

Yasuyuki Hikita

List of Publications by Year in descending order

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112
papers

9,605
citations

66343

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116
all docs

116
docs citations

116
times ranked

11514
citing authors

#	ARTICLE	IF	CITATIONS
1	Universal behavior of the bosonic metallic ground state in a two-dimensional superconductor. Npj Quantum Materials, 2021, 6, .	5.2	10
2	Highly Efficient Surface Charge Transfer in Fe ₂ TiO ₅ Epitaxial Thin Film Photoanodes. ACS Applied Energy Materials, 2021, 4, 2098-2106.	5.1	5
3	Strain Gradient Elasticity in SrTiO ₃ Membranes: Bending versus Stretching. Nano Letters, 2021, 21, 2470-2475.	9.1	39
4	Epitaxial Stabilization and Oxygen Evolution Reaction Activity of Metastable Columbite Iridium Oxide. ACS Applied Energy Materials, 2021, 4, 3074-3082.	5.1	7
5	Stabilization of Sr ₃ Al ₂ O ₆ Growth Templates for Ex Situ Synthesis of Freestanding Crystalline Oxide Membranes. Nano Letters, 2021, 21, 4454-4460.	9.1	25
6	Understanding Degradation Mechanisms in SrIrO ₃ Oxygen Evolution Electrocatalysts: Chemical and Structural Microscopy at the Nanoscale. Advanced Functional Materials, 2021, 31, 2101542.	14.9	16
7	Charge order textures induced by non-linear couplings in a half-doped manganite. Nature Communications, 2021, 12, 3747.	12.8	12
8	Extreme tensile strain states in La _{0.7} Ca _{0.3} MnO ₃ membranes. Science, 2020, 368, 71-76.	12.6	151
9	Electronic structure of the parent compound of superconducting infinite-layer nickelates. Nature Materials, 2020, 19, 381-385.	27.5	205
10	Ferromagnetic resonance of perpendicularly magnetized Tm ₃ Fe ₅ O ₁₂ /Pt heterostructures. Applied Physics Letters, 2019, 115, .	3.3	23
11	Superconductivity in an infinite-layer nickelate. Nature, 2019, 572, 624-627.	27.8	673
12	Large-Area Crystalline BaSnO ₃ Membranes with High Electron Mobilities. ACS Applied Electronic Materials, 2019, 1, 1269-1274.	4.3	29
13	Freestanding Oxide Ferroelectric Tunnel Junction Memories Transferred onto Silicon. Nano Letters, 2019, 19, 3999-4003.	9.1	64
14	Delta-doped SrTiO ₃ top-gated field effect transistor. Applied Physics Letters, 2019, 114, 231605.	3.3	4
15	Oxygen Evolution Reaction Activity in IrOx/SrIrO ₃ Catalysts: Correlations between Structural Parameters and the Catalytic Activity. Journal of Physical Chemistry Letters, 2019, 10, 1516-1522.	4.6	24
16	Probing the band alignment in rectifying SrIrO ₃ /Nb:SrTiO ₃ heterostructures. Applied Physics Letters, 2019, 114, .	3.3	3
17	Heteroepitaxial vertical perovskite hot-electron transistors down to the monolayer limit. Nature Communications, 2019, 10, 5312.	12.8	10
18	Strain-tunable magnetism at oxide domain walls. Nature Physics, 2019, 15, 269-274.	16.7	65

