Ryo Ishikawa

List of Publications by Year
in descending order

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120 papers	4,001 citations	109321 35 h-index	123424 61 g-index
123 all docs	123 docs citations	123 times ranked	5514 citing authors

#	Article	IF	Citations
1	Overall water splitting by Ta3N5 nanorod single crystals grown on the edges of KTaO3 particles. Nature Catalysis, 2018, 1, 756-763.	34.4	390
2	Direct imaging of hydrogen-atom columns in a crystal by annular bright-field electron microscopy. Nature Materials, 2011, 10, 278-281.	27.5	313
3	Direct Atomicâ€Resolution Observation of Two Phases in the Li_{1.2}Mn_{0.567}Ni_{0.166}Co_{0.067}O₂ Cathode Material for Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2013, 52, 5969-5973.	13.8	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.	30.8	219
5	Electric field imaging of single atoms. Nature Communications, 2017, 8, 15631.	12.8	144
6	Enhancing Photocatalytic Activity of LaTiO₂N by Removal of Surface Reconstruction Layer. Nano Letters, 2014, 14, 1038-1041.	9.1	129
7	Direct Imaging of Pt Single Atoms Adsorbed on TiO₂ (110) Surfaces. Nano Letters, 2014, 14, 134-138.	9.1	115
8	Possible absence of critical thickness and size effect in ultrathin perovskite ferroelectric films. Nature Communications, 2017, 8, 15549.	12.8	104
9	Direct imaging of atomistic grain boundary migration. Nature Materials, 2021, 20, 951-955.	27.5	94
10	Atomic-Scale Measurement of Flexoelectric Polarization at <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SrTiO</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub><mml:mo></mml:mo></mml:mrow></mml:math> Dislocations. Physical Review Letters, 2018, 120, 267601.	7.8	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.	7.8	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.	9.1	89
13	Single-source-precursor derived RGO/CNTs-SiCN ceramic nanocomposite with ultra-high electromagnetic shielding effectiveness. Acta Materialia, 2017, 130, 83-93.	7.9	86
14	Quantitative Annular Dark Field Electron Microscopy Using Single Electron Signals. Microscopy and Microanalysis, 2014, 20, 99-110.	0.4	80
15	Towards 3D Mapping of BO₆ Octahedron Rotations at Perovskite Heterointerfaces, Unit Cell by Unit Cell. ACS Nano, 2015, 9, 8412-8419.	14.6	78
16	Direct electric field imaging of graphene defects. Nature Communications, 2018, 9, 3878.	12.8	74
17	Persistence of Covalent Bonding in Liquid Silicon Probed by Inelastic X-Ray Scattering. Physical Review Letters, 2012, 108, 067402.	7.8	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.	13.8	63

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19	Atomic mechanism of polarization-controlled surface reconstruction in ferroelectric thin films. Nature Communications, 2016, 7, 11318.	12.8	61
20	Transparent polycrystalline cubic silicon nitride. Scientific Reports, 2017, 7, 44755.	3.3	57
21	Large-angle illumination STEM: Toward three-dimensional atom-by-atom imaging. Ultramicroscopy, 2015, 151, 122-129.	1.9	54
22	Influence of Dislocations in Transition Metal Oxides on Selected Physical and Chemical Properties. Crystals, 2018, 8, 241.	2.2	54
23	Attainment of 40.5 pm spatial resolution using 300 kV scanning transmission electron microscope equipped with fifth-order aberration corrector. Microscopy (Oxford, England), 2018, 67, 46-50.	1.5	51
24	Single-source-precursor synthesis and electromagnetic properties of novel RGOâ€“SiCN ceramic nanocomposites. Journal of Materials Chemistry C, 2017, 5, 7950-7960.	5.5	48
25	Picometer-scale atom position analysis in annular bright-field STEM imaging. Ultramicroscopy, 2018, 184, 177-187.	1.9	47
26	Multivariate Statistical Characterization of Charged and Uncharged Domain Walls in Multiferroic Hexagonal YMnO₃ Single Crystal Visualized by a Spherical Aberration-Corrected STEM. Nano Letters, 2013, 13, 4594-4601.	9.1	46
27	Atomic-scale structure relaxation, chemistry and charge distribution of dislocation cores in SrTiO3. Ultramicroscopy, 2018, 184, 217-224.	1.9	45
28	Atomic Structure of Luminescent Centers in High-Efficiency Ce-doped w-AlN Single Crystal. Scientific Reports, 2014, 4, 3778.	3.3	43
29	Probing the Internal Atomic Charge Density Distributions in Real Space. ACS Nano, 2018, 12, 8875-8881.	14.6	43
30	Cubic Cesium Hydrogen Silicododecatungstate with Anisotropic Morphology and Polyoxometalate Vacancies Exhibiting Selective Water Sorption and Cation-Exchange Properties. Chemistry of Materials, 2013, 25, 905-911.	6.7	42
31	Dislocation and oxygen-release driven delithiation in Li2MnO3. Nature Communications, 2020, 11, 4452.	12.8	41
32	PPARÎ± Ligand-Binding Domain Structures with Endogenous Fatty Acids and Fibrates. IScience, 2020, 23, 101727.	4.1	41
33	Functional Complex Point-Defect Structure in a Huge-Size-Mismatch System. Physical Review Letters, 2013, 110, 065504.	7.8	40
34	Single atom visibility in STEM optical depth sectioning. Applied Physics Letters, 2016, 109, .	3.3	40
35	Direct Measurement of Electronic Band Structures at Oxide Grain Boundaries. Nano Letters, 2020, 20, 2530-2536.	9.1	38
36	Quantitative electric field mapping in thin specimens using a segmented detector: Revisiting the transfer function for differential phase contrast. Ultramicroscopy, 2017, 182, 258-263.	1.9	36

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37	Single-atom dynamics in scanning transmission electron microscopy. MRS Bulletin, 2017, 42, 644-652.	3.5	33
38	Atomic-Scale Tracking of a Phase Transition from Spinel to Rocksalt in Lithium Manganese Oxide. Chemistry of Materials, 2017, 29, 1006-1013.	6.7	32
39	Atomic Scale Origin of Enhanced Ionic Conductivity at Crystal Defects. Nano Letters, 2019, 19, 2162-2168.	9.1	30
40	Jointed magnetic skyrmion lattices at a small-angle grain boundary directly visualized by advanced electron microscopy. Scientific Reports, 2016, 6, 35880.	3.3	27
41	Three-Dimensional Imaging of a Single Dopant in a Crystal. Physical Review Applied, 2020, 13, .	3.8	27
42	High spatiotemporal-resolution imaging in the scanning transmission electron microscope. Microscopy (Oxford, England), 2020, 69, 240-247.	1.5	27
43	Fast Li-ion conduction at grain boundaries in (La,Li)NbO3 polycrystals. Journal of Power Sources, 2019, 441, 227187.	7.8	24
44	Grain boundary Li-ion conductivity in (Li0.33La0.56)TiO3 polycrystal. Applied Physics Letters, 2020, 116, .	3.3	24
45	Direct visualization of anionic electrons in an electride reveals inhomogeneities. Science Advances, 2021, 7, .	10.3	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.	7.9	22
47	A new method to detect and correct sample tilt in scanning transmission electron microscopy bright-field imaging. Ultramicroscopy, 2017, 173, 76-83.	1.9	21
48	Direct visualization of lithium via annular bright field scanning transmission electron microscopy: a review. Microscopy (Oxford, England), 2016, 66, 3-14.	1.5	20
49	Atomistic Origin of Li-Ion Conductivity Reduction at (Li_{3x}La_{2/3â€“x})TiO₃ Grain Boundary. Nano Letters, 2021, 21, 6282-6288.	9.1	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.	3.3	19
51	Interfacial Atomic Structure of Twisted Few-Layer Graphene. Scientific Reports, 2016, 6, 21273.	3.3	18
52	Unique fitting of electrochemical impedance spectra by random walk Metropolis Hastings algorithm. Journal of Power Sources, 2018, 403, 184-191.	7.8	18
53	Metastable oxysulfide surface formation on LiNi_{0.5}Mn_{1.5}O₄ 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.	10.3	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.	5.7	16

