Takayoshi Katase

List of Publications by Year
in descending order

87 papers	1,874 citations	304743 22 h-index	276875 41 g-index
88 all docs	88 docs citations	88 times ranked	1616 citing authors

#	Article	IF	Citations
1	Advantageous grain boundaries in iron pnictide superconductors. Nature Communications, 2011, 2, 409.	12.8	246
2	Biaxially textured cobalt-doped BaFe2As2 films with high critical current density over 1â€‚MA/cm2 on MgO-buffered metal-tape flexible substrates. Applied Physics Letters, 2011, 98, 242510.	3.3	110
3	Superconductivity in Epitaxial Thin Films of Co-Doped SrFe2As2with Bilayered FeAs Structures and their Magnetic Anisotropy. Applied Physics Express, 2008, 1, 101702.	2.4	103
4	Heteroepitaxial growth and optoelectronic properties of layered iron oxyarsenide, LaFeAsO. Applied Physics Letters, 2008, 93, 162504.	3.3	91
5	High Critical Current Density 4 MA/cm²in Co-Doped BaFe₂As₂Epitaxial Films Grown on (La,Sr)(Al,Ta)O₃Substrates without Buffer Layers. Applied Physics Express, 2010, 3, 063101.	2.4	83
6	Water-induced superconductivity inSrFe2As2. Physical Review B, 2009, 80, .	3.2	69
7	Josephson junction in cobalt-doped BaFe2As2 epitaxial thin films on (La,Sr)(Al,Ta)O3 bicrystal substrates. Applied Physics Letters, 2010, 96, .	3.3	68
8	Atomically-flat, chemically-stable, superconducting epitaxial thin film of iron-based superconductor, cobalt-doped. Solid State Communications, 2009, 149, 2121-2124.	1.9	66
9	Thin Film Growth and Device Fabrication of Iron-Based Superconductors. Journal of the Physical Society of Japan, 2012, 81, 011011.	1.6	50
10	DC superconducting quantum interference devices fabricated using bicrystal grain boundary junctions in Co-doped BaFe₂As₂epitaxial films. Superconductor Science and Technology, 2010, 23, 082001.	3.5	47
11	Liquid vortex phase and strong<i>c</i>-axis pinning in low anisotropy BaCo_{<i>x</i>}Fe_{2 âˆ'<i>x</i>}As₂pnictide films. Superconductor Science and Technology, 2011, 24, 055007.	3.5	44
12	Directing Oxygen Vacancy Channels in SrFeO_{2.5} Epitaxial Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 4831-4837.	8.0	43
13	Identical effects of indirect and direct electron doping of superconducting BaFe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>As<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>thin films. Physical Review B, 2012, 85, .	3.2	42
14	Thin film growth by pulsed laser deposition and properties of 122-type iron-based superconductor AE(Fe_{1âˆ'<i>x</i>}Co_{<i>x</i>})₂As₂(AE=alkaline earth). Superconductor Science and Technology, 2012, 25, 084015.	3.5	42
15	Competition and cooperation of pinning by extrinsic point-like defects and intrinsic strong columnar defects in BaFe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>As<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>thin films. Physical Review B, 2012, 86, .	3.2	39
16	A transparent electrochromic metal-insulator switching device with three-terminal transistor geometry. Scientific Reports, 2016, 6, 25819.	3.3	39
17	Microstructure and transport properties of [001]-tilt bicrystal grain boundaries in iron pnictide superconductor, cobalt-doped BaFe2As2. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2012, 177, 515-519.	3.5	35
18	Reversibly Switchable Electromagnetic Device with Leakageâ€Free Electrolyte. Advanced Electronic Materials, 2016, 2, 1600044.	5.1	34