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19	Understanding crystalline $\text{YB}_2\text{C}_3\text{O}_7$ superconductivity. <i>Physical Review Letters</i> , 2018, 121, 167003.	2.4	38
20	Strain Tuning in Complex Oxide Epitaxial Films Using an Ultrathin Strontium Aluminate Buffer Layer. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1700339.	2.4	13
21	Polaronic behavior in a weak-coupling superconductor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 1475-1480.	7.1	67
22	Atomically engineered epitaxial anatase TiO_2 metal-semiconductor field-effect transistors. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	5
23	Direct Electron Detection for Atomic-Resolution EELS Mapping at Cryogenic Temperature. <i>Microscopy and Microanalysis</i> , 2018, 24, 454-455.	0.4	6
24	Inhomogeneous barrier heights at dipole-controlled $\text{SrRuO}_3/\text{Nb:SrTiO}_3$ Schottky junctions. <i>Applied Physics Letters</i> , 2018, 113, 221603.	3.3	7
25	Carrier density and disorder tuned superconductor-metal transition in a two-dimensional electron system. <i>Nature Communications</i> , 2018, 9, 4008.	12.8	55
26	Superconducting Tunneling Spectroscopy of Spin-Orbit Coupling and Orbital Depairing in Nb:SrTiO_3 . <i>Physical Review Letters</i> , 2018, 121, 167003.	7.8	9
27	Spontaneous Ionic Polarization in Ammonia-Based Ionic Liquid. <i>ACS Applied Energy Materials</i> , 2018, 1, 2717-2720.	5.1	2
28	Synthesis and electronic properties of Fe_2TiO_5 epitaxial thin films. <i>APL Materials</i> , 2018, 6, .	5.1	18
29	Ubiquitous strong electron-phonon coupling at the interface of FeSe/SrTiO_3 . <i>Nature Communications</i> , 2017, 8, 14468.	12.8	51
30	Ultrathin Epitaxial Barrier Layer to Avoid Thermally Induced Phase Transformation in Oxide Heterostructures. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 54-59.	8.0	27
31	Mapping cation diffusion through lattice defects in epitaxial oxide thin films on the water-soluble buffer layer $\text{Sr}_3\text{Al}_2\text{O}_6$ using atomic resolution electron microscopy. <i>APL Materials</i> , 2017, 5, .	5.1	13
32	Enhancing the barrier height in oxide Schottky junctions using interface dipoles. <i>Applied Physics Letters</i> , 2017, 111, 091602.	3.3	6
33	Imaging and tuning polarity at SrTiO_3 domain walls. <i>Nature Materials</i> , 2017, 16, 1203-1208.	27.5	68
34	Two-dimensional limit of crystalline order in perovskite membrane films. <i>Science Advances</i> , 2017, 3, eaao5173.	10.3	103
35	Enhanced Sensitivity of Atomic-Resolution Spectroscopic Imaging by Direct Electron Detection. <i>Microscopy and Microanalysis</i> , 2017, 23, 366-367.	0.4	14
36	Band Edge Engineering of Oxide Photoanodes for Photoelectrochemical Water Splitting: Integration of Subsurface Dipoles with Atomic-Scale Control. <i>Advanced Energy Materials</i> , 2016, 6, 1502154.	19.5	39

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37	Variation in superconducting transition temperature due to tetragonal domains in two-dimensionally doped SrTiO_3 . Physical Review B, 2016, 94, .	3.2	30
38	Impurity Segregation via Extended Defects in Oxide Thin Films Probed by Aberration-Corrected STEM-EELS. Microscopy and Microanalysis, 2016, 22, 1518-1519.	0.4	0
39	Thermodynamic guiding principles in selective synthesis of strontium iridate Ruddlesden-Popper epitaxial films. APL Materials, 2016, 4, .	5.1	41
40	Depth resolved domain mapping in tetragonal SrTiO_3 by micro-Laue diffraction. Applied Physics Letters, 2016, 108, 182901.	3.3	6
41	Orientation-resolved domain mapping in tetragonal SrTiO_3 using polarized Raman spectroscopy. Physical Review B, 2016, 94, .	3.2	10
42	Anisotropic Transport at the $\text{LaAlO}_3/\text{SrTiO}_3$ Interface Explained by Microscopic Imaging of Channel-Flow over SrTiO_3 Domains. ACS Applied Materials & Interfaces, 2016, 8, 12514-12519.	8.0	42
43	A highly active and stable IrO_3 catalyst for the oxygen evolution reaction. Science, 2016, 353, 1011-1014.	12.6	1,606
44	Synthesis of freestanding single-crystal perovskite films and heterostructures by etching of sacrificial water-soluble layers. Nature Materials, 2016, 15, 1255-1260.	27.5	387
45	Dual-Gate Modulation of Carrier Density and Disorder in an Oxide Two-Dimensional Electron System. Nano Letters, 2016, 16, 6130-6136.	9.1	45
46	Defect Control of Conventional and Anomalous Electron Transport at Complex Oxide Interfaces. Physical Review X, 2016, 6, .	8.9	42
47	Tuning Band Alignment Using Interface Dipoles at the Pt/Anatase TiO_2 Interface. Advanced Materials, 2015, 27, 7458-7461.	21.0	14
48	Strain Control at Two-Dimensional Oxide Interfaces Probed by Aberration-Corrected STEM-EELS. Microscopy and Microanalysis, 2015, 21, 1137-1138.	0.4	0
49	Polarization-sensitive broadband photodetector using a black phosphorus vertical p-n junction. Nature Nanotechnology, 2015, 10, 707-713.	31.5	1,007
50	Enhanced Electrical Transparency by Ultrathin LaAlO_3 Insertion at Oxide Metal/Semiconductor Heterointerfaces. Nano Letters, 2015, 15, 1622-1626.	9.1	24
51	Optical Study of Tetragonal Domains in $\text{LaAlO}_3/\text{SrTiO}_3$. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1017-1020.	1.8	16
52	Controlling band alignments by artificial interface dipoles at perovskite heterointerfaces. Nature Communications, 2015, 6, 6759.	12.8	58
53	Inelastic x-ray scattering in heterostructures: electronic excitations in $\text{LaAlO}_3/\text{SrTiO}_3$. Journal of Physics Condensed Matter, 2015, 27, 335501.	1.8	8
54	Origin of the Magnetoresistance in Oxide Tunnel Junctions Determined through Electric Polarization Control of the Interface. Physical Review X, 2015, 5, .	8.9	29

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55	Quantum longitudinal and Hall transport at the LaAlO ₃ /SrTiO ₃ interface at low electron densities. Solid State Communications, 2014, 197, 25-29.	1.9	38
56	Spin-dependent transport across Co/LaAlO ₃ /SrTiO ₃ heterojunctions. Applied Physics Letters, 2014, 105, 032406.	3.3	34
57	Spatial density profile of electrons near the LaAlO ₃ /SrTiO ₃ heterointerface revealed by time-resolved photoluminescence spectroscopy. Applied Physics Letters, 2014, 104, .	3.3	16
58	Photocarrier recombination and localization dynamics of LaAlO ₃ /SrTiO ₃ heterostructures. Proceedings of SPIE, 2014, , .	0.8	3
59	Visualizing the interfacial evolution from charge compensation to metallic screening across the manganite metal-insulator transition. Nature Communications, 2014, 5, 3464.	12.8	73
60	Atomically Engineered Metal-Insulator Transition at the TiO ₂ /LaAlO ₃ Heterointerface. Nano Letters, 2014, 14, 6743-6746.	9.1	24
61	Hot electron transport in a strongly correlated transition-metal oxide. Scientific Reports, 2013, 3, 1274.	3.3	16
62	Enhancing Electron Mobility at the LaAlO ₃ /SrTiO ₃ Interface by Surface Control. Advanced Materials, 2013, 25, 4735-4738.	21.0	71
63	Locally enhanced conductivity due to the tetragonal domain structure in LaAlO ₃ /SrTiO ₃ heterointerfaces. Nature Materials, 2013, 12, 1091-1095.	27.5	172
64	Titanium dxy ferromagnetism at the LaAlO ₃ /SrTiO ₃ interface. Nature Materials, 2013, 12, 703-706.	27.5	303
65	Measurement of the Femtosecond Optical Absorption of $\text{LaAlO}_3/\text{SrTiO}_3$ Evidence for an Extremely Slow Electron Relaxation at the Interface. Physical Review Letters, 2013, 111, 047403.	3.3	19
66	Compositional and gate tuning of the interfacial conductivity in LaAlO ₃ /LaTiO ₃ /SrTiO ₃ heterostructures. Applied Physics Letters, 2013, 102, .	3.3	19
67	Transistor operation and mobility enhancement in top-gated LaAlO ₃ /SrTiO ₃ heterostructures. Applied Physics Letters, 2013, 103, .	3.3	64
68	Stoichiometry control of the electronic properties of the LaAlO ₃ /SrTiO ₃ heterointerface. Applied Physics Letters, 2013, 102, .	3.3	63
69	Tunable coupling of two-dimensional superconductors in bilayer SrTiO ₃ /LaAlO ₃ heterostructures. Physical Review B, 2013, 88, .	3.2	6
70	Coexistence of two-dimensional and three-dimensional Shubnikov-de Haas oscillations in Ar-doped SrTiO ₃ /LaAlO ₃ heterostructures. Physical Review B, 2012, 85, .	3.2	44
71	Intrinsic spin-orbit coupling in superconducting LaAlO ₃ /SrTiO ₃ heterostructures. Physical Review B, 2012, 85, .	3.2	36
72	Intrinsic spin-orbit coupling in superconducting LaAlO ₃ /SrTiO ₃ heterostructures. Physical Review B, 2012, 86, .	3.2	49

