

The Royale Chulan Kuala Lumpur

- Invited “Electron-Phonon interactions in Two-Dimensional Electronic States at the H-dosed ZnO Surface”
Ryu Yukawa

International Workshop on Oxide Electronics 23

October 12-14, 2016

Nanjing, China

- Poster “Thickness Dependent Physical Properties of La_{1/3}Sr_{2/3}FeO₃ Thin Films Grown on SrTiO₃ (001) and (111) Substrates”
M. Minohara, M. Kitamura, H. Wadati, H. Nakao, R. Kumai, Y. Murakami, and H. Kumigashira

International symposium on revolutionary atomic-layer materials

October 21-22, 2016

Tohoku University

- Invited “Novel two-dimensional electron liquid states in quantum well structures of strongly correlated oxides”
Hiroshi KUMIGASHIRA

Symposium on Surface Science & Nanotechnology -25th Anniversary of SSSJ Kansai-

January 24-25, 2017

Kyoto International Community House

- Poster “Hard and soft x-ray scattering study of charge and magnetic orderings in La_{1/3}Sr_{2/3}FeO₃ thin films”
K. Yamamoto, Y. Hirata, M. Horio, Y. Yokoyama, K. Takubo, M. Minohara, H. Kumigashira, Y. Yamasaki, H. Nakao, Y. Murakami, A. Fujimori, H. Wadati

The 18th International Symposium on Eco-materials Processing and Design

February 17-20, 2017

Okinawa jchikaikan

- Oral “Topotactic synthesis of strontium vanadium oxyhydride epitaxial thin films”
Akira CHIKAMATSU, Tsukasa KATAYAMA, Keisuke YAMADA, Kei SHIGEMATSU, Tomoya ONOZUKA, Makoto MINOHARA, Hiroshi KUMIGASHIRA, Eiji IKENAGA, Tetsuya HASEGAWA

APCTP-Quantum Materials Symposium 2017 in conjunction with 17th Korea-Taiwan-Japan Workshop

February 19-24, 2017

Yongpyong resort, Korea

- Poster “Structure analysis of LaNiO₃/LaAlO₃ interface by surface X-ray diffraction”
Kazuhiro Kowa, Masato Anada, Enju Sakai, Miho Kitamura, Hiroshi Kumigashira, Yoshinori Nakanishi-Ohno, Masato Okada, Tsuyoshi Kimura, and Yusuke Wakabayashi