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19	Electric double-layer transistor using layered iron selenide Mott insulator TlFe1.6Se2. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3979-3983.	7.1	30
20	Roomâ€Temperatureâ€Protonationâ€Driven Onâ€Demand Metalâ€"Insulator Conversion of a Transition Metal Oxide. Advanced Electronic Materials, 2015, 1, 1500063.	5.1	26
21	Thermopower analysis of metal-insulator transition temperature modulations in vanadium dioxide thin films with lattice distortion. Physical Review B, 2015, 92, .	3.2	25
22	Thermopower analysis of the electronic structure around the metal-insulator transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="normal">V</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></ mathvariant="normal">W</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2014, 90, .	3.2	24
23	Critical factor for epitaxial growth of cobalt-doped BaFe2As2 films by pulsed laser deposition. Applied Physics Letters, 2014, 104, .	3.3	22
24	Oxygen Vacancies Allow Tuning the Work Function of Vanadium Dioxide. Advanced Materials Interfaces, 2018, 5, 1801033.	3.7	20
25	Transport and magnetic properties of Co-doped BaFe₂As₂epitaxial thin films grown on MgO substrate. Superconductor Science and Technology, 2010, 23, 105016.	3.5	19
26	Superconductivity at 48 K of heavily hydrogen-doped SmFeAsO epitaxial films grown by topotactic chemical reaction using <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Ca</mml:mi><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review Materials, 2019, 3, .	2.4	19
27	Fabrication of Flat MgO(111) Films on Al₂O₃(0001) Substrates by Pulsed Laser Deposition. Applied Physics Express, 2009, 2, 091403.	2.4	18
28	Magnetic scattering and electron pair breaking by rare-earth-ion substitution in BaFe₂As₂epitaxial films. New Journal of Physics, 2013, 15, 073019.	2.9	18
29	Shallow Valence Band of Rutile GeO₂ and P-type Doping. Journal of Physical Chemistry C, 2020, 124, 25721-25728.	3.1	18
30	pâ€Type Transparent Quadruple Perovskite Halide Conductors: Fact or Fiction?. Advanced Functional Materials, 2020, 30, 1909906.	14.9	17
31	Unusual pressure effects on the superconductivity of indirectly electron-doped (Ba1â^'xLax)Fe2As2epitaxial films. Physical Review B, 2013, 88, .	3.2	16
32	Anomalous scaling behavior in a mixed-state Hall effect of a cobalt-doped BaFe2As2epitaxial film with a high critical current density over 1 MA/cm2. Physical Review B, 2013, 87, .	3.2	16
33	Multiple Color Inorganic Thinâ€Film Phosphor, RE â€Doped Amorphous Gallium Oxide (RE â€‰=â€‰Rare Earth: Pr,) Tj ETQq1 1 0.78 Science, 2019, 216, 1700833.	1.8	15
34	Effects of Base Pressure on Growth and Optoelectronic Properties of Amorphous Inâ€Gaâ€Znâ€O: Ultralow Optimum Oxygen Supply and Bandgap Widening. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1700832.	1.8	14
35	Superconducting Properties and Phase Diagram of Indirectly Electron-Doped $(hbox{Sr}_{1 -) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Transactions on Applied Superconductivity, 2013, 23, 7300405-7300405.	1.7	13
36	Stoichiometric and Oxygen-Deficient VO₂ as Versatile Hole Injection Electrode for Organic Semiconductors. ACS Applied Materials & Interfaces, 2018, 10, 10552-10559.	8.0	13

