Young-Han Shin

List of Publications by Year
in descending order

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99 papers	3,576 citations	159585 30 h-index	138484 58 g-index
99 all docs	99 docs citations	99 times ranked	5088 citing authors

#	Article	IF	Citations
1	Nucleation and growth mechanism of ferroelectric domain-wall motion. Nature, 2007, 449, 881-884.	27.8	340
2	Direct observation of conducting filaments on resistive switching of NiO thin films. Applied Physics Letters, 2008, 92, .	3.3	257
3	Thermoelectric and phonon transport properties of two-dimensional IVâ€“VI compounds. Scientific Reports, 2017, 7, 506.	3.3	224
4	NiO Resistive Random Access Memory Nanocapacitor Array on Graphene. ACS Nano, 2010, 4, 2655-2658.	14.6	171
5	Ultra low lattice thermal conductivity and high carrier mobility of monolayer SnS₂and SnSe₂: a first principles study. Physical Chemistry Chemical Physics, 2017, 19, 20677-20683.	2.8	166
6	First principles study of a SnS₂/graphene heterostructure: a promising anode material for rechargeable Na ion batteries. Journal of Materials Chemistry A, 2016, 4, 14316-14323.	10.3	132
7	Collective Coherent Control: Synchronization of Polarization in Ferroelectric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>PbTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>by Shaped THz Fields. Physical Review Letters, 2009, 102, 247603.	7.8	124
8	Adsorption and diffusion of mono, di, and trivalent ions on two-dimensional TiS₂. Nanotechnology, 2017, 28, 175401.	2.6	124
9	Semicrystalline Dâ€“A Copolymers with Different Chain Curvature for Applications in Polymer Optoelectronic Devices. Macromolecules, 2014, 47, 1604-1612.	4.8	95
10	Heteroepitaxial Ferroelectric ZnSnO₃ Thin Film. Journal of the American Chemical Society, 2009, 131, 8386-8387.	13.7	93
11	Dipolar polarization and piezoelectricity of a hexagonal boron nitride sheet decorated with hydrogen and fluorine. Physical Chemistry Chemical Physics, 2014, 16, 6575.	2.8	92
12	Development of a bond-valence molecular-dynamics model for complex oxides. Physical Review B, 2005, 71, .	3.2	78
13	Strain engineering of phonon thermal transport properties in monolayer 2H-MoTe₂. Physical Chemistry Chemical Physics, 2017, 19, 32072-32078.	2.8	78
14	MoS₂@VS₂ Nanocomposite as a Superior Hybrid Anode Material. ACS Applied Materials & Interfaces, 2017, 9, 29942-29949.	8.0	74
15	Four-States Multiferroic Memory Embodied Using Mn-Doped BaTiO₃ Nanorods. ACS Nano, 2013, 7, 5522-5529.	14.6	71
16	Modified embedded-atom method interatomic potentials for pure Mn and the Feâ€“Mn system. Acta Materialia, 2009, 57, 474-482.	7.9	67
17	Enhanced Magnetization and Modulated Orbital Hybridization in Epitaxially Constrained BiFeO₃ Thin Films with Rhombohedral Symmetry. Chemistry of Materials, 2009, 21, 5050-5057.	6.7	64
18	High-Mobility Graphene Nanoribbons Prepared Using Polystyrene Dip-Pen Nanolithography. Journal of the American Chemical Society, 2011, 133, 5623-5625.	13.7	64

