

Masaki Uchida, Ph. D.

Affiliation: Department of Physics, School of Science, Institute of Science Tokyo

Position: Associate Professor

Postal Address: South Bldg. 5 #107A (S5-4), Ookayama 2-12-1, Meguro-ku, Tokyo 152-8551, JAPAN

Email: m.uchida [* at _mark *] phys.sci.isct.ac.jp **Website:** <http://masakiuchida.com> **Tel:** +81-3-5734-2756

Research Areas:

molecular beam epitaxy, topological materials, strongly correlated materials, quantum transport, thin film interface

Appointments:

2024.10-present Associate Professor, Dept. of Phys., Institute of Science Tokyo

2022.4-present FOREST Project Researcher, JST (directed by Prof. Hikaru Kawamura)

2020.9-2024.9 Associate Professor, Dept. of Phys., Tokyo Institute of Technology

2018.10-2022.3 PRESTO Project Researcher, JST (directed by Prof. Shuichi Murakami)

2018.7-2020.8 Lecturer, Dept. of Applied Phys., the University of Tokyo

2013.9-2018.6 Research Associate, Dept. of Applied Phys., the University of Tokyo

2012.4-2013.8 JSPS Postdoctoral Fellow for Research Abroad (Prof. Shen Group, Cornell University)

2009.4-2012.3 JSPS Research Fellow (DC1) (Prof. Tokura Group, the University of Tokyo)

Education:

2009.4-2012.3 Ph. D. in Applied Physics, the University of Tokyo (supervised by Prof. Yoshinori Tokura)

2007.4-2009.3 M. S. in Applied Physics, the University of Tokyo (supervised by Prof. Yoshinori Tokura)

2003.4-2007.3 B. S. in Applied Physics, Kyoto University (supervised by Prof. Isao Tanaka)

2000.4-2003.3 Asahigaoka High School (Nagoya)

Publications: (As of November 2024: 71 total publications, 3000+ citations, *h*-index = 29)

Review Articles

[2] “**Topological Properties and Functionalities in Oxide Thin Films and Interfaces**” M. Uchida and M. Kawasaki, *Journal of Physics D: Applied Physics* **51**, 143001 (2018).

[1] “**Topological Oxide Electronics**” in “**The 2016 Oxide Electronic Materials and Oxide Interfaces Roadmap**” M. Uchida and M. Kawasaki, *Journal of Physics D: Applied Physics* **49**, 433001 (2016).

Original Papers

[69] “**In-plane anomalous Hall effect associated with orbital magnetization: Measurements of low-carrier density films of a magnetic Weyl semimetal**” A. Nakamura, S. Nishihaya, H. Ishizuka, M. Kriener, Y. Watanabe, and M. Uchida, *Physical Review Letters*, accepted (2024).

[68] “**Distinct topological Hall responses in CeCu₂-type EuZn₂ and EuCd₂ films**” Y. Watanabe, S. Nishihaya, M. Kriener, A. Nakamura, and M. Uchida, *Applied Physics Letters*, accepted (2024).

[67] “**Unconventional two-dimensional quantum oscillations in three-dimensional thick SrRuO₃ films**” Y. Matsuki, S. Nishihaya, M. Kriener, R. Oshima, F. Miwa, and M. Uchida, *Applied Physics Letters* **125**, 113105 (2024).

[66] “**Topological Hall effect enhanced at magnetic transition fields in a frustrated magnet EuCd₂**” S. Nishihaya, Y. Watanabe, M. Kriener, A. Nakamura, and M. Uchida, *Physical Review B* **110**, 035159 (2024).

[65] “**Magnetic structure of a single-crystal thin film of EuCd₂Sb₂**” E. Heinrich, A. Nakamura, S. Nishihaya, E. Weschke, H. Rønnow, M. Uchida, B. Flebus, and J.-R. Soh, *Physical Review B* **110**, 024405 (2024).

[64] “**Ferromagnetic state with large magnetic moments realized in epitaxially strained Sr₃Ru₂O₇ films**” R. Oshima, T. Hatanaka, S. Nishihaya, T. Nomoto, M. Kriener, T. C. Fujita, M. Kawasaki, R. Arita, and M. Uchida, *Physical Review B*, **109**, L121113 (2024).

[63] “**Berry curvature derived negative magnetoconductivity observed in type-II magnetic Weyl semimetal films**” A. Nakamura, S. Nishihaya, H. Ishizuka, M. Kriener, M. Ohno, Y. Watanabe, M. Kawasaki, and M. Uchida, *Physical Review*

B **109**, L121108 (2024).

- [62] **“Edge and Bulk States in Weyl-Orbit Quantum Hall Effect as Studied by Corbino Measurements”** Y. Nakazawa, R. Kurihara, M. Miyazawa, S. Nishihaya, M. Kriener, M. Tokunaga, M. Kawasaki, and M. Uchida, *Journal of the Physical Society of Japan* **93**, 023706 (2024).
- [61] **“Intrinsic insulating transport characteristics in low-carrier density EuCd₂As₂ films”** S. Nishihaya, A. Nakamura, M. Ohno, M. Kriener, Y. Watanabe, M. Kawasaki, and M. Uchida, *Applied Physics Letters* **124**, 023103 (2024).
- [60] **“Magnetic excitations in the square-lattice iridate Ba₂IrO₄”** J. P. Clancy, H. Gretarsson, A. Lupascu, J. A. Sears, Z. Nie, M. H. Upton, J. Kim, Z. Islam, M. Uchida, D. G. Schlom, K. M. Shen, and Y.-J. Kim, *Physical Review B* **107**, 054423 (2023).
- [59] **“Strain-modulated anisotropic electronic structure in superconducting RuO₂ films”** C. A. Occhialini, L. G. P. Martins, S. Fan, V. Bisogni, T. Yasunami, M. Musashi, M. Kawasaki, M. Uchida, R. Comin, and J. Pellicciari, *Physical Review Materials* **6**, 084802 (2022).
- [58] **“Maximizing intrinsic anomalous Hall effect by controlling the Fermi level in simple Weyl semimetal films”** M. Ohno, S. Minami, Y. Nakazawa, S. Sato, M. Kriener, R. Arita, M. Kawasaki, and M. Uchida, *Physical Review B* **105**, L201101 (2022).
- [57] **“Above-ordering-temperature large anomalous Hall effect in a triangular-lattice magnetic semiconductor”** M. Uchida, S. Sato, H. Ishizuka, R. Kurihara, T. Nakajima, Y. Nakazawa, M. Ohno, M. Kriener, A. Miyake, K. Ohishi, T. Morikawa, M. S. Bahramy, T. Arima, M. Tokunaga, N. Nagaosa, and M. Kawasaki, *Science Advances* **7**, eabl5381 (2021).
- [56] **“Intrinsic coupling between spatially-separated surface Fermi-arcs in Weyl orbit quantum Hall states”** S. Nishihaya, M. Uchida, Y. Nakazawa, M. Kriener, Y. Taguchi, and M. Kawasaki, *Nature Communications* **12**, 2572 (2021).
- [55] **“Molecular beam deposition of a new layered pnictide with distorted Sb square nets”** M. Ohno, M. Uchida, Y. Nakazawa, S. Sato, M. Kriener, A. Miyake, M. Tokunaga, Y. Taguchi, and M. Kawasaki, *APL Materials* **9**, 051107 (2021). *Selected for Featured Article, Featured in Scilight*
- [54] **“Quantum transport observed in films of the magnetic topological semimetal EuSb₂”** M. Ohno, M. Uchida, R. Kurihara, S. Minami, Y. Nakazawa, S. Sato, M. Kriener, M. Hirayama, A. Miyake, Y. Taguchi, R. Arita, M. Tokunaga, and M. Kawasaki, *Physical Review B* **103**, 165144 (2021).
- [53] **“Enhancement of spin-orbit coupling in Dirac semimetal Cd₃As₂ films by Sb doping”** Y. Nakazawa, M. Uchida, S. Nishihaya, M. Ohno, S. Sato, and M. Kawasaki, *Physical Review B* **103**, 045109 (2021).
- [52] **“Superconductivity in uniquely strained RuO₂ films”** M. Uchida, T. Nomoto, M. Musashi, R. Arita, and M. Kawasaki, *Physical Review Letters* **125**, 147001 (2020). *Selected for Editors' Suggestion, Featured in Physics*
- [51] **“Characterization of Sr₂RuO₄ Josephson junctions made of epitaxial films”** M. Uchida, I. Sakuraba, M. Kawamura, M. Ide, K. S. Takahashi, Y. Tokura, and M. Kawasaki, *Physical Review B* **101**, 035107 (2020).
- [50] **“Ferromagnetic state above room temperature in a proximitized topological Dirac semimetal”** M. Uchida, T. Koretsune, S. Sato, M. Kriener, Y. Nakazawa, S. Nishihaya, Y. Taguchi, R. Arita, and M. Kawasaki, *Physical Review B* **100**, 245148 (2019).
- [49] **“Ballistic transport in periodically modulated MgZnO/ZnO two-dimensional electron systems”** K. Tanaka, J. Falson, Y. Kozuka, M. Uchida, D. Maryenko, J. T. Ye, Y. Iwasa, A. Tsukazaki, J. H. Smet, and M. Kawasaki, *Applied Physics Letters* **115**, 153101 (2019). *Selected for Featured Article*
- [48] **“Molecular beam epitaxy of three-dimensionally thick Dirac semimetal Cd₃As₂ films”** Y. Nakazawa, M. Uchida, S. Nishihaya, S. Sato, A. Nakao, J. Matsuno, and M. Kawasaki, *APL Materials* **7**, 071109 (2019). *Selected for Featured Article*
- [47] **“Quantized surface transport in topological Dirac semimetal films”** S. Nishihaya, M. Uchida, Y. Nakazawa, R. Kurihara, K. Akiba, M. Kriener, A. Miyake, Y. Taguchi, M. Tokunaga, and M. Kawasaki, *Nature Communications* **10**, 2564 (2019).
- [46] **“Anomalous enhancement of upper critical field in Sr₂RuO₄ thin films”** M. Uchida, M. Ide, M. Kawamura, K. S. Takahashi, Y. Kozuka, Y. Tokura, and M. Kawasaki, *Physical Review B* **99**, 161111(R) (2019).