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37	Optoelectronic properties of valence-state-controlled amorphous niobium oxide. Journal of Physics Condensed Matter, 2016, 28, 255001.	1.8	12
38	Symmetric Ambipolar Thin-Film Transistors and High-Gain CMOS-like Inverters Using Environmentally Friendly Copper Nitride. ACS Applied Materials & Interfaces, 2019, 11, 35132-35137.	8.0	12
39	Phonon scattering limited mobility in the representative cubic perovskite semiconductors <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrGeO</mml:mi><mml:mn>3</mml:mn></mml:msub> , <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>BaSnO</mml:mi><mml:mn>3</mml:mn></mml:msub> , and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub>	3.2	11
40	Plasmon-Assisted Polarity Switching of a Photoelectric Conversion Device by UV and Visible Light Irradiation. Journal of Physical Chemistry C, 2018, 122, 14064-14071.	3.1	10
41	Terahertz conductivity measurement of FeSe0.5Te0.5 and Co-doped BaFe2As2 thin films. Physica C: Superconductivity and Its Applications, 2011, 471, 634-638.	1.2	9
42	Highly conducting leakage-free electrolyte for SrCoO<i>x</i>-based non-volatile memory device. Journal of Applied Physics, 2017, 122, .	2.5	9
43	Infrared-transmittance tunable metal-insulator conversion device with thin-film-transistor-type structure on a glass substrate. APL Materials, 2017, 5, 056105.	5.1	9
44	Superconductivity in La _{1âˆ’x} Ce _x OBiSSe: Carrier doping by mixed valence of Ce ions. Europhysics Letters, 2018, 122, 17004.	2.0	9
45	Intrinsic and Extrinsic Defects in Layered Nitride Semiconductor SrTiN₂. Journal of Physical Chemistry C, 2019, 123, 19307-19314.	3.1	9
46	Substrate-Independent Energy-Level Pinning of an Organic Semiconductor Providing Versatile Hole-Injection Electrodes. ACS Applied Electronic Materials, 2020, 2, 3994-4001.	4.3	9
47	Ultralow-Dissipative Conductivity by Dirac Fermions in BaFe2As2. Journal of the Physical Society of Japan, 2013, 82, 043709.	1.6	8
48	Origin of Metallic Nature of Na₃N. Journal of the American Chemical Society, 2021, 143, 69-72.	13.7	8
49	Repeatable Photoinduced Insulator-to-Metal Transition in Yttrium Oxyhydride Epitaxial Thin Films. Chemistry of Materials, 2022, 34, 3616-3623.	6.7	8
50	Fabrication of Atomically Flat ScAlMgO₄ Epitaxial Buffer Layer and Low-Temperature Growth of High-Mobility ZnO Films. Crystal Growth and Design, 2010, 10, 1084-1089.	3.0	7
51	Reactive Solid-Phase Epitaxy and Electrical Conductivity of Layered Sodium Manganese Oxide Films. Crystal Growth and Design, 2017, 17, 1849-1853.	3.0	7
52	Stable and Tunable Current-Induced Phase Transition in Epitaxial Thin Films of Ca2RuO4. ACS Applied Materials & Interfaces, 2020, 12, 28368-28374.	8.0	7
53	Double Charge Polarity Switching in Sbâ€Doped SnSe with Switchable Substitution Sites. Advanced Functional Materials, 2021, 31, 2008092.	14.9	7
54	Degenerated Hole Doping and Ultraâ€Low Lattice Thermal Conductivity in Polycrystalline SnSe by Nonequilibrium Isovalent Te Substitution. Advanced Science, 2022, 9, e2105958.	11.2	7

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55	Fabrication of ScAlMgO4 epitaxial thin films using ScGaO3(ZnO)m buffer layers and its application to lattice-matched buffer layer for ZnO epitaxial growth. Thin Solid Films, 2008, 516, 5842-5846.	1.8	6
56	Large domain growth of GaN epitaxial films on lattice-matched buffer layer ScAlMgO4. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 161, 66-70.	3.5	6
57	Solidâ€Phase Epitaxial Growth of Aâ€Siteâ€Ordered Perovskite Sr_{4â^'<i>x</i>}Er<i>_x</i>Co₄O_{12â^'<i>Î´</i>}: A Room Temperature Ferrimagnetic pâ€Type Semiconductor. Advanced Electronic Materials, 2015, 1, 1500199.	5.1	6
58	Transition Metalâ€Doped Amorphous Oxide Semiconductor Thinâ€Film Phosphor, Chromiumâ€Doped Amorphous Gallium Oxide. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800198.	1.8	6
59	Reversible 3D-2D structural phase transition and giant electronic modulation in nonequilibrium alloy semiconductor, lead-tin-selenide. Science Advances, 2021, 7, .	10.3	6
60	Coexistence of magnetism and superconductivity in thin films of the Fe-based superconductor Ba_{1â^'x}La_xFe₂As₂. Journal of Physics Condensed Matter, 2020, 32, 485804.	1.8	6
61	Breaking of Thermopowerâ€"Conductivity Tradeâ€Off in LaTiO 3 Film around Mott Insulator to Metal Transition. Advanced Science, 2021, 8, 2102097.	11.2	6
62	Large phonon drag thermopower boosted by massive electrons and phonon leaking in LaAlO₃/LaNiO₃/LaAlO₃ heterostructure. Nano Letters, 2021, 21, 9240-9246.	9.1	6
63	Electronic and Lattice Thermal Conductivity Switching by 3Dâ^'2D Crystal Structure Transition in Nonequilibrium (Pb_{1â^'}<i>_x</i>Sn<i>_x</i>)Se. Advanced Electronic Materials, 2022, 8, .	5.1	6
64	Characterization of epitaxial Co-doped BaFe2As2 thin films. Physica C: Superconductivity and Its Applications, 2011, 471, 1181-1184.	1.2	5
65	Solidâ€"liquid phase epitaxial growth of Li₄Ti₅O₁₂ thin film. Applied Physics Express, 2016, 9, 125501.	2.4	5
66	Crystal Structure Built from a GeO₆â€"GeO₅ Polyhedra Network with High Thermal Stability: Î²â€"SrGe₂O₅. ACS Applied Electronic Materials, 2019, 1, 1989-1993.	4.3	5
67	Oxide-based optical, electrical and magnetic properties switching devices with water-incorporated gate insulator. Japanese Journal of Applied Physics, 2019, 58, 090501.	1.5	5
68	Impurities in FeAs-based superconductor, SrFe2As2, studied by first-principles calculations. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 173, 244-247.	3.5	4
69	Structure determination in thin film <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">B</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></m mathvariant="normal">L</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mi mathvariant="normal">F<	3.2	4
70	Transition-metal-oxide based functional thin-film device using leakage-free electrolyte. Journal of the Ceramic Society of Japan, 2017, 125, 608-615.	1.1	4
71	Surface charge accumulation and electrochemical protonation of transition metal oxides using water-infiltrated nanoporous glass. Semiconductor Science and Technology, 2019, 34, 123001.	2.0	4
72	Thermoelectric (Ba x Sr1â€"x)Si2 films prepared by sputtering method over the barium solubility limit. Japanese Journal of Applied Physics, 2020, 59, SFFB02.	1.5	4

