

Fumiyasu Oba

List of Publications by Citations

Source: <https://exaly.com/author-pdf/1042573/fumiyasu-oba-publications-by-citations.pdf>

Version: 2024-04-23

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

183
papers

11,387
citations

47
h-index

104
g-index

192
ext. papers

12,931
ext. citations

4.2
avg, IF

6.58
L-index

#	Paper	IF	Citations
183	First-principles calculations of the ferroelastic transition between rutile-type and CaCl ₂ -type SiO ₂ at high pressures. <i>Physical Review B</i> , 2008 , 78,	3.3	3593
182	Defect energetics in ZnO: A hybrid Hartree-Fock density functional study. <i>Physical Review B</i> , 2008 , 77,	3.3	613
181	Energetics of native defects in ZnO. <i>Journal of Applied Physics</i> , 2001 , 90, 824-828	2.5	330
180	Band structure diagram paths based on crystallography. <i>Computational Materials Science</i> , 2017 , 128, 140-184	3.2	247
179	First-principles calculations of native defects in tin monoxide. <i>Physical Review B</i> , 2006 , 74,	3.3	240
178	Electrostatics-based finite-size corrections for first-principles point defect calculations. <i>Physical Review B</i> , 2014 , 89,	3.3	239
177	Point defects in ZnO: an approach from first principles. <i>Science and Technology of Advanced Materials</i> , 2011 , 12, 034302	7.1	234
176	Band alignment of semiconductors from density-functional theory and many-body perturbation theory. <i>Physical Review B</i> , 2014 , 90,	3.3	203
175	Structures and energetics of Ga ₂ O ₃ polymorphs. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 346211	1.8	182
174	Debye temperature and stiffness of carbon and boron nitride polymorphs from first principles calculations. <i>Physical Review B</i> , 2006 , 73,	3.3	181
173	Effect of MnO Crystal Structure on Aerobic Oxidation of 5-Hydroxymethylfurfural to 2,5-Furandicarboxylic Acid. <i>Journal of the American Chemical Society</i> , 2019 , 141, 890-900	16.4	174
172	First-principles approach to chemical diffusion of lithium atoms in a graphite intercalation compound. <i>Physical Review B</i> , 2008 , 78,	3.3	160
171	Ionization potentials of solids: the importance of vertex corrections. <i>Physical Review Letters</i> , 2014 , 112, 096401	7.4	148
170	Carbon supersaturation due to paraequilibrium carburization: Stainless steels with greatly improved mechanical properties. <i>Acta Materialia</i> , 2006 , 54, 1597-1606	8.4	139
169	Discovery of earth-abundant nitride semiconductors by computational screening and high-pressure synthesis. <i>Nature Communications</i> , 2016 , 7, 11962	17.4	133
168	Structure and stability of a homologous series of tin oxides. <i>Physical Review Letters</i> , 2008 , 100, 045702	7.4	129
167	Intercalation and Push-Out Process with Spinel-to-Rocksalt Transition on Mg Insertion into Spinel Oxides in Magnesium Batteries. <i>Advanced Science</i> , 2015 , 2, 1500072	13.6	117

166	Electronic Structure and Defect Physics of Tin Sulfides: SnS, Sn ₂ S ₃ , and SnS ₂ . <i>Physical Review Applied</i> , 2016 , 6,	4.3	111
165	Lattice dynamics of the tin sulphides SnS, SnS and SnS: vibrational spectra and thermal transport. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 12452-12465	3.6	108
164	Shape Control in Epitaxial Electrodeposition: Cu ₂ O Nanocubes on InP(001). <i>Chemistry of Materials</i> , 2003 , 15, 4882-4885	9.6	105
163	Pressure-induced phase transition in ZnO and ZnO/MgO pseudobinary system: A first-principles lattice dynamics study. <i>Physical Review B</i> , 2005 , 72,	3.3	91
162	Theoretical Formation Energy of Oxygen-Vacancies in Oxides. <i>Materials Transactions</i> , 2002 , 43, 1426-1429,	3.3	91
161	Role of Ti antisitelike defects in SrTiO ₃ . <i>Physical Review Letters</i> , 2009 , 103, 185502	7.4	90
160	Core-hole effects on theoretical electron-energy-loss near-edge structure and near-edge x-ray absorption fine structure of MgO. <i>Physical Review B</i> , 2000 , 61, 2180-2187	3.3	89
159	Antiferromagnetic superexchange via 3d states of titanium in EuTiO ₃ as seen from hybrid Hartree-Fock density functional calculations. <i>Physical Review B</i> , 2011 , 83,	3.3	86
158	Structure, energy and solute segregation behaviour of [110] symmetric tilt grain boundaries in yttria-stabilized cubic zirconia. <i>Philosophical Magazine</i> , 2004 , 84, 2381-2415	1.6	86
157	Room temperature ferromagnetism in Mn-doped EGa ₂ O ₃ with spinel structure. <i>Applied Physics Letters</i> , 2006 , 89, 181903	3.4	84
156	Anti-ferrodistortive-like oxygen-octahedron rotation induced by the oxygen vacancy in cubic SrTiO ₃ . <i>Advanced Materials</i> , 2013 , 25, 86-90	2.4	76
155	Prediction of ground-state structures and order-disorder phase transitions in II-III spinel oxides: A combined cluster-expansion method and first-principles study. <i>Physical Review B</i> , 2006 , 73,	3.3	72
154	Design and exploration of semiconductors from first principles: A review of recent advances. <i>Applied Physics Express</i> , 2018 , 11, 060101	2.4	70
153	Epitaxial Electrodeposition of High-Aspect-Ratio Cu ₂ O(110) Nanostructures on InP(111). <i>Chemistry of Materials</i> , 2005 , 17, 725-729	9.6	68
152	First-principles study of bulk ordering and surface segregation in Pt-Rh binary alloys. <i>Physical Review B</i> , 2006 , 74,	3.3	65
151	Toward Blocking-chair type Mg/Li dual-salt batteries. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 10188-10194,	3.3	64
150	Atomic structures of supersaturated ZnO/Al ₂ O ₃ solid solutions. <i>Journal of Applied Physics</i> , 2008 , 103, 014309	2.5	64
149	Ionization potentials of (112) and (112̄) facet surfaces of CuInSe ₂ and CuGaSe ₂ . <i>Physical Review B</i> , 2012 , 86,	3.3	59

148	Comparison of approximations in density functional theory calculations: Energetics and structure of binary oxides. <i>Physical Review B</i> , 2017 , 96,	3.3	58
147	Epitaxial Growth of Cuprous Oxide Electrodeposited onto Semiconductor and Metal Substrates. <i>Journal of the American Ceramic Society</i> , 2005 , 88, 253-270	3.8	57
146	Atomic structure of [0001]-tilt grain boundaries in ZnO: A high-resolution TEM study of fiber-textured thin films. <i>Physical Review B</i> , 2004 , 70,	3.3	56
145	Transition pathway of CO ₂ crystals under high pressures. <i>Physical Review B</i> , 2008 , 77,	3.3	54
144	Doping of hexagonal boron nitride via intercalation: A theoretical prediction. <i>Physical Review B</i> , 2010 , 81,	3.3	53
143	Chemical and Lattice Stability of the Tin Sulfides. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 6446-6454	3.8	52
142	First-principles study of native defects and lanthanum impurities in NaTaO ₃ . <i>Physical Review B</i> , 2008 , 78,	3.3	52
141	Hardness of cubic silicon nitride. <i>Journal of Materials Research</i> , 2002 , 17, 731-733	2.5	52
140	First-principles study of self-trapped holes and acceptor impurities in Ga ₂ O ₃ polymorphs. <i>Physical Review Materials</i> , 2019 , 3,	3.2	50
139	Electronic and structural properties of the oxygen vacancy in BaTiO ₃ . <i>Applied Physics Letters</i> , 2011 , 98, 172901	3.4	49
138	First-Principles Calculations of Anion Vacancies in Oxides and Nitrides. <i>Journal of the American Ceramic Society</i> , 2004 , 85, 68-74	3.8	47
137	Local environment of Mn dopant in ZnO by near-edge x-ray absorption fine structure analysis. <i>Applied Physics Letters</i> , 2005 , 86, 121902	3.4	47
136	Ab initio study of symmetric tilt boundaries in ZnO. <i>Physical Review B</i> , 2001 , 63,	3.3	46
135	Band alignment of semiconductors and insulators using dielectric-dependent hybrid functionals: Toward high-throughput evaluation. <i>Physical Review B</i> , 2017 , 95,	3.3	45
134	Defect chemistry of a BaZrO ₃ β (111) grain boundary by first principles calculations and space-charge theory. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 12339-46	3.6	44
133	²⁷ Al NMR Chemical Shifts in Oxide Crystals: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 3869-3873	3.8	44
132	Epitaxial electrodeposition of Cu ₂ O films onto InP(001). <i>Applied Physics Letters</i> , 2003 , 83, 1944-1946	3.4	43
131	First-principles study of cation disordering in MgAl ₂ O ₄ spinel with cluster expansion and Monte Carlo simulation. <i>Physical Review B</i> , 2006 , 73,	3.3	42