- [45] “**Ferroelectric field control of charge density in oxide films with polarization reversal by electric double layer**” R. Nishino, Y. Kozuka, F. Kagawa, M. Uchida, and M. Kawasaki, *Applied Physics Letters* **113**, 143501 (2018).
- [44] “**Signatures of charge-order correlations in transport properties of electron-doped cuprate superconductors**” H. Matsuoka, M. Nakano, M. Uchida, M. Kawasaki, and Y. Iwasa, *Physical Review B* **98**, 144506 (2018).
- [43] “**Negative magnetoresistance suppressed through topological phase transition in $(\text{Cd}_{1-x}\text{Zn}_x)_3\text{As}_2$ films**” S. Nishihaya, M. Uchida, Y. Nakazawa, K. Akiba, M. Kriener, Y. Kozuka, A. Miyake, Y. Taguchi, M. Tokunaga, and M. Kawasaki, *Physical Review B* **97**, 245103 (2018).
- [42] “**Gate-tuned quantum Hall states in Dirac semimetal $(\text{Cd}_{1-x}\text{Zn}_x)_3\text{As}_2$** ” S. Nishihaya, M. Uchida, Y. Nakazawa, M. Kriener, Y. Kozuka, Y. Taguchi, and M. Kawasaki, *Science Advances* **4**, eaar5668 (2018).
- [41] “**Controlling surface carrier density by illumination in the transparent conductor La-doped BaSnO_3** ” E. B. Lochocki, H. Paik, M. Uchida, D. G. Schlom, and K. M. Shen, *Applied Physics Letters* **112**, 181603 (2018).
- [40] “**Structural characterization of high-mobility Cd_3As_2 films crystallized on SrTiO_3** ” Y. Nakazawa, M. Uchida, S. Nishihaya, M. Kriener, Y. Kozuka, Y. Taguchi, and M. Kawasaki, *Scientific Reports* **8**, 2244 (2018).
- [39] “**Electrical conduction on the surface of ferroelectric PbTiO_3 thin film induced by electrolyte gating**” R. Nishino, Y. Kozuka, M. Uchida, F. Kagawa, and M. Kawasaki, *Applied Physics Letters* **112**, 051602 (2018).
- [38] “**Electric-field control of anomalous and topological Hall effects in oxide bilayer thin films**” Y. Ohuchi, J. Matsuno, N. Ogawa, Y. Kozuka, M. Uchida, Y. Tokura, and M. Kawasaki, *Nature Communications* **9**, 213 (2018). *Selected for Editors’ Highlights*
- [37] “**All-in-all-out magnetic domain inversion in $\text{Tb}_2\text{Ir}_2\text{O}_7$ with molecular fields anti-parallel to external fields**” T. C. Fujita, Y. Kozuka, J. Matsuno, M. Uchida, A. Tsukazaki, T. Arima, and M. Kawasaki, *Physical Review Materials* **2**, 011402(R) (2018). *Selected for Editors’ Suggestion*
- [36] “**Quantum Hall states observed in thin films of Dirac semimetal Cd_3As_2** ” M. Uchida, Y. Nakazawa, S. Nishihaya, K. Akiba, M. Kriener, Y. Kozuka, A. Miyake, Y. Taguchi, M. Tokunaga, N. Nagaosa, Y. Tokura, and M. Kawasaki, *Nature Communications* **8**, 2274 (2017). *Selected for Editors’ Highlights*