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73	Superconductivity in In-doped AgSnBiTe3 with possible band inversion. Scientific Reports, 2021, 11, 22885.	3.3	4
74	Design, Synthesis, and Optoelectronic Properties of the High-Purity Phase in Layered <i>AETM</i>N₂ (<i>AE</i> = Sr, Ba; <i>TM</i> = Ti, Zr, Hf) Semiconductors. Inorganic Chemistry, 2022, 61, 6650-6659.	4.0	4
75	Tuning of carrier concentration and superconductivity in high-entropy-alloy-type metal telluride (AgSnPbBi)(1-)/4In Te. Journal of Alloys and Compounds, 2022, 920, 166013.	5.5	4
76	Fabrication of GaN epitaxial thin film on InGaZnO4 single-crystalline buffer layer. Thin Solid Films, 2010, 518, 2996-2999.	1.8	3
77	Ion Substitution Effect on Defect Formation in Two-Dimensional Transition Metal Nitride Semiconductors, <i>AE</i>TiN₂ (<i>AE</i> = Ca, Sr, and Ba). Inorganic Chemistry, 2021, 60, 10227-10234.	4.0	3
78	Unique Conduction Band Minimum of Semiconductors Possessing a Zincblende-Type Framework. Inorganic Chemistry, 2022, 61, 10359-10364.	4.0	3
79	Arbitrary control of the diffusion potential between a plasmonic metal and a semiconductor by an angstrom-thick interface dipole layer. Journal of Chemical Physics, 2020, 152, 034705.	3.0	2
80	Hard x-ray photoemission study on strain effect in LaNiO3 thin films. Applied Physics Letters, 2021, 118, 161601.	3.3	2
81	New Amorphous Inâ€“Gaâ€“Znâ€“O Thin-Film Transistor-Based Optical Pixel Sensor for Optical Input Signal With Short Wavelength. IEEE Transactions on Electron Devices, 2019, 66, 3841-3846.	3.0	1
82	Photoinduced transient states of antiferromagnetic orderings in La_{1/3}Sr_{2/3}FeO₃ and SrFeO_{3â^'Î´} thin films observed through time-resolved resonant soft x-ray scattering. New Journal of Physics, 2022, 24, 043012.	2.9	1
83	High-Mobility Metastable Rock-Salt Type (Sn,Ca)Se Thin Film Stabilized by Direct Epitaxial Growth on a YSZ (111) Single-Crystal Substrate. ACS Applied Materials & Interfaces, 2022, 14, 18682-18689.	8.0	1
84	Characterization of electronic structure around metal–insulator transition in V_{1−}<i>_x</i>W<i>_x</i>O<sub& thin films by thermopower measurement. Journal of the Ceramic Society of Japan, 2015, 123, 307-311.	1.1	0
85	Electrolysis-induced protonation of VO2thin film transistor for the metal-insulator phase modulation. , 2016, , .		0
86	Fabrication and characterization of (CaxSr1-x)Si2 films prepared by co-sputtering method. MRS Advances, 2020, 5, 451-458.	0.9	0
87	Low Residual Carrier Density and High In-Grain Mobility in Polycrystalline Zn₃N₂ Films on a Glass Substrate. ACS Applied Electronic Materials, 2022, 4, 2026-2031.	4.3	0