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55	Atomic-scale assessment of the crystallization onset in silicon carbonitride. Journal of the European Ceramic Society, 2015, 35, 3355-3362.	5.7	15
56	Reversible Electrochemical Insertion/Extraction of Magnesium Ion into/from Robust NASICON-Type Crystal Lattice in a Mg(BF₄)₂-Based Electrolyte. ACS Applied Energy Materials, 2020, 3, 6824-6833.	5.1	14
57	Visualizing the Mixed Bonding Properties of Liquid Boron with High-Resolution X-Ray Compton Scattering. Physical Review Letters, 2015, 114, 177401.	7.8	13
58	Relative Li-ion mobility mapping in Li_{0.33}La_{0.56}TiO₃polycrystalline by electron backscatter diffraction and electrochemical strain microscopy. Applied Physics Express, 2017, 10, 061102.	2.4	13
59	Large angle illumination enabling accurate structure reconstruction from thick samples in scanning transmission electron microscopy. Ultramicroscopy, 2019, 197, 112-121.	1.9	12
60	Single-source-precursor synthesis and high-temperature evolution of novel mesoporous SiVN(O)-based ceramic nanocomposites. Journal of the European Ceramic Society, 2020, 40, 6280-6287.	5.7	11
61	First-principles calculations of group IIA and group IV impurities in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>â€“</mml:mtext><mml:mi mathvariant="normal">A</mml:mi><mml:msub><mml:mi mathvariant="normal">I</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review Materials, 2020, 4, .	2.4	11
62	Flexoelectric nanodomains in rare-earth iron garnet thin films under strain gradient. Communications Materials, 2021, 2, .	6.9	10
63	Anataselike Grain Boundary Structure in Rutile Titanium Dioxide. Nano Letters, 2021, 21, 2745-2751.	9.1	9
64	Atomic-Level Changes during Electrochemical Cycling of Oriented LiMn₂O₄ Cathodic Thin Films. ACS Applied Materials & Interfaces, 2022, 14, 6507-6517.	8.0	9
65	Direct Observation of Atomistic Reaction Process between Pt Nanoparticles and TiO₂ (110). Nano Letters, 2022, 22, 4161-4167.	9.1	9
66	Thermophysical properties of the melts of AlPdMn icosahedral quasicrystal. Philosophical Magazine, 2007, 87, 2965-2971.	1.6	8
67	Discovery of Ternary Silicon Titanium Nitride with Spinel-Type Structure. Scientific Reports, 2020, 10, 7372.	3.3	8
68	Probing the meta-stability of oxide core/shell nanoparticle systems at atomic resolution. Chemical Engineering Journal, 2021, 405, 126820.	12.7	8
69	Adsorption sites of single noble metal atoms on the rutile TiO₂(1â€‰1â€‰0) surface influenced by different surface oxygen vacancies. Journal of Physics Condensed Matter, 2016, 28, 175002.	1.8	7
70	Misalignment Induced Artifacts in Quantitative Annular Bright-Field Imaging. Microscopy and Microanalysis, 2016, 22, 888-889.	0.4	7
71	Atomic-Resolution Topographic Imaging of Crystal Surfaces. ACS Nano, 2021, 15, 9186-9193.	14.6	7
72	Two-Dimensional Room-Temperature Giant Antiferrodistortive SrTiO3 at a Grain Boundary. Physical Review Letters, 2021, 126, 225702.	7.8	7

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73	Room-temperature dilute ferromagnetic dislocations in Sr1â^'xMnxTiO3â^'Î´. Physical Review B, 2017, 96, .	3.2	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.	0.4	6
75	Atomic structures of Tiâ€doped Î±â€Al 2 O 3 Î£13 grain boundary with a small amount of Si impurity. Journal of the American Ceramic Society, 2020, 103, 6659-6665.	3.8	6
76	Stabilization of a honeycomb lattice of IrO6 octahedra by formation of ilmenite-type superlattices in MnTiO3. Communications Materials, 2020, 1, .	6.9	5
77	Synthesis of Novel Melilite-Type Iron/Cobalt Oxides and Their Oxygen Evolution Reaction Electrocatalytic Activity. Chemistry of Materials, 2020, 32, 6847-6854.	6.7	5
78	Improving the depth resolution of STEM-ADF sectioning by 3D deconvolution. Microscopy (Oxford,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.5	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.	1.9	5
80	Atomic-resolution STEM image denoising by total variation regularization. Microscopy (Oxford,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46	1.5	5
81	Coexistence of two different atomic structures in the Î£13 pyramidal twin boundary in Î±-Al₂O₃. Philosophical Magazine Letters, 2019, 99, 435-443.	1.2	4
82	Room temperature fluoride ion conductivity in defective Î²-KSb1-ÎF4-3Î´ polycrystals. Journal of Power Sources, 2021, 483, 229173.	7.8	4
83	Automated geometric aberration correction for large-angle illumination STEM. Ultramicroscopy, 2021, 222, 113215.	1.9	4
84	Fluoride-ion conversion alloy for fluoride-ion batteries. Journal of Materials Chemistry A, 2022, 10, 3743-3749.	10.3	4
85	Transition-Metal Distribution in Brownmillerite Ca₂FeCoO₅. Inorganic Chemistry, 2019, 58, 10209-10216.	4.0	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.	2.0	3
87	Atomic-Resolution Composition Mapping in EDS STEM. Microscopy and Microanalysis, 2016, 22, 1432-1433.	0.4	2
88	Phase relation between supercooled liquid and amorphous silicon. Applied Physics Letters, 2020, 116, 093705.	3.3	2
89	Improving the Depth Resolution of HAADF Sectioning by 3D Deconvolution. Microscopy and Microanalysis, 2020, 26, 3110-3111.	0.4	2
90	Direct Electromagnetic Structure Observation by Aberration-corrected Differential Phase Contrast Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 906-907.	0.4	1