130	Native defects in oxide semiconductors: a density functional approach. <i>Journal of Physics Condensed Matter</i> , 2010 , 22, 384211	1.8	41
129	First-principles study of point defects in chalcopyrite ZnSnP ₂ . <i>Physical Review B</i> , 2014 , 90,	3.3	39
128	Coexistence of Mn ²⁺ and Mn ³⁺ in ferromagnetic GaMnN. <i>Journal of Physics Condensed Matter</i> , 2006 , 18, 4615-4621	1.8	39
127	Atomic structure and solute segregation of a Σ 3, [110]/{111} grain boundary in an yttria-stabilized cubic zirconia bicrystal. <i>Philosophical Magazine Letters</i> , 2002 , 82, 393-400	1	39
126	Screening procedure for structurally and electronically matched contact layers for high-performance solar cells: hybrid perovskites. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 1149-1158	7.1	38
125	Crystal and electronic structure and magnetic properties of divalent europium perovskite oxides EuMO ₃ (M = Ti, Zr, and Hf): experimental and first-principles approaches. <i>Inorganic Chemistry</i> , 2012 , 51, 4560-7	5.1	38
124	Band offsets of CuInSe ₂ /CdS and CuInSe ₂ /ZnS (110) interfaces: A hybrid density functional theory study. <i>Physical Review B</i> , 2013 , 88,	3.3	38
123	Grain boundary dependency of nonlinear current-voltage characteristics in Pr and Co Doped ZnO Bicrystals. <i>Journal of Applied Physics</i> , 2004 , 95, 1258-1264	2.5	37
122	Metastable cubic tin sulfide: A novel phonon-stable chiral semiconductor. <i>APL Materials</i> , 2017 , 5, 0361015:7	15.7	36
121	Zinc-based spinel cathode materials for magnesium rechargeable batteries: toward the reversible spinel-rocksalt transition. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 12225-12235	13	36
120	Fast Diffusion of Multivalent Ions Facilitated by Concerted Interactions in Dual-Ion Battery Systems. <i>Advanced Energy Materials</i> , 2018 , 8, 1801475	21.8	36
119	Microstructure of Mn-doped ϵ -Ga ₂ O ₃ epitaxial film on sapphire (0001) with room temperature ferromagnetism. <i>Journal of Applied Physics</i> , 2007 , 101, 063526	2.5	36
118	General rule for displacive phase transitions in perovskite compounds revisited by first principles calculations. <i>Physical Review Letters</i> , 2005 , 94, 035502	7.4	36
117	Geometry and electronic structure of [0001]/(1 230) Σ 7 symmetric tilt boundary in ZnO. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2000 , 80, 1567-1581		36
116	Epitaxial growth of Mn-doped ϵ -Ga ₂ O ₃ on spinel substrate. <i>Journal of Materials Research</i> , 2011 , 26, 578-583	5.3	35
115	Atomic structure of luminescent centers in high-efficiency Ce-doped w-AlN single crystal. <i>Scientific Reports</i> , 2014 , 4, 3778	4.9	34
114	Effects of crystal structure on Co-L _{2,3} x-ray absorption near-edge structure and electron-energy-loss near-edge structure of trivalent cobalt oxides. <i>Physical Review B</i> , 2008 , 77,	3.3	34
113	Functional complex point-defect structure in a huge-size-mismatch system. <i>Physical Review Letters</i> , 2013 , 110, 065504	7.4	33

112	First-principles-based phase diagram of the cubic BNC ternary system. <i>Physical Review B</i> , 2008 , 77,	3-3	33
111	Electron-energy-loss near edge structures of six-fold-coordinated Zn in MgO. <i>Ultramicroscopy</i> , 2001 , 86, 363-70	3-1	33
110	Identification of native defects around grain boundary in Pr-doped ZnO bicrystal using electron energy loss spectroscopy and first-principles calculations. <i>Applied Physics Letters</i> , 2004 , 84, 5311-5313	3-4	32
109	Categorization of surface polarity from a crystallographic approach. <i>Computational Materials Science</i> , 2016 , 113, 221-230	3-2	31
108	First-principles calculations of the phase diagrams and band gaps in CuInSe ₂ -CuGaSe ₂ and CuInSe ₂ -CuAlSe ₂ pseudobinary systems. <i>Physical Review B</i> , 2012 , 85,	3-3	31
107	Theoretical Photovoltaic Conversion Efficiencies of ZnSnP ₂ , CdSnP ₂ , and Zn _{1-x} Cd _x SnP ₂ Alloys. <i>Applied Physics Express</i> , 2013 , 6, 061201	2-4	31
106	Effective Doping in Cubic Si ₃ N ₄ and Ge ₃ N ₄ : A First-Principles Study. <i>Journal of the American Ceramic Society</i> , 2004 , 85, 97-100	3-8	31
105	Current-Voltage Characteristics across (0001) Twist Boundaries in Zinc Oxide Bicrystals. <i>Journal of the American Ceramic Society</i> , 2002 , 85, 2142-2144	3-8	31
104	Heterogeneously Catalyzed Aerobic Oxidation of Sulfides with a BaRuO Nanoperovskite. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 23792-23801	9-5	29
103	Strong Spin-Lattice Coupling Through Oxygen Octahedral Rotation in Divalent Europium Perovskites. <i>Advanced Functional Materials</i> , 2013 , 23, 1864-1872	15-6	28
102	Ordering and segregation of a Cu ₇₅ Pt ₂₅ (111) surface: A first-principles cluster expansion study. <i>Physical Review B</i> , 2007 , 76,	3-3	28
101	Atomic and electronic structure of [0001]/($\bar{1}\bar{2}30$) $\sqrt{3}$ symmetric tilt grain boundary in ZnO bicrystal with linear current-voltage characteristic. <i>Journal of Materials Science</i> , 2005 , 40, 3059-3066 ⁴⁻³		28
100	Native point defects and carbon clusters in 4H-SiC: A hybrid functional study. <i>Journal of Applied Physics</i> , 2019 , 125, 125701	2-5	27
99	Classification of spinel structures based on first-principles cluster expansion analysis. <i>Physical Review B</i> , 2010 , 81,	3-3	27
98	Grain-boundary faceting at a = 3, [110]/{112} grain boundary in a cubic zirconia bicrystal. <i>Philosophical Magazine</i> , 2003 , 83, 2221-2246	1-6	26
97	Arrangement of multiple structural units in a [0001] $\sqrt{3}$ tilt grain boundary in ZnO. <i>Physical Review B</i> , 2005 , 72,	3-3	26
96	Carrier-Induced Band-Gap Variation and Point Defects in Zn ₃ N ₂ from First Principles. <i>Physical Review Applied</i> , 2017 , 8,	4-3	25
95	Cluster calculation of oxygen K-edge electron-energy-loss near-edge structure of NiO. <i>Physical Review B</i> , 1998 , 58, 9693-9696	3-3	25

94	Point Defects and p-Type Doping in ScN from First Principles. <i>Physical Review Applied</i> , 2018 , 9,	4.3	24
93	Hybrid density functional study of oxygen vacancies in KTaO ₃ and NaTaO ₃ . <i>Physical Review B</i> , 2011 , 83,	3.3	23
92	Theoretical Prediction of Post-Spinel Phases of Silicon Nitride. <i>Journal of the American Ceramic Society</i> , 2004 , 85, 7-10	3.8	23
91	First-principles calculations of migration energy of lithium ions in halides and chalcogenides. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 8258-62	3.4	22
90	Electrically Benign Defect Behavior in Zinc Tin Nitride Revealed from First Principles. <i>Physical Review Applied</i> , 2018 , 10,	4.3	21
89	n- and p-type dopants for cubic silicon nitride. <i>Applied Physics Letters</i> , 2001 , 78, 1577-1579	3.4	20
88	High-Mobility p-Type and n-Type Copper Nitride Semiconductors by Direct Nitriding Synthesis and In Silico Doping Design. <i>Advanced Materials</i> , 2018 , 30, e1801968	24	19
87	Formation energy of Cr/Al vacancies in spinel MgCr ₂ O ₄ and MgAl ₂ O ₄ by first-principles calculations. <i>Physical Review B</i> , 2002 , 65,	3.3	19
86	Energetics and electronic structure of point defects associated with oxygen excess at a tilt boundary of ZnO. <i>Journal of Materials Research</i> , 2000 , 15, 2167-2175	2.5	19
85	Effect of Oxidation on Chemical Bonding around 3d Transition-Metal Impurities in ZnO. <i>Japanese Journal of Applied Physics</i> , 1999 , 38, 3569-3575	1.4	19
84	Electronic Structure and Defect Chemistry of Tin(II) Complex Oxide SnNb ₂ O ₆ . <i>Journal of Physical Chemistry C</i> , 2016 , 120, 9604-9611	3.8	19
83	First-principles study of valence band offsets at ZnSnP ₂ /CdS, ZnSnP ₂ /ZnS, and related chalcopyrite/zincblende heterointerfaces. <i>Journal of Applied Physics</i> , 2013 , 114, 043718	2.5	18
82	Discovery of a Novel Sn(II)-Based Oxide SnMoO for Daylight-Driven Photocatalysis. <i>Advanced Science</i> , 2017 , 4, 1600246	13.6	18
81	Current-Voltage Characteristics of Cobalt-Doped Inversion Boundaries in Zinc Oxide Bicrystals. <i>Journal of the American Ceramic Society</i> , 2003 , 86, 1616-1618	3.8	18
80	First-Principles Calculations of Co Impurities and Native Defects in ZnO. <i>Materials Transactions</i> , 2002 , 43, 1439-1443	1.3	18
79	Band alignment at surfaces and heterointerfaces of Al ₂ O ₃ , Ga ₂ O ₃ , In ₂ O ₃ , and related group-III oxide polymorphs: A first-principles study. <i>Physical Review Materials</i> , 2019 , 3,	3.2	18
78	Non-Fermi-Liquid Behavior on an Iron-Based Itinerant Electron Magnet Fe ₃ Mo ₃ N. <i>Journal of the Physical Society of Japan</i> , 2010 , 79, 043701	1.5	17
77	DFT investigation into the underperformance of sulfide materials in photovoltaic applications. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 9132-9140	13	16

76	Complex Structural Behavior of BiMnO Quadruple Perovskite. <i>Inorganic Chemistry</i> , 2017 , 56, 12272-12281	3.1	16
75	Finite-size corrections for defect-involving vertical transitions in supercell calculations. <i>Physical Review B</i> , 2020 , 101,	3.3	16
74	Effects of composition, crystal structure, and surface orientation on band alignment of divalent metal oxides: A first-principles study. <i>Physical Review Materials</i> , 2018 , 2,	3.2	16
73	Theory of ionization potentials of nonmetallic solids. <i>Physical Review B</i> , 2017 , 95,	3.3	15
72	Direct Observation of Magnetization Reversal by Electric Field at Room Temperature in Co-Substituted Bismuth Ferrite Thin Film. <i>Nano Letters</i> , 2019 , 19, 1767-1773	11.5	15
71	Awakening of ferromagnetism in GaMnN through control of Mn valence. <i>Applied Physics Letters</i> , 2007 , 90, 012504	3.4	14
70	Improvement of superconducting properties of SmBa ₂ Cu ₃ O _y films on MgO substrate by using BaZrO ₃ buffer layer. <i>Physica C: Superconductivity and Its Applications</i> , 2003 , 392-396, 835-840	1.3	14
69	Energetics and electronic structure of native point defects in β -Ga ₂ O ₃ . <i>Applied Physics Express</i> , 2019 , 12, 091001	2.4	12
68	Effect of boundary plane on the atomic structure of [0001] Σ tilt grain boundaries in ZnO. <i>Journal of Materials Science</i> , 2005 , 40, 3067-3074	4.3	12
67	Unusual magnetic structure of the high-pressure synthesized perovskites ACrO ₃ (A=Sc, In, Tl). <i>Physical Review B</i> , 2017 , 95,	3.3	11
66	Non-linear current-voltage characteristics related to native defects in SrTiO ₃ and ZnO bicrystals. <i>Science and Technology of Advanced Materials</i> , 2003 , 4, 605-611	7.1	11
65	Valence Band Structure of ZnO (1010) Surface by Cluster Calculation 1999 , 4, 69-80		11
64	Valence band offsets at zinc-blende heterointerfaces with misfit dislocations: A first-principles study. <i>Physical Review B</i> , 2013 , 88,	3.3	10
63	Local environment of silicon in cubic boron nitride. <i>Journal of Applied Physics</i> , 2013 , 114, 233502	2.5	10
62	First-principles investigation of R ₂ O ₃ (ZnO) ₃ (R=Al, Ga, and In) in homologous series of compounds. <i>Journal of Solid State Chemistry</i> , 2008 , 181, 137-142	3.3	10
61	Polar metallic behavior of strained antiperovskites ACNi ₃ (A=Mg,Zn,and Cd) from first principles. <i>Physical Review Materials</i> , 2018 , 2,	3.2	10
60	Atomistic structure and energetics of interface between Mn-doped β -Ga ₂ O ₃ and MgAl ₂ O ₄ . <i>Journal of Materials Science</i> , 2011 , 46, 4169-4175	4.3	9
59	Interfacial structures of Y123 and Nd123 films formed on MgO(001) substrates by liquid phase epitaxy. <i>Journal of Materials Research</i> , 2004 , 19, 2674-2682	2.5	9

58	Current-Voltage Characteristics Across Small Angle Symmetric Tilt Boundaries in Nb-Doped SrTiO ₃ Bicrystals. <i>Materials Transactions</i> , 2002 , 43, 1537-1541	1.3	9
57	Phase Transition from Weak Ferroelectricity to Incipient Ferroelectricity in Li ₂ Sr(Nb _{1-x} Tax)2O ₇ . <i>Chemistry of Materials</i> , 2020 , 32, 744-750	9.6	9
56	Site preference of cation vacancies in Mn-doped Ga ₂ O ₃ with defective spinel structure. <i>Applied Physics Letters</i> , 2012 , 101, 241906	3.4	8
55	Theoretical exploration of mixed-anion antiperovskite semiconductors M ₃ XN(M=Mg,Ca,Sr,Ba;X=P,As,Sb,Bi). <i>Physical Review Materials</i> , 2020 , 4,	3.2	8
54	Theoretical prediction of strain-induced carrier effective mass modulation in 4H-SiC and GaN. <i>Applied Physics Letters</i> , 2019 , 115, 112102	3.4	7
53	Thermodynamics and structures of oxide crystals by a systematic set of first principles calculations. <i>Journal of Materials Chemistry</i> , 2010 , 20, 10335		7
52	First-principles study of defect equilibria in lithium zinc nitride. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 046201	1.8	6
51	Electronic Structure and Chemical Bondings of MgCr _{2-x} O ₄ . <i>Japanese Journal of Applied Physics</i> , 2000 , 39, 513-516	1.4	6
50	The Role of Co Ions on the Appearance of Non-Linear I-V Characteristics of ZnO-Based Ceramics. <i>Key Engineering Materials</i> , 1998 , 157-158, 249-256	0.4	6
49	Stabilization of small polarons in BaTiO ₃ by local distortions. <i>Physical Review Materials</i> , 2019 , 3,	3.2	6
48	Machine learning models for predicting the dielectric constants of oxides based on high-throughput first-principles calculations. <i>Physical Review Materials</i> , 2020 , 4,	3.2	6
47	Geometry and electronic structure of [0001]/(1 230) $\sqrt{7}$ symmetric tilt boundary in ZnO		6
46	Achieving non-degenerate Zn ₃ N ₂ thin films by near room temperature sputtering deposition. <i>Applied Physics Letters</i> , 2019 , 115, 092104	3.4	5
45	LiNbO ₃ -Type Oxide (Tl(1-x)Sc(x))ScO ₃ : High-Pressure Synthesis, Crystal Structure, and Electronic Properties. <i>Inorganic Chemistry</i> , 2016 , 55, 1940-5	5.1	5
44	First-principles study of defect-induced potentials in Ca ₂ CuO ₂ Cl ₂ . <i>Physical Review B</i> , 2009 , 80,	3.3	5
43	Effectiveness of BaZrO ₃ buffer layer in SmBa ₂ Cu ₃ O _y epitaxial growth on MgO substrate: A first-principles study. <i>Journal of Applied Physics</i> , 2004 , 95, 2309-2318	2.5	5
42	Strain-engineered Peierls instability in layered perovskite La ₃ Ni ₂ O ₇ from first principles. <i>Physical Review Materials</i> , 2018 , 2,	3.2	5
41	Surface reconstruction and band alignment of nonmetallic A(II)B(IV)O ₃ perovskites. <i>Physical Review Materials</i> , 2020 , 4,	3.2	5

40	Mechanism for Improvement of In-Plane Alignment of SmBa ₂ Cu ₃ O _y Films by BaZrO ₃ Buffer Layer on MgO Substrate. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2003 , 67, 295-301	0.4	5
39	One-dimensionally extended oxygen vacancy states in perovskite oxides. <i>Physical Review B</i> , 2019 , 99,	3.3	4
38	Phonon scattering limited mobility in the representative cubic perovskite semiconductors SrGeO ₃ , BaSnO ₃ , and SrTiO ₃ . <i>Physical Review B</i> , 2020 , 101,	3.3	4
37	Perovskite-Type InCoO with Low-Spin Co: Effect of In-O Covalency on Structural Stabilization in Comparison with Rare-Earth Series. <i>Inorganic Chemistry</i> , 2017 , 56, 11113-11122	5.1	4
36	Epitaxial growth of tin(II) niobate with a pyrochlore structure. <i>Journal of Crystal Growth</i> , 2015 , 416, 126-129	1.2	4
35	Variable anisotropy of ionic conduction in lithium nitride: Effect of duplex-charge transfer. <i>Physical Review B</i> , 2009 , 80,	3.3	4
34	First principles calculations for modern ceramic science and engineering. <i>Journal of Physics Condensed Matter</i> , 2008 , 20, 064215	1.8	4
33	First Principles Calculation of CO and H ₂ Adsorption on Strained Pt Surface. <i>Materials Transactions</i> , 2008 , 49, 2484-2490	1.3	4
32	Al-doped ZnO ceramics fabricated by mechanical alloying and high-pressure sintering technique. <i>Journal of Materials Science Letters</i> , 2003 , 22, 1201-1204		4
31	Theoretical calculation of oxygen K electron-energy-loss near-edge structures of Si-doped MgO. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 5661-5670	1.8	4
30	SrZn ₂ N ₂ as a Solar Absorber: Theoretical Defect Chemistry and Synthesis by Metal Alloy Nitridation. <i>Chemistry of Materials</i> , 2021 , 33, 2864-2870	9.6	4
29	Ground-state search in multicomponent magnetic systems. <i>Physical Review B</i> , 2012 , 85,	3.3	3
28	Epitaxial Growth and Characterization of Rocksalt ZnO Thin Films with Low-Level NiO Alloying. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 075503	1.4	3
27	First principles calculations of the formation energy of Cr/Al vacancies in spinel-type MgCr ₂ O ₄ and MgAl ₂ O ₄ . <i>International Journal of Quantum Chemistry</i> , 2003 , 91, 208-210	2.1	3
26	Ligancy-Driven Controlling of Covalency and Metallicity in a Ruthenium Two-Dimensional System. <i>Chemistry of Materials</i> , 2016 , 28, 5784-5790	9.6	3
25	Coexisting Mechanisms for the Ferroelectric Phase Transition in Li ₂ SrNb ₂ O ₇ . <i>Chemistry of Materials</i> , 2021 , 33, 1257-1264	9.6	3
24	Spin-Glass Magnetic Properties of A-Site Columnar-Ordered Quadruple Perovskites YMnGa(MnGa)O with 0 $\leq x \leq 1$. <i>Inorganic Chemistry</i> , 2019 , 58, 14830-14841	5.1	2
23	Insights into oxygen vacancies from high-throughput first-principles calculations. <i>Physical Review Materials</i> , 2021 , 5,	3.2	2

