

Ryo Ishikawa

List of Publications by Year in descending order

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120
papers

4,001
citations

109264

35
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123376

61
g-index

123
all docs

123
docs citations

123
times ranked

5514
citing authors

#	ARTICLE	IF	CITATIONS
1	Overall water splitting by Ta ₃ N ₅ nanorod single crystals grown on the edges of KTaO ₃ particles. Nature Catalysis, 2018, 1, 756-763.	16.1	390
2	Direct imaging of hydrogen-atom columns in a crystal by annular bright-field electron microscopy. Nature Materials, 2011, 10, 278-281.	13.3	313
3	Direct Atomic-Resolution Observation of Two Phases in the Li _{1.2} Mn _{0.567} Ni _{0.166} Co _{0.067} O ₂ Cathode Material for Lithium-ion Batteries. Angewandte Chemie - International Edition, 2013, 52, 5969-5973.	7.2	242
4	Atomic-scale origin of the large grain-boundary resistance in perovskite Li-ion-conducting solid electrolytes. Energy and Environmental Science, 2014, 7, 1638.	15.6	219
5	Electric field imaging of single atoms. Nature Communications, 2017, 8, 15631.	5.8	144
6	Enhancing Photocatalytic Activity of LaTiO ₂ N by Removal of Surface Reconstruction Layer. Nano Letters, 2014, 14, 1038-1041.	4.5	129
7	Direct Imaging of Pt Single Atoms Adsorbed on TiO ₂ (110) Surfaces. Nano Letters, 2014, 14, 134-138.	4.5	115
8	Possible absence of critical thickness and size effect in ultrathin perovskite ferroelectric films. Nature Communications, 2017, 8, 15549.	5.8	104
9	Direct imaging of atomistic grain boundary migration. Nature Materials, 2021, 20, 951-955.	13.3	94
10	Atomic-Scale Measurement of Flexoelectric Polarization at SrTiO_3 Dislocations. Physical Review Letters, 2018, 120, 267601.	2.9	93
11	Direct Observation of Dopant Atom Diffusion in a Bulk Semiconductor Crystal Enhanced by a Large Size Mismatch. Physical Review Letters, 2014, 113, 155501.	2.9	91
12	Three-Dimensional Location of a Single Dopant with Atomic Precision by Aberration-Corrected Scanning Transmission Electron Microscopy. Nano Letters, 2014, 14, 1903-1908.	4.5	89
13	Single-source-precursor derived RGO/CNTs-SiCN ceramic nanocomposite with ultra-high electromagnetic shielding effectiveness. Acta Materialia, 2017, 130, 83-93.	3.8	86
14	Quantitative Annular Dark Field Electron Microscopy Using Single Electron Signals. Microscopy and Microanalysis, 2014, 20, 99-110.	0.2	80
15	Towards 3D Mapping of BO ₆ Octahedron Rotations at Perovskite Heterointerfaces, Unit Cell by Unit Cell. ACS Nano, 2015, 9, 8412-8419.	7.3	78
16	Direct electric field imaging of graphene defects. Nature Communications, 2018, 9, 3878.	5.8	74
17	Persistence of Covalent Bonding in Liquid Silicon Probed by Inelastic X-Ray Scattering. Physical Review Letters, 2012, 108, 067402.	2.9	63
18	Ultrafast Encapsulation of Metal Nanoclusters into MFI Zeolite in the Course of Its Crystallization: Catalytic Application for Propane Dehydrogenation. Angewandte Chemie - International Edition, 2020, 59, 19669-19674.	7.2	63