- [35] “**Visualizing ferroic domains in an all-in–all-out antiferromagnet thin film**” Y. Kozuka, T. C. Fujita, M. Uchida, T. Nojima, A. Tsukazaki, J. Matsuno, T. Arima, and M. Kawasaki, *Physical Review B* **96**, 224417 (2017).
- [34] “**Adsorption-controlled growth of La-doped BaSnO_3 by molecular-beam epitaxy**” H. Paik, Z. Chen, E. Lochocki, A. Seidner H., A. Verma, N. Tanen, J. Park, M. Uchida, S. Shang, B.-C. Zhou, M. Brützmam, R. Uecker, Z.-K. Liu, D. Jena, K. M. Shen, D. A. Muller, and D. G. Schlom, *APL Materials* **5**, 116107 (2017).
- [33] “**Molecular beam epitaxy growth of superconducting Sr_2RuO_4 films**” M. Uchida, M. Ide, H. Watanabe, K. S. Takahashi, Y. Tokura, and M. Kawasaki, *APL Materials* **5**, 106108 (2017).
- [32] “**Alloy disorder modulated electron transport at $\text{Mg}_x\text{Zn}_{1-x}\text{O}/\text{ZnO}$ heterointerface**” A. Vishnuradhan, Y. Kozuka, M. Uchida, J. Falson, A. Tsukazaki, and M. Kawasaki, *AIP Advances* **7**, 015029 (2017).
- [31] “**Evolution of electronic correlations across the rutile, perovskite, and Ruddelsden-Popper iridates with octahedral connectivity**” J. K. Kawasaki, M. Uchida, H. Paik, D. G. Schlom, and K. M. Shen, *Physical Review B* **94**, 121104(R) (2016).
- [30] “**Evolution of Insulator-Metal Phase Transitions in Epitaxial Tungsten Oxide Films during Electrolyte-Gating**” S. Nishihaya, M. Uchida, Y. Kozuka, Y. Iwasa, and M. Kawasaki, *ACS Applied Materials & Interfaces* **8**, 22330 (2016).
- [29] “ **MgZnO/ZnO heterostructures with electron mobility exceeding $1 \times 10^6 \text{ cm}^2/\text{Vs}$** ” J. Falson, Y. Kozuka, M. Uchida, J. H. Smet, T. Arima, A. Tsukazaki and M. Kawasaki, *Scientific Reports* **6**, 26598 (2016).
- [28] “**Strain Control of Fermiology and Many-Body Interactions in Two-Dimensional Ruthenates**” B. Burganov, C. Adamo, A. Mulder, M. Uchida, P. D. C. King, J. W. Harter, D. E. Shai, A. S. Gibbs, A. P. Mackenzie, R. Uecker, M. Bruetzam, M. R. Beasley, C. J. Fennie, D. G. Schlom, and K. M. Shen, *Physical Review Letters* **116**, 197003 (2016).
- [27] “**All-in-all-out magnetic domain wall conduction in a pyrochlore iridate heterointerface**” T. C. Fujita, M. Uchida, Y. Kozuka, W. Sano, A. Tsukazaki, T. Arima, and M. Kawasaki, *Physical Review B* **93**, 064419 (2016). *Selected for Editors’ Suggestion*

- [26] “**Epitaxially Stabilized Oxide Composed of Twisted Triangular-Lattice Layers**” M. Uchida, K. Ohba, Y. Ohuchi, Y. Kozuka, and M. Kawasaki, *Chemistry of Materials* **28**, 1165 (2016).
- [25] “**Effective carrier doping and metallization in $\text{La}_x\text{Sr}_{2-x-y}\text{Ba}_y\text{IrO}_{4-\delta}$ thin films**” M. Ito, M. Uchida, Y. Kozuka, K. S. Takahashi, and M. Kawasaki, *Physical Review B* **93**, 045139 (2016).
- [24] “**Direct Observation of Electrostatically Driven Band Gap Renormalization in a Degenerate Perovskite Transparent Conducting Oxide**” Z. Lebens-Higgins, D. O. Scanlon, H. Paik, S. Sallis, Y. Nie, M. Uchida, N. F. Quackenbush, M. J. Wahila, G. E. Sterbinsky, Dario A. Arena, J. C. Woicik, D. G. Schlom, and L. F. J. Piper, *Physical Review Letters* **116**, 027602 (2016).
- [23] “**All-in-all-out magnetic domain size in pyrochlore iridate thin films as probed by local magnetotransport**” T. C. Fujita, M. Uchida, Y. Kozuka, S. Ogawa, A. Tsukazaki, T. Arima, and M. Kawasaki, *Applied Physics Letters* **108**, 022402 (2016).
- [22] “**Magnetic properties of spin frustrated spinel ZnFe_2O_4 / ZnCr_2O_4 superlattices**” T. Murata, Y. Kozuka, M. Uchida, and M. Kawasaki, *Journal of Applied Physics* **118**, 193901 (2015).
- [21] “**Formation and Observation of a Quasi-Two-Dimensional d_{xy} Electron Liquid in Epitaxially Stabilized $\text{Sr}_{2-x}\text{La}_x\text{TiO}_4$ Thin Films**” Y. F. Nie, D. Di Sante, S. Chatterjee, P. D. C. King, M. Uchida, S. Ciuchi, D. G. Schlom, and K. M. Shen, *Physical Review Letters* **115**, 096405 (2015).
- [20] “**Field-direction control of the type of charge carriers in nonsymmorphic IrO_2** ” M. Uchida, W. Sano, K. S. Takahashi, T. Koretsune, Y. Kozuka, R. Arita, Y. Tokura, and M. Kawasaki, *Physical Review B* **91**, 241119(R) (2015). *Selected for Editors’ Suggestion*
- [19] “**Band alignment and photovoltaic effect of epitaxial α - PbO thin films**” E. Majima, Y. Kozuka, M. Uchida, M. Nakamura, and M. Kawasaki, *Applied Physics Express* **8**, 074001 (2015).
- [18] “**Topological Hall effect in Heisenberg ferromagnet EuO thin films**” Y. Ohuchi, Y. Kozuka, M. Uchida, K. Ueno, A. Tsukazaki, M. Kawasaki, *Physical Review B* **91**, 245115 (2015).
- [17] “**Odd-parity magnetoresistance in pyrochlore iridate thin films with broken time-reversal symmetry**” T. C. Fujita, Y. Kozuka, M. Uchida, A. Tsukazaki, T. Arima, and M. Kawasaki, *Scientific Reports* **5**, 9711 (2015).
- [16] “**Calibration and control of in-plane Mg doping distribution in $\text{Mg}_x\text{Zn}_{1-x}\text{O}/\text{ZnO}$ heterostructures grown by molecular beam epitaxy**” M. Uchida, J. Falson, Y. Segawa, Y. Kozuka, A. Tsukazaki, and M. Kawasaki, *Japanese Journal of Applied Physics* **54**, 028004 (2015).
- [15] “**Interplay of Spin-Orbit Interactions, Dimensionality, and Octahedral Rotations in Semimetallic SrIrO_3** ” Y. F. Nie, P. D. C. King, C. H. Kim, M. Uchida, H. I. Wei, B. D. Faeth, J. P. Ruf, J. P. C. Ruff, L. Xie, X. Pan, C. J. Fennie, D. G. Schlom, and K. M. Shen, *Physical Review Letters* **114**, 016401 (2015).
- [14] “**Correlated vs. conventional insulating behavior in the $J_{\text{eff}} = 1/2$ vs. $3/2$ bands in the layered iridate Ba_2IrO_4** ” M. Uchida, Y. F. Nie, P. D. C. King, C. H. Kim, C. J. Fennie, D. G. Schlom, and K. M. Shen, *Physical Review B* **90**, 075142 (2014).
- [13] “**Atomic-scale control of competing electronic phases in ultrathin LaNiO_3** ” P. D. C. King, H. I. Wei, Y. F. Nie, M. Uchida, C. Adamo, S. Zhu, X. He, I. Božović, D. G. Schlom, and K. M. Shen, *Nature Nanotechnology* **9**, 443–447 (2014).
- [12] “**Evidence for Topologically Protected Surface States and a Superconducting Phase in $[\text{Ti}_4](\text{Ti}_{1-x}\text{Sn}_x)\text{Te}_3$ Using Photoemission, Specific Heat, and Magnetization Measurements, and Density Functional Theory**” K. E. Arpino, D. C. Wallace, Y. F. Nie, T. Birol, P. D. C. King, S. Chatterjee, M. Uchida, S. M. Koohpayeh, J.-J. Wen, C. J. Fennie, K. M. Shen, and T. M. McQueen, *Physical Review Letters* **112**, 017002 (2014).
- [11] “**Extremely high electron mobility in a phonon-glass semimetal**” S. Ishiwata, Y. Shiomi, M. S. Bahramy, J. S. Lee, T. Suzuki, M. Uchida, R. Arita, Y. Taguchi, and Y. Tokura, *Nature Materials* **12**, 512-517 (2013).
- [10] “**A tunable low-energy photon source for high-resolution angle-resolved photoemission spectroscopy**” J. W. Harter, P. D. C. King, E. J. Monkman, D. E. Shai, Y. Nie, M. Uchida, B. Burganov, S. Chatterjee, and K. M. Shen, *Review of Scientific Instruments* **83**, 113103 (2012).
- [9] “**Pseudogap-related charge dynamics in layered-nickelate $\text{R}_{2-x}\text{Sr}_x\text{NiO}_4$ ($x \sim 1$)**” M. Uchida, Y. Yamasaki, Y. Kaneko,

K. Ishizaka, J. Okamoto, H. Nakao, Y. Murakami, and Y. Tokura, *Physical Review B* **86**, 165126 (2012).

[8] “**Spin and charge states of Co in half-doped layered cobaltates $\text{La}_{1.5}\text{Ca}_{0.5}\text{CoO}_4$ and $\text{La}_{1.5}\text{Sr}_{0.5}\text{CoO}_4$** ” J. S. Lee, Hal. Q. Yamamoto, M. Uchida, and Y. Tokura, *Physical Review B* **86**, 045133 (2012).

[7] “**Charge-gap formation in the insulating states of $A\text{V}_{10}\text{O}_{15}$ ($A = \text{Ba}, \text{Sr}$)**” M. Hoshino, T. Kajita, T. Kanzaki, M. Uchida, Y. Tokura, and T. Katsufuji, *Physical Review B* **85**, 085106 (2012).

[6] “**Orbital characters of three-dimensional Fermi surfaces in $\text{Eu}_{2-x}\text{Sr}_x\text{NiO}_4$ as probed by soft-x-ray angle-resolved photoemission spectroscopy**” M. Uchida, K. Ishizaka, P. Hansmann, X. Yang, M. Sakano, J. Miyawaki, R. Arita, Y. Kaneko, Y. Takata, M. Oura, A. Toschi, K. Held, A. Chainani, O. K. Andersen, S. Shin, and Y. Tokura, *Physical Review B* **84**, 241109(R) (2011). *Selected for Editors’ Suggestion*

[5] “**Thermoelectric response in the incoherent transport region near Mott transition: the case study of $\text{La}_{1-x}\text{Sr}_x\text{VO}_3$** ” M. Uchida, K. Oishi, M. Matsuo, W. Koshibae, Y. Onose, M. Mori, J. Fujioka, S. Miyasaka, S. Maekawa, and Y. Tokura, *Physical Review B* **83**, 165127 (2011).

[4] “**Large magnetoresistance and spin-polarized heavy-mass electron state of the doped valence-bond solid $(\text{Ti}_{1-x}\text{V}_x)_2\text{O}_3$** ” M. Uchida, Y. Onose, and Y. Tokura, *Physical Review B* **83**, 052404 (2011).

[3] “**Pseudogap of metallic layered nickelate $\text{R}_{2-x}\text{Sr}_x\text{NiO}_4$ ($R=\text{Nd},\text{Eu}$) crystals measured using angle-resolved photoemission spectroscopy**” M. Uchida, K. Ishizaka, P. Hansmann, Y. Kaneko, Y. Ishida, X. Yang, R. Kumai, A. Toschi, Y. Onose, R. Arita, K. Held, O. K. Andersen, S. Shin, and Y. Tokura, *Physical Review Letters* **106**, 027001 (2011). *Featured in Journal Club for Condensed Matter Physics*

[2] “**Growth of superconducting Sr_2RuO_4 thin films**” Y. Krockenberger, M. Uchida, K. S. Takahashi, M. Nakamura, M. Kawasaki, and Y. Tokura, *Applied Physics Letters* **97**, 082502 (2010).

[1] “**Charge dynamics in thermally and doping induced insulator-metal transitions of $(\text{Ti}_{1-x}\text{V}_x)_2\text{O}_3$** ” M. Uchida, J. Fujioka, Y. Onose, and Y. Tokura, *Physical Review Letters* **101**, 066406 (2008).

Books

[1] “**Spectroscopic Study on Charge-Spin-Orbital Coupled Phenomena in Mott-Transition Oxides**” M. Uchida ISBN: 978-4-431-54296-4 (Springer-Verlag, 2013).