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73	Metal-to-insulator transition in anatase TiO ₂ thin films induced by growth rate modulation. Applied Physics Letters, 2012, 101, .	3.3	18
74	Subband Structure of a Two-Dimensional Electron Gas Formed at the Polar Surface of the Strong Spin-Orbit Perovskite $KTaO_3$. Physical Review Letters, 2012, 108, 117602.	7.8	173
75	Gate-tuned superfluid density at the superconducting LaAlO ₃ /SrTiO ₃ interface. Physical Review B, 2012, 86, .	3.2	94
76	Scanning Probe Manipulation of Magnetism at the LaAlO ₃ /SrTiO ₃ Heterointerface. Nano Letters, 2012, 12, 4055-4059.	9.1	43
77	Magnetotransport effects in polar versus non-polar SrTiO ₃ based heterostructures. Physical Review B, 2012, 86, .	3.2	23
78	Critical thickness for ferromagnetism in LaAlO ₃ /SrTiO ₃ heterostructures. Nature Communications, 2012, 3, 922.	12.8	186
79	Scanning SQUID susceptometry of a paramagnetic superconductor. Physical Review B, 2012, 85, .	3.2	46
80	LaVO ₄ : Eu Phosphor films with enhanced Eu solubility. Applied Physics Letters, 2011, 98, .	3.3	36
81	Direct imaging of the coexistence of ferromagnetism and superconductivity at the LaAlO ₃ /SrTiO ₃ interface. Nature Physics, 2011, 7, 767-771.	16.7	765
82	Growth Temperature Dependence of the LaAlO ₃ /SrTiO ₃ Interfacial Structure. Journal of Physics: Conference Series, 2011, 320, 012074.	0.4	1
83	Electronic structure of the SrTiO ₃ /LaAlO ₃ interface revealed by resonant soft x-ray scattering. IOP Conference Series: Materials Science and Engineering, 2011, 24, 012012.	0.6	4
84	A heteroepitaxial perovskite metal-base transistor. Nature Materials, 2011, 10, 198-201.	27.5	104
85	Built-in and induced polarization across LaAlO ₃ /SrTiO ₃ heterojunctions. Nature Physics, 2011, 7, 80-86.	16.7	178
86	Control of electronic conduction at an oxide heterointerface using surface polar adsorbates. Nature Communications, 2011, 2, 494.	12.8	149
87	Tuning the Electron Gas at an Oxide Heterointerface via Free Surface Charges. Advanced Materials, 2011, 23, 1744-1747.	21.0	60
88	Electric field penetration in Au/Nb:SrTiO ₃ Schottky junctions probed by bias-dependent internal photoemission. Applied Physics Letters, 2011, 98, .	3.3	33
89	Fermi Surface and Superconductivity in Low-Density High-Mobility δ -Doped SrTiO ₃ . Physical Review Letters, 2011, 107, 106801.	7.8	46
90	Reentrant insulating state in ultrathin manganite films. Applied Physics Letters, 2011, 99, 092513.	3.3	24

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109	Characterization of the Schottky barrier in SrRuO ₃ â••Nb:SrTiO ₃ junctions. Applied Physics Letters, 2007, 90, 143507.	3.3	71
110	Optically tuned dimensionality crossover in photocarrier-doped SrTiO_3 . Onset of weak localization. Physical Review B, 2007, 76, .	3.2	27
111	Fabrication of MgB ₂ Thin Film on Boride Substrates by Pulsed Laser Deposition. Journal of Low Temperature Physics, 2003, 131, 1187-1191.	1.4	5
112	Correlation between the superconducting and structural properties in MgB ₂ thin films prepared by molecular-beam epitaxy. Applied Physics Letters, 2003, 83, 3740-3742.	3.3	14