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19	Atomic mechanism of polarization-controlled surface reconstruction in ferroelectric thin films. <i>Nature Communications</i> , 2016, 7, 11318.	5.8	61
20	Transparent polycrystalline cubic silicon nitride. <i>Scientific Reports</i> , 2017, 7, 44755.	1.6	57
21	Large-angle illumination STEM: Toward three-dimensional atom-by-atom imaging. <i>Ultramicroscopy</i> , 2015, 151, 122-129.	0.8	54
22	Influence of Dislocations in Transition Metal Oxides on Selected Physical and Chemical Properties. <i>Crystals</i> , 2018, 8, 241.	1.0	54
23	Attainment of 40.5 pm spatial resolution using 300 kV scanning transmission electron microscope equipped with fifth-order aberration corrector. <i>Microscopy (Oxford, England)</i> , 2018, 67, 46-50.	0.7	51
24	Single-source-precursor synthesis and electromagnetic properties of novel RGO/SiCN ceramic nanocomposites. <i>Journal of Materials Chemistry C</i> , 2017, 5, 7950-7960.	2.7	48
25	Picometer-scale atom position analysis in annular bright-field STEM imaging. <i>Ultramicroscopy</i> , 2018, 184, 177-187.	0.8	47
26	Multivariate Statistical Characterization of Charged and Uncharged Domain Walls in Multiferroic Hexagonal YMnO ₃ Single Crystal Visualized by a Spherical Aberration-Corrected STEM. <i>Nano Letters</i> , 2013, 13, 4594-4601.	4.5	46
27	Atomic-scale structure relaxation, chemistry and charge distribution of dislocation cores in SrTiO ₃ . <i>Ultramicroscopy</i> , 2018, 184, 217-224.	0.8	45
28	Atomic Structure of Luminescent Centers in High-Efficiency Ce-doped w-AlN Single Crystal. <i>Scientific Reports</i> , 2014, 4, 3778.	1.6	43
29	Probing the Internal Atomic Charge Density Distributions in Real Space. <i>ACS Nano</i> , 2018, 12, 8875-8881.	7.3	43
30	Cubic Cesium Hydrogen Silicododecatungstate with Anisotropic Morphology and Polyoxometalate Vacancies Exhibiting Selective Water Sorption and Cation-Exchange Properties. <i>Chemistry of Materials</i> , 2013, 25, 905-911.	3.2	42
31	Dislocation and oxygen-release driven delithiation in Li ₂ MnO ₃ . <i>Nature Communications</i> , 2020, 11, 4452.	5.8	41
32	PPAR α Ligand-Binding Domain Structures with Endogenous Fatty Acids and Fibrates. <i>IScience</i> , 2020, 23, 101727.	1.9	41
33	Functional Complex Point-Defect Structure in a Huge-Size-Mismatch System. <i>Physical Review Letters</i> , 2013, 110, 065504.	2.9	40
34	Single atom visibility in STEM optical depth sectioning. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	40
35	Direct Measurement of Electronic Band Structures at Oxide Grain Boundaries. <i>Nano Letters</i> , 2020, 20, 2530-2536.	4.5	38
36	Quantitative electric field mapping in thin specimens using a segmented detector: Revisiting the transfer function for differential phase contrast. <i>Ultramicroscopy</i> , 2017, 182, 258-263.	0.8	36

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37	Single-atom dynamics in scanning transmission electron microscopy. MRS Bulletin, 2017, 42, 644-652.	1.7	33
38	Atomic-Scale Tracking of a Phase Transition from Spinel to Rocksalt in Lithium Manganese Oxide. Chemistry of Materials, 2017, 29, 1006-1013.	3.2	32
39	Atomic Scale Origin of Enhanced Ionic Conductivity at Crystal Defects. Nano Letters, 2019, 19, 2162-2168.	4.5	30
40	Jointed magnetic skyrmion lattices at a small-angle grain boundary directly visualized by advanced electron microscopy. Scientific Reports, 2016, 6, 35880.	1.6	27
41	Three-Dimensional Imaging of a Single Dopant in a Crystal. Physical Review Applied, 2020, 13, .	1.5	27
42	High spatiotemporal-resolution imaging in the scanning transmission electron microscope. Microscopy (Oxford, England), 2020, 69, 240-247.	0.7	27
43	Fast Li-ion conduction at grain boundaries in (La,Li)NbO ₃ polycrystals. Journal of Power Sources, 2019, 441, 227187.	4.0	24
44	Grain boundary Li-ion conductivity in (Li _{0.33} La _{0.56})TiO ₃ polycrystal. Applied Physics Letters, 2020, 116, .	1.5	24
45	Direct visualization of anionic electrons in an electride reveals inhomogeneities. Science Advances, 2021, 7, .	4.7	24
46	Full picture discovery for mixed-fluorine anion effects on high-voltage spinel lithium nickel manganese oxide cathodes. NPG Asia Materials, 2017, 9, e398-e398.	3.8	22
47	A new method to detect and correct sample tilt in scanning transmission electron microscopy bright-field imaging. Ultramicroscopy, 2017, 173, 76-83.	0.8	21
48	Direct visualization of lithium via annular bright field scanning transmission electron microscopy: a review. Microscopy (Oxford, England), 2016, 66, 3-14.	0.7	20
49	Atomistic Origin of Li-Ion Conductivity Reduction at (Li _{3-x} La _{2/3})TiO ₃ Grain Boundary. Nano Letters, 2021, 21, 6282-6288.	4.5	20
50	An artificial photosynthesis anode electrode composed of a nanoparticulate photocatalyst film in a visible light responsive GaN-ZnO solid solution system. Scientific Reports, 2016, 6, 35593.	1.6	19
51	Interfacial Atomic Structure of Twisted Few-Layer Graphene. Scientific Reports, 2016, 6, 21273.	1.6	18
52	Unique fitting of electrochemical impedance spectra by random walk Metropolis Hastings algorithm. Journal of Power Sources, 2018, 403, 184-191.	4.0	18
53	Metastable oxysulfide surface formation on LiNi _{0.5} Mn _{1.5} O ₄ single crystal particles by carbothermal reaction with sulfur-doped heterocarbon nanoparticles: new insight into their structural and electrochemical characteristics, and their potential applications. Journal of Materials Chemistry A, 2020, 8, 22302-22314.	5.2	17
54	One-pot synthesis of a C/SiFeN(O)-based ceramic paper with in-situ generated hierarchical micro/nano-morphology. Journal of the European Ceramic Society, 2017, 37, 5193-5203.	2.8	16