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19	Molecular Dynamics Study of Dielectric Response in a Relaxor Ferroelectric. Physical Review Letters, 2009, 103, 197601.	7.8	62
20	A Nonvolatile Memory Device Made of a Ferroelectric Polymer Gate Nanodot and a Single-Walled Carbon Nanotube. ACS Nano, 2010, 4, 7315-7320.	14.6	62
21	Self-Formed Exchange Bias of Switchable Conducting Filaments in NiO Resistive Random Access Memory Capacitors. ACS Nano, 2010, 4, 3288-3292.	14.6	61
22	Dip-Pen Lithography of Ferroelectric PbTiO₃ Nanodots. Journal of the American Chemical Society, 2009, 131, 14676-14678.	13.7	57
23	Superionic and electronic conductivity in monolayer W₂C: ab initio predictions. Journal of Materials Chemistry A, 2017, 5, 11094-11099.	10.3	51
24	Epitaxial BiAlO3 thin film as a lead-free ferroelectric material. Applied Physics Letters, 2008, 92, .	3.3	50
25	Crystal Shape of a Nickel Particle Related to Carbon Nanotube Growth. Japanese Journal of Applied Physics, 2002, 41, 6142-6144.	1.5	41
26	Correlation between the Kolmogorov-Sinai entropy and the self-diffusion coefficient in simple liquids. Physical Review E, 2000, 62, 6516-6521.	2.1	38
27	Multiferroic BiMnO3 thin films with double SrTiO3 buffer layers. Applied Physics Letters, 2008, 93, 062902.	3.3	38
28	Tuning the optoelectronic and thermoelectric characteristics of narrow bandgap Rb2AlInX6(X= Cl,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	4.0	35
29	A theoretical study on tuning band gaps of monolayer and bilayer SnS2 and SnSe2 under external stimuli. Current Applied Physics, 2019, 19, 709-714.	2.4	32
30	Influences of vacancy and doping on electronic and magnetic properties of monolayer SnS. Journal of Applied Physics, 2018, 124, .	2.5	31
31	Polarization switching characteristics of BiFeO3 thin films epitaxially grown on Pt/MgO at a low temperature. Applied Physics Letters, 2009, 95, 242902.	3.3	30
32	Origin of piezoelectricity in monolayer halogenated graphane piezoelectrics. Chemical Physics Letters, 2014, 603, 62-66.	2.6	30
33	Hydrogen and fluorine co-decorated silicene: A first principles study of piezoelectric properties. Journal of Applied Physics, 2015, 117, .	2.5	29
34	Highly ordered lead-free double perovskite halides by design. Journal of Materiomics, 2020, 6, 651-660.	5.7	27
35	Orderâ€“disorder character of PbTiO₃. Journal of Physics Condensed Matter, 2008, 20, 015224.	1.8	26
36	Optoelectronics properties of Janus SnSSe monolayer for solar cells applications. Physica B: Condensed Matter, 2022, 625, 413487.	2.7	24

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37	The effect of non-analytical corrections on the phononic thermal transport in InX (Xâ€‰=â€‰S, Se, Te) monolayers. Scientific Reports, 2020, 10, 1093.	3.3	23
38	Carbon diffusion around the edge region of nickel nanoparticles. Applied Physics Letters, 2008, 92, 043103.	3.3	22
39	Atomistic modeling of IIIâ€“V nitrides: modified embedded-atom method interatomic potentials for GaN, InN and Ga_{1â^'x}In_xN. Journal of Physics Condensed Matter, 2009, 21, 325801.	1.8	22
40	First-Principles Study of the Î±â€“Î² Phase Transition of Ferroelectric Poly(vinylidene difluoride): Observation of Multiple Transition Pathways. Journal of Physical Chemistry B, 2016, 120, 3240-3249.	2.6	21
41	A modified embedded-atom method interatomic potential for indium. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 82-88.	1.6	19
42	A modified embedded-atom method interatomic potential for Germanium. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 34-42.	1.6	18
43	Effects of Cl-Based Ligand Structures on Atomic Layer Deposited HfO₂. Journal of Physical Chemistry C, 2016, 120, 5958-5967.	3.1	18
44	Imprint Control of Nonvolatile Shape Memory with Asymmetric Ferroelectric Multilayers. Chemistry of Materials, 2014, 26, 6911-6914.	6.7	17
45	Structure stability and high Li storage capacity of the unzipped graphene oxide monolayer. Applied Surface Science, 2019, 475, 151-157.	6.1	17
46	Switchable polarization in an unzipped graphene oxide monolayer. Physical Chemistry Chemical Physics, 2016, 18, 20443-20449.	2.8	16
47	Vacancyâ€•and dopