

Hirofumi Akamatsu

List of Publications by Year in descending order

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77
all docs

77
docs citations

77
times ranked

2255
citing authors

#	ARTICLE	IF	CITATIONS
1	A labile hydride strategy for the synthesis of heavily nitrized BaTiO ₃ . Nature Chemistry, 2015, 7, 1017-1023.	6.6	118
2	Antiferromagnetic superexchange via $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:mi} \rangle d \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ states of titanium in EuTiO $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ as seen from hybrid Hartree-Fock density functional calculations. Physical Review B, 2011, 83, .	1.1	104
3	Ferroelectric Sr ₃ Zr ₂ O ₇ : Competition between Hybrid Improper Ferroelectric and Antiferroelectric Mechanisms. Advanced Functional Materials, 2018, 28, 1801856.	7.8	89
4	Structural characterization of hierarchically porous alumina aerogel and xerogel monoliths. Journal of Colloid and Interface Science, 2009, 338, 506-513.	5.0	87
5	Room-Temperature Polar Ferromagnet ScFeO ₃ Transformed from a High-Pressure Orthorhombic Perovskite Phase. Journal of the American Chemical Society, 2014, 136, 15291-15299.	6.6	78
6	Hybrid Improper Ferroelectricity in (Sr,Ca) ₃ Sn ₂ O ₇ and Beyond: Universal Relationship between Ferroelectric Transition Temperature and Tolerance Factor in $n = 2$ Ruddlesden-Popper Phases. Journal of the American Chemical Society, 2018, 140, 15690-15700.	6.6	74
7	Artificial two-dimensional polar metal at room temperature. Nature Communications, 2018, 9, 1547.	5.8	61
8	Inversion Symmetry Breaking by Oxygen Octahedral Rotations in the Ruddlesden-Popper $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle Na \langle \text{mml:mi} \rangle R \langle \text{mml:mi} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle TiO_3 \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ Physical Review Letters, 2014, 112, 187602.	2.9	60
9	Crystal and Electronic Structure and Magnetic Properties of Divalent Europium Perovskite Oxides Eu _M O ₃ ($M = Ti, Zr, \text{ and } Hf$): Experimental and First-Principles Approaches. Inorganic Chemistry, 2012, 51, 4560-4567.	1.9	54
10	Mn ₂ FeWO ₆ : A New Ni ₃ TeO ₆ -Type Polar and Magnetic Oxide. Advanced Materials, 2015, 27, 2177-2181.	11.1	53
11	Insights into Sodium Ion Transfer at the Na/NASICON Interface Improved by Uniaxial Compression. ACS Applied Energy Materials, 2019, 2, 2913-2920.	2.5	51
12	LiNbO ₃ -Type InFeO ₃ : Room-Temperature Polar Magnet without Second-Order Jahn-Teller Active Ions. Chemistry of Materials, 2016, 28, 6644-6655.	3.2	43
13	Strong Spin-Lattice Coupling Through Oxygen Octahedral Rotation in Divalent Europium Perovskites. Advanced Functional Materials, 2013, 23, 1864-1872.	7.8	41
14	Light-Activated Gigahertz Ferroelectric Domain Dynamics. Physical Review Letters, 2018, 120, 096101.	2.9	39
15	Antiferromagnetism of perovskite EuZrO ₃ . Journal of Solid State Chemistry, 2010, 183, 168-172.	1.4	38
16	Magnetic and magneto-optical quenching in (Mn ²⁺ , Sr ²⁺) metaphosphate glasses. Optical Materials Express, 2013, 3, 184.	1.6	38
17	Magneto-optical properties of transparent divalent iron phosphate glasses. Applied Physics Letters, 2008, 92, .	1.5	36
18	Emergent Noncentrosymmetry and Piezoelectricity Driven by Oxygen Octahedral Rotations in $n = 2$ Dion-Jacobson Phase Layer Perovskites. Advanced Functional Materials, 2016, 26, 1930-1937.	7.8	33

#	ARTICLE	IF	CITATIONS
19	Improper Inversion Symmetry Breaking and Piezoelectricity through Oxygen Octahedral Rotations in Layered Perovskite Family, LiR_2TiO_4 ($\text{R} = \text{Rare Earths}$). <i>Advanced Electronic Materials</i> , 2016, 2, 1500196.	2.6	28
20	Carrier-Induced Band-Gap Variation and Point Defects in ZnN from First Principles. <i>Physical Review Applied</i> , 2017, 8, .	1.5	18
21	Competing Polar and Antipolar Structures in the Ruddlesden-Popper Layered Perovskite $\text{Li}_2\text{SrNb}_2\text{O}_7$. <i>Chemistry of Materials</i> , 2019, 31, 4418-4425.	3.2	28
22	Spin dynamics in $\text{Fe}_2\text{O}_3\text{-TeO}_2$ glass: Experimental evidence for an amorphous oxide spin glass. <i>Physical Review B</i> , 2006, 74, .	1.1	26
23	Magnetic properties of mixed-valence iron phosphate glasses. <i>Physical Review B</i> , 2009, 80, .	1.1	25
24	Magnetic properties of oxide glasses containing iron and rare-earth ions. <i>Physical Review B</i> , 2011, 84, .	1.1	25
25	Magnetic phase transitions in $\text{Fe}_2\text{O}_3\text{-Bi}_2\text{O}_3$ and $\text{Bi}_2\text{O}_3\text{-Fe}_2\text{O}_3$ glasses. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 235216.	0.7	22
26	PbMn(IV)TeO_6 : A New Noncentrosymmetric Layered Honeycomb Magnetic Oxide. <i>Inorganic Chemistry</i> , 2016, 55, 1333-1338.	1.9	22
27	Competing Structural Instabilities in the Ruddlesden-Popper Derivatives RTiO_4 ($\text{R} = \text{Rare}$) Tj ETQq1 1 0.784314 rgBT Centrosymmetry. <i>Chemistry of Materials</i> , 2017, 29, 656-665.	3.2	22
28	Magneto-optical properties of Eu^{2+} -containing aluminoborosilicate glasses with ferromagnetic interactions. <i>Optical Materials</i> , 2013, 35, 1997-2000.	1.7	21
29	Low-temperature Cationic Rearrangement in a Bulk Metal Oxide. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 9862-9867.	7.2	20
30	Ferromagnetic Eu^{2+} oxide glasses with reentrant spin glass behavior. <i>Physical Review B</i> , 2010, 81, .	1.1	20
31	Magnetic properties of disordered oxides with iron and manganese ions. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 1347-1352.	1.5	17
32	Ferromagnetism induced by lattice volume expansion and amorphization in EuTiO_3 thin films. <i>Journal of Materials Research</i> , 2013, 28, 1031-1041.	1.2	17
33	Discovering minimum energy pathways via distortion symmetry groups. <i>Physical Review B</i> , 2018, 98, .	1.1	14
34	Reversible Electrochemical Insertion/Extraction of Magnesium Ion into/from Robust NASICON-Type Crystal Lattice in a $\text{Mg(BF}_4)_2$ -Based Electrolyte. <i>ACS Applied Energy Materials</i> , 2020, 3, 6824-6833.	2.5	14
35	Polar metallic behavior of strained antiperovskites ACNi_3 ($\text{A} = \text{Mg, Zn, and Cd}$) from first principles. <i>Physical Review Materials</i> , 2018, 2, .	0.9	14
36	Preparation and magnetic properties of amorphous EuTiO_3 thin films. <i>Journal of Non-Crystalline Solids</i> , 2010, 356, 2389-2392.	1.5	13

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37	Spin dynamics in oxide glass of Fe ₂ O ₃ -Bi ₂ O ₃ -B ₂ O ₃ system. Journal of Magnetism and Magnetic Materials, 2007, 310, 1506-1507.	1.0	12
38	Impact of amorphization on the magnetic properties of EuO-TiO_2 . Physical Review B, 2010, 82, .	1.1	12
39	Structural phase transitions in EuNbO ₃ perovskite. Journal of Solid State Chemistry, 2016, 239, 192-199.	1.4	12
40	Sn-Based Perovskite with a Wide Visible-Light Absorption Band Assisted by Hydride Doping. Chemistry of Materials, 2021, 33, 3631-3638.	3.2	12
41	Ferroelectricity of Dionâ€“Jacobson layered perovskites CsNdNb ₂ O ₇ and RbNdNb ₂ O ₇ . Japanese Journal of Applied Physics, 2020, 59, SPPC04.	0.8	12
42	Emergent room temperature polar phase in CaTiO ₃ nanoparticles and single crystals. APL Materials, 2019, 7, .	2.2	10
43	Strain-engineered Peierls instability in layered perovskite $\text{La}_{3-x}\text{O}_{7-x}$ from first principles. Physical Review Materials, 2018, 2, .	0.9	10
44	AgCu ₃ V ₄ O ₁₂ : a Novel Perovskite Containing Mixed-Valence Silver ions. Inorganic Chemistry, 2013, 52, 13824-13826.	1.9	9
45	Controlling Defects to Achieve Reproducibly High Ionic Conductivity in Na ₃ SbS ₄ Solid Electrolytes. Chemistry of Materials, 2022, 34, 5634-5643.	3.2	9
46	Ferromagnetic properties with reentrant spinâ€“glass behavior in amorphous EuZrO ₃ thin film. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 3051-3054.	0.8	8
47	Sodium titanium oxide bronze nanoparticles synthesized <i>via</i> concurrent reduction and Na ⁺ -doping into TiO ₂ (B). Nanoscale, 2019, 11, 1442-1450.	2.8	8
48	Variation of meso- and macroporous morphologies in resorcinolâ€“formaldehyde (RF) gels tailored via a solâ€“gel process combined with soft-templating and phase separation. Journal of Sol-Gel Science and Technology, 2020, 95, 801-812.	1.1	8
49	Instabilities in tetragonal tungsten bronze $\text{K}_2\text{R}_2\text{O}_{15}$ (<i>R</i> : Ti, Nb) and its dielectric response owing to competing polar and antipolar instabilities. Physical Review Applied, 2019, 11, 044002.	0.9	8
50	Local Structure of Amorphous EuO-TiO_2 Thin Films Probed by X-Ray Absorption Fine Structure. Journal of the American Ceramic Society, 2012, 95, 716-720.	1.9	7
51	Ferromagnetic amorphous oxides in the EuO-TiO ₂ system studied by the Faraday effect in the visible region and the x-ray magnetic circular dichroism at the Eu M_{23} edge. Physical Review Applied, 2014, 6, 044002.	1.1	7
52	Perovskite-Type InCoO ₃ with Low-Spin Co ³⁺ : Effect of Inâ€“O Covalency on Structural Stabilization in Comparison with Rare-Earth Series. Inorganic Chemistry, 2017, 56, 11113-11122.	1.9	7
53	Comprehensive magnetic phase diagrams of the polar metal CaC_2 . Physical Review Letters, 2019, 123, 087201.		

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55	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle \text{A} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -site cation size effect on oxygen octahedral rotations in acentric Ruddlesden-Popper alkali rare-earth titanates. <i>Physical Review Materials</i> , 2019, 3, .	0.9	7
56	Electronic Origin of Non-Zone-Center Phonon Condensation: Octahedral Rotation as a Case Study. <i>Physical Review Letters</i> , 2021, 127, 215701.	2.9	7
57	Magnetic Properties of Amorphous $\text{Fe}_{2}\text{O}_{3}\text{-R}_{2}\text{O}_{3}$ (R=La, Gd and Tb) Thin Films Fabricated by Sputtering Method. <i>Advanced Materials Research</i> , 2008, 39-40, 207-212.	0.3	6
58	Structural and Magnetic Properties of $\text{CdFe}_{2}\text{O}_{4}$ Thin Films Fabricated via Sputtering Method. <i>IEEE Transactions on Magnetics</i> , 2008, 44, 2796-2799.	1.2	6
59	Environmental impact of amino acids on the release of selenate immobilized in hydrotalcite: Integrated interpretation of experimental and density-functional theory study. <i>Chemosphere</i> , 2021, 274, 129927.	4.2	5
60	Interplay between Oxygen Octahedral Rotation and Deformation in the Acentric TiO_{4} Series toward Negative Thermal Expansion. <i>Chemistry of Materials</i> , 2022, 34, 6492-6504.	3.2	5
61	Environmental impact of amino acids on selenate-bearing hydrocalumite: Experimental and DFT studies. <i>Environmental Pollution</i> , 2021, 288, 117687.	3.7	4
62	Low-temperature Cationic Rearrangement in a Bulk Metal Oxide. <i>Angewandte Chemie</i> , 2016, 128, 10016-10021.	1.6	3
63	Structural dynamics of LaVO_{3} on the nanosecond time scale. <i>Structural Dynamics</i> , 2019, 6, 014502.	0.9	3
64	Effect of Substrate Strain and Interface on Magnetic Properties of EuTiO_{3} Thin Film. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1454, 149-159.	0.1	2
65	Random anion distribution in MSxSe_{2-x} (M = Mo, W) crystals and nanosheets. <i>RSC Advances</i> , 2018, 8, 9871-9878.	1.7	2
66	Synthesis of Hydride-Doped Perovskite Stannate with Visible Light Absorption Capability. <i>Inorganic Chemistry</i> , 2022, , .	1.9	2
67	Glass-ceramic route to NASICON-type $\text{NaTi}_{2}(\text{PO}_{4})_{3}$ electrodes for Na-ion batteries. <i>Ceramics International</i> , 2022, 48, 24758-24764.	2.3	2
68	Superspin glass behavior of amorphous FeO-SiO_{2} thin films. <i>Japanese Journal of Applied Physics</i> , 2014, 53, 05FB11.	0.8	1
69	Mechanical and thermal properties of porous polyimide monoliths crosslinked with aromatic and aliphatic triamines. <i>Journal of Sol-Gel Science and Technology</i> , 0, , .	1.1	1
70	Frontispiz: Low-Temperature Cationic Rearrangement in a Bulk Metal Oxide. <i>Angewandte Chemie</i> , 2016, 128, .	1.6	0
71	Frontispiece: Low-Temperature Cationic Rearrangement in a Bulk Metal Oxide. <i>Angewandte Chemie - International Edition</i> , 2016, 55, .	7.2	0
72	Influence of Amino Acids on the Mobility of Iodide in Hydrocalumite. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 836.	0.8	0