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55	Atomic-scale assessment of the crystallization onset in silicon carbonitride. <i>Journal of the European Ceramic Society</i> , 2015, 35, 3355-3362.	2.8	15
56	Reversible Electrochemical Insertion/Extraction of Magnesium Ion into/from Robust NASICON-Type Crystal Lattice in a $\text{Mg}(\text{BF}_4)_2$ -Based Electrolyte. <i>ACS Applied Energy Materials</i> , 2020, 3, 6824-6833.	2.5	14
57	Visualizing the Mixed Bonding Properties of Liquid Boron with High-Resolution X-Ray Compton Scattering. <i>Physical Review Letters</i> , 2015, 114, 177401.	2.9	13
58	Relative Li-ion mobility mapping in $\text{Li}_{0.33}\text{La}_{0.56}\text{TiO}_3$ polycrystalline by electron backscatter diffraction and electrochemical strain microscopy. <i>Applied Physics Express</i> , 2017, 10, 061102.	1.1	13
59	Large angle illumination enabling accurate structure reconstruction from thick samples in scanning transmission electron microscopy. <i>Ultramicroscopy</i> , 2019, 197, 112-121.	0.8	12
60	Single-source-precursor synthesis and high-temperature evolution of novel mesoporous SiVN(O)-based ceramic nanocomposites. <i>Journal of the European Ceramic Society</i> , 2020, 40, 6280-6287.	2.8	11
61	First-principles calculations of group IIIA and group IV impurities in Al_2O_3 . <i>Physical Review Materials</i> , 2020, 4, .	0.9	11
62	Flexoelectric nanodomains in rare-earth iron garnet thin films under strain gradient. <i>Communications Materials</i> , 2021, 2, .	2.9	10
63	Anatase-like Grain Boundary Structure in Rutile Titanium Dioxide. <i>Nano Letters</i> , 2021, 21, 2745-2751.	4.5	9
64	Atomic-Level Changes during Electrochemical Cycling of Oriented LiMn_2O_4 Cathodic Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 6507-6517.	4.0	9
65	Direct Observation of Atomistic Reaction Process between Pt Nanoparticles and TiO_2 (110). <i>Nano Letters</i> , 2022, 22, 4161-4167.	4.5	9
66	Thermophysical properties of the melts of AlPdMn icosahedral quasicrystal. <i>Philosophical Magazine</i> , 2007, 87, 2965-2971.	0.7	8
67	Discovery of Ternary Silicon Titanium Nitride with Spinel-Type Structure. <i>Scientific Reports</i> , 2020, 10, 7372.	1.6	8
68	Probing the meta-stability of oxide core/shell nanoparticle systems at atomic resolution. <i>Chemical Engineering Journal</i> , 2021, 405, 126820.	6.6	8
69	Adsorption sites of single noble metal atoms on the rutile TiO_2 (110) surface influenced by different surface oxygen vacancies. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 175002.	0.7	7
70	Misalignment Induced Artifacts in Quantitative Annular Bright-Field Imaging. <i>Microscopy and Microanalysis</i> , 2016, 22, 888-889.	0.2	7
71	Atomic-Resolution Topographic Imaging of Crystal Surfaces. <i>ACS Nano</i> , 2021, 15, 9186-9193.	7.3	7
72	Two-Dimensional Room-Temperature Giant Antiferrodistortive SrTiO_3 at a Grain Boundary. <i>Physical Review Letters</i> , 2021, 126, 225702.	2.9	7

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73	Room-temperature dilute ferromagnetic dislocations in Sr $_{1-x}$ Mn $_x$ TiO $_3$. Physical Review B, 2017, 96, .	1.1	6
74	Resolution Achievement of 40.5 pm in Scanning Transmission Electron Microscopy using 300 kV Microscope with Delta Corrector. Microscopy and Microanalysis, 2018, 24, 120-121.	0.2	6
75	Atomic structures of Ti-doped Al_2O_3 grain boundary with a small amount of Si impurity. Journal of the American Ceramic Society, 2020, 103, 6659-6665.	1.9	6
76	Stabilization of a honeycomb lattice of IrO $_6$ octahedra by formation of ilmenite-type superlattices in MnTiO $_3$. Communications Materials, 2020, 1, .	2.9	5
77	Synthesis of Novel Melilite-Type Iron/Cobalt Oxides and Their Oxygen Evolution Reaction Electrocatalytic Activity. Chemistry of Materials, 2020, 32, 6847-6854.	3.2	5
78	Improving the depth resolution of STEM-ADF sectioning by 3D deconvolution. Microscopy (Oxford), 2020, 10, 107-115.	0.7	5
79	Factors limiting quantitative phase retrieval in atomic-resolution differential phase contrast scanning transmission electron microscopy using a segmented detector. Ultramicroscopy, 2022, 233, 113457.	0.8	5
80	Atomic-resolution STEM image denoising by total variation regularization. Microscopy (Oxford), 2020, 10, 50-54.	0.7	5
81	Coexistence of two different atomic structures in the Al_2O_3 pyramidal twin boundary in Al_2O_3 . Philosophical Magazine Letters, 2019, 99, 435-443.	0.5	4
82	Room temperature fluoride ion conductivity in defective K_2SbF_6 polycrystals. Journal of Power Sources, 2021, 483, 229173.	4.0	4
83	Automated geometric aberration correction for large-angle illumination STEM. Ultramicroscopy, 2021, 222, 113215.	0.8	4
84	Fluoride-ion conversion alloy for fluoride-ion batteries. Journal of Materials Chemistry A, 2022, 10, 3743-3749.	5.2	4
85	Transition-Metal Distribution in Brownmillerite $\text{Ca}_2\text{FeCoO}_5$. Inorganic Chemistry, 2019, 58, 10209-10216.	1.9	3
86	Ultrafast Encapsulation of Metal Nanoclusters into MFI Zeolite in the Course of Its Crystallization: Catalytic Application for Propane Dehydrogenation. Angewandte Chemie, 2020, 132, 19837-19842.	1.6	3
87	Atomic-Resolution Composition Mapping in EDS STEM. Microscopy and Microanalysis, 2016, 22, 1432-1433.	0.2	2
88	Phase relation between supercooled liquid and amorphous silicon. Applied Physics Letters, 2020, 116, 093705.	1.5	2
89	Improving the Depth Resolution of HAADF Sectioning by 3D Deconvolution. Microscopy and Microanalysis, 2020, 26, 3110-3111.	0.2	2
90	Direct Electromagnetic Structure Observation by Aberration-corrected Differential Phase Contrast Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 906-907.	0.2	1

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91	Quantitative Atomic Resolution Differential Phase Contrast Imaging Using a Segmented Area All Field Detector. <i>Microscopy and Microanalysis</i> , 2016, 22, 504-505.	0.2	1
92	Materials Characterization with Quantitative Electron Microscopy. <i>Materia Japan</i> , 2016, 55, 479-483.	0.1	1
93	Three-Dimensional Point Defect Imaging by Large-angle Illumination STEM. <i>Microscopy and Microanalysis</i> , 2017, 23, 424-425.	0.2	1
94	Phase-Contrast-Based Structure Retrieval Methods in Atomic Resolution Scanning Transmission Electron Microscopy “When They Hold and When They Don't. <i>Microscopy and Microanalysis</i> , 2020, 26, 442-443.	0.2	1
95	Effect of annealing on grain growth and Y segregation behavior in tetragonal ZrO ₂ thin film. <i>Journal of the American Ceramic Society</i> , 2022, 105, 2300-2308.	1.9	1
96	A Compton scattering study on the Hume-Rothery mechanism of AlCu TM (TM: transition metal) quasicrystals. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 7203-7208.	0.7	0
97	Novel-long period structures in hydrogen storage La _x Y _{1-x} Ni _{3.8} compounds. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2008, 64, C533-C533.	0.3	0
98	Stacking Faults and a Novel Structural Polytype in a Hydrogen-Storage (La _{0.8} Mg _{0.2} Ni _{3.5}) Alloy with Block-Stacking Superstructures. <i>Materials Transactions</i> , 2009, 50, 943-947.	0.4	0
99	Direct Imaging of Hydrogen Atoms in a Crystal by Annular Bright-field STEM. <i>Microscopy and Microanalysis</i> , 2011, 17, 1278-1279.	0.2	0
100	Direct Imaging of Interstitial Atoms in a Complex (La _{0.6} Er _{0.4}) ₅ Ni ₁₉ Hydrogen-Storage Compound. <i>Microscopy and Microanalysis</i> , 2011, 17, 1612-1613.	0.2	0
101	Tracking Dopant Diffusion Pathways inside Bulk Materials. <i>Microscopy and Microanalysis</i> , 2014, 20, 50-51.	0.2	0
102	Atomic-Resolution Monitoring of Structural Phase Transition in Bi-magnetic Core/Shell Oxide Nanoparticles. <i>Microscopy and Microanalysis</i> , 2014, 20, 106-107.	0.2	0
103	Toward 3D Mapping of Octahedral Rotations at Perovskite Thin Film Heterointerfaces Unit Cell by Unit Cell. <i>Microscopy and Microanalysis</i> , 2014, 20, 1038-1039.	0.2	0
104	Atomic Observation of Phase Transformation from Spinel to Rock Salt in Lithium Manganese Oxide. <i>Microscopy and Microanalysis</i> , 2015, 21, 333-334.	0.2	0
105	Quantitative Electron Microscopy and the Application by Single Electron Signals. <i>Microscopy and Microanalysis</i> , 2015, 21, 1449-1450.	0.2	0
106	Advanced Electron Microscopy for Energy Related Materials. <i>Microscopy and Microanalysis</i> , 2015, 21, 471-472.	0.2	0
107	Annular Bright-Field Electron Microscopy Tracking Solid-State Chemical Reaction. <i>Microscopy and Microanalysis</i> , 2015, 21, 963-964.	0.2	0
108	B11-O-11Atomic-scale Tracking Cation Diffusion in Lithium Manganese Oxide. <i>Microscopy (Oxford)</i> Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.7	0

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109	Atomic Structure and Properties of Dislocations and Grain Boundaries. , 2016, , .		0
110	Better Contrast for Imaging Defects by ABF. Microscopy and Microanalysis, 2017, 23, 480-481.	0.2	0
111	Quantitative Relation Between Differential Phase Contrast Images Obtained by Segmented and Pixelated Detectors. Microscopy and Microanalysis, 2017, 23, 440-441.	0.2	0
112	Surface and Electric Field Imaging by Newly Designed Atomic-Resolution STEM. Microscopy and Microanalysis, 2018, 24, 118-119.	0.2	0
113	TV-rate Atomic-resolution STEM Imaging. Microscopy and Microanalysis, 2020, 26, 1150-1151.	0.2	0
114	Development of High-Speed Scan System for Atomic Resolution STEM. Microscopy and Microanalysis, 2021, 27, 2710-2712.	0.2	0
115	Direct atomistic defect observations by depth sectioning and dynamic STEM. Microscopy and Microanalysis, 2021, 27, 2138-2139.	0.2	0
116	Complex Point Defect Structure in Cubic Boron Nitride. Materia Japan, 2016, 55, 609-609.	0.1	0
117	Electron microscope control and image analysis by DigitalMicrograph. Materia Japan, 2018, 57, 584-588.	0.1	0
118	Electric Field Imaging at Atomic Resolution by DPC STEM. Materia Japan, 2019, 58, 104-104.	0.1	0
119	Direct Electric Field Imaging of Atomistic Graphene Defects. Nihon Kessho Gakkaishi, 2019, 61, 231-236.	0.0	0
120	Reprint of: Automated geometric aberration correction for large-angle illumination STEM. Ultramicroscopy, 2021, 231, 113410.	0.8	0