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91	Quantitative Atomic Resolution Differential Phase Contrast Imaging Using a Segmented Area All Field Detector. Microscopy and Microanalysis, 2016, 22, 504-505.	0.4	1
92	Materials Characterization with Quantitative Electron Microscopy. Materia Japan, 2016, 55, 479-483.	0.1	1
93	Three-Dimensional Point Defect Imaging by Large-angle Illumination STEM. Microscopy and Microanalysis, 2017, 23, 424-425.	0.4	1
94	Phase-Contrast-Based Structure Retrieval Methods in Atomic Resolution Scanning Transmission Electron Microscopy â€“ When They Hold and When They Don't. Microscopy and Microanalysis, 2020, 26, 442-443.	0.4	1
95	Effect of annealing on grain growth and Y segregation behavior in tetragonal ZrO₂ thin film. Journal of the American Ceramic Society, 2022, 105, 2300-2308.	3.8	1
96	A Compton scattering study on the Hume-Rothery mechanism of AlCuâ€“TM (TM: transition metal) quasicrystals. Journal of Physics Condensed Matter, 2006, 18, 7203-7208.	1.8	0
97	Novel-long period structures in hydrogen storage LaxY1â^'xNi3.8compounds. Acta Crystallographica Section A: Foundations and Advances, 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. Materials Transactions, 2009, 50, 943-947.	1.2	0
99	Direct Imaging of Hydrogen Atoms in a Crystal by Annular Bright-field STEM. Microscopy and Microanalysis, 2011, 17, 1278-1279.	0.4	0
100	Direct Imaging of Interstitial Atoms in a Complex (La0.6Er0.4)5Ni19 Hydrogen-Storage Compound. Microscopy and Microanalysis, 2011, 17, 1612-1613.	0.4	0
101	Tracking Dopant Diffusion Pathways inside Bulk Materials. Microscopy and Microanalysis, 2014, 20, 50-51.	0.4	0
102	Atomic-Resolution Monitoring of Structural Phase Transition in Bi-magnetic Core/Shell Oxide Nanoparticles. Microscopy and Microanalysis, 2014, 20, 106-107.	0.4	0
103	Toward 3D Mapping of Octahedral Rotations at Perovskite Thin Film Heterointerfaces Unit Cell by Unit Cell. Microscopy and Microanalysis, 2014, 20, 1038-1039.	0.4	0
104	Atomic Observation of Phase Transformation from Spinel to Rock Salt in Lithium Manganese Oxide. Microscopy and Microanalysis, 2015, 21, 333-334.	0.4	0
105	Quantitative Electron Microscopy and the Application by Single Electron Signals. Microscopy and Microanalysis, 2015, 21, 1449-1450.	0.4	0
106	Advanced Electron Microscopy for Energy Related Materials. Microscopy and Microanalysis, 2015, 21, 471-472.	0.4	0
107	Annular Bright-Field Electron Microscopy Tracking Solid-State Chemical Reaction. Microscopy and Microanalysis, 2015, 21, 963-964.	0.4	0
108	B11-O-11Atomic-scale Tracking Cation Diffusion in Lithium Manganese Oxide. Microscopy (Oxford,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.5	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.	0.4	0
111	Quantitative Relation Between Differential Phase Contrast Images Obtained by Segmented and Pixelated Detectors. Microscopy and Microanalysis, 2017, 23, 440-441.	0.4	0
112	Surface and Electric Field Imaging by Newly Designed Atomic-Resolution STEM. Microscopy and Microanalysis, 2018, 24, 118-119.	0.4	0
113	TV-rate Atomic-resolution STEM Imaging. Microscopy and Microanalysis, 2020, 26, 1150-1151.	0.4	0
114	Development of High-Speed Scan System for Atomic Resolution STEM. Microscopy and Microanalysis, 2021, 27, 2710-2712.	0.4	0
115	Direct atomistic defect observations by depth sectioning and dynamic STEM. Microscopy and Microanalysis, 2021, 27, 2138-2139.	0.4	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.	1.9	0