Research Grants:

2024-2025 JSPS Grant-in-Aid for Transformative Research Areas (A) “1000-Tesla Science”

2024-2025 JSPS Grant-in-Aid for Transformative Research Areas (A) “Asymmetric Quantum Matters”

2022-2023 JSPS Grant-in-Aid for Challenging Research (Exploratory)

2022-2023 JSPS Grant-in-Aid for Scientific Research on Innovative Areas “Crystal Defect Core”

2022-2023 JSPS Grant-in-Aid for Scientific Research on Innovative Areas “Quantum Liquid Crystals”

2022- JST FOREST

2021-2023 JSPS Grant-in-Aid for Scientific Research (B)

2018-2021 JST PRESTO “Topological Materials Science for Creation of Innovative Functions”

2018-2020 JSPS Grant-in-Aid for Scientific Research (B)

2016-2017 JSPS Grant-in-Aid for Scientific Research on Innovative Areas “Topological Materials Science”

2015-2016 JSPS Grant-in-Aid for Young Scientists (A)

2014-2015 JSPS Grant-in-Aid for Challenging Exploratory Research

2012-2013 JSPS Postdoctoral Fellowships for Research Abroad

2009-2011 JSPS Research Fellowships for Young Scientists

Awards:

2024 Special Award for Tokyo Tech Advanced Researchers [STAR] (Tokyo Institute of Technology)

2023 iWoe prize (iWoe Award Committee)

2022 High Magnetic Field Forum Frontier Award (The High Magnetic Field Forum)

2022 Honda Memorial Young Researcher Award (The Honda Memorial Foundation)

2021 Condensed-Matter Science Prize (Condensed-Matter Science Prize Steering Committee)

- 2021 Tokyo Tech Challenging Research Award, Suematsu Challenging Research Award (Tokyo Institute of Technology)
- 2021 The Young Scientists' Award (MEXT)
- 2020 Young Research Incentive Award in School of Science (Tokyo Institute of Technology)
- 2020 Young Scientist Award of the Physical Society of Japan (Division 4) (The Physical Society of Japan)
- 2017 Science Poster Prize in CEMS-QPEC Symposium (Science AAAS)
- 2015 Ando Prize for Outstanding Young Scientists (The Foundation of Ando Laboratory)
- 2015 Funai Research Incentive Award (Funai Foundation for Information Technology)
- 2014 Inoue Research Award for Young Scientists (Inoue Foundation for Science)
- 2012 Springer Theses (Springer)

Other Foundation Grants:

2024-2026	Murata Science and Education Foundation	Research Grant
2024	Iketani Science and Technology Foundation	Research Grant
2023	Izumi Science and Technology Foundation	Research Grant
2021	The Mitsubishi Foundation	Grant for Young Researchers
2021	The Asahi Glass Foundation	Incentive Research Grant
2021	Inamori Foundation	Research Grant
2021-2022	TEPCO Memorial Foundation	Basic Research Grant
2020	The Sumitomo Foundation	Grant for Basic Science Research Projects
2020	Murata Science Foundation	Research Grant
2019-2020	School of Engineering, The University of Tokyo	Support for Young Researchers
2019	TEPCO Memorial Foundation	General Research Grant
2016	The Foundation for The Promotion of Ion Engineering	Research Grant
2016	The Asahi Glass Foundation	Incentive Research Grant
2016	Iketani Science and Technology Foundation	Research Grant
2016	Yazaki Memorial Foundation for Science and Technology	Incentive Research Grant
2015	The Thermal & Electric Energy Technology Inc. Foundation	Research Grant
2015	Research Foundation for the Electrotechnology of Chubu	Research Grant
2014	The Casio Science Promotion Foundation	Research Grant
2014	Murata Science Foundation	Research Grant
2014	Toyota Physical and Chemical Research Institute	Scholar Project
2014	Mizuho Foundation for the Promotion of Sciences	Engineering Research Grant