22	Antiferroelectricity and robust dielectric response owing to competing polar and antipolar instabilities in tetragonal tungsten bronze K ₂ RNb ₅ O ₁₅ (R: rare-earth). <i>Physical Review Materials</i> , 2020 , 4,	3.2	2
21	Theoretical Prediction and Thin-Film Growth of the Defect-Tolerant Nitride Semiconductor YZn ₃ N ₃ . <i>Chemistry of Materials</i> ,	9.6	2
20	Point defects in p-type transparent conductive CuMO ₂ (M=Al, Ga, In) from first principles. <i>Physical Review Materials</i> , 2021 , 5,	3.2	2
19	Phase relationships and structures of inorganic crystals by a combination of the cluster expansion method and first principles calculations. <i>Journal of Physics Condensed Matter</i> , 2010 , 22, 384207	1.8	1
18	Current-Voltage Characteristic and Grain Boundary Structure in Undoped and Pr and Co Doped ZnO Bicrystals. <i>Materials Science Forum</i> , 2005 , 475-479, 3867-3870	0.4	1
17	Identification of Mg Vacancy in MgO by Positron Lifetime Measurements and First-Principles Calculations. <i>Defect and Diffusion Forum</i> , 2005 , 242-244, 1-8	0.7	1
16	Atomic and Electronic Structure of Symmetric Tilt Boundaries in ZnO. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 654, 121		1
15	Unraveling crystal symmetry and strain effects on electronic band structures of SiC polytypes. <i>AIP Advances</i> , 2020 , 10, 105014	1.5	1
14	Data-Mining Element Charges in Inorganic Materials. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 8264-8267	6.8	1
13	Recommendation of interstitial hydrogen positions in metal oxides. <i>Computational Materials Science</i> , 2022 , 203, 111068	3.2	0
12	Prediction of Fundamental Properties of Semiconductors and Materials Exploration Using First-Principles Calculations. <i>Materia Japan</i> , 2017 , 56, 554-559	0.1	
11	First Principles Thermodynamics Calculations of Atomic Scale Modifications. <i>Materia Japan</i> , 2009 , 48, 299-302	0.1	
10	First Principles Calculations of Advanced Nitrides, Oxides and Alloys. <i>Key Engineering Materials</i> , 2008 , 403, 73-76	0.4	
9	Atomic-Scale Processes of Grain-Boundary Faceting in a Zirconia Bicrystal. <i>Materials Science Forum</i> , 2007 , 558-559, 955-958	0.4	
8	Electronic states associated with bond disorder at ZnO grain boundaries. <i>Advances in Quantum Chemistry</i> , 2003 , 42, 175-186	1.4	
7	First-Principles Calculations of Silicon Nitrides and SiAlONs. <i>Key Engineering Materials</i> , 2003 , 247, 149-154	1.4	
6	Structure of Oxide Interfaces Viewed at An Atomistic and Electronic Level. <i>Materia Japan</i> , 2005 , 44, 687-690	6.9	
5	Grain Boundary Dependence of Dopant Segregation and Electrical Property in ZnO. <i>Materia Japan</i> , 2005 , 44, 965-965	0.1	

- 4 Atomic Structure of Tilt Grain Boundaries in ZnO. *Materia Japan*, **2004**, 43, 985-985 0.1
- 3 Structure Units of σ_9 Zirconia Grain Boundary. *Materia Japan*, **2006**, 45, 842-842 0.1
- 2 Complex Point Defect Structure in Cubic Boron Nitride. *Materia Japan*, **2016**, 55, 609-609 0.1
- 1 Grain-Boundary Atomic Structures in Zirconia Ceramics. *Ceramic Engineering and Science Proceedings*, 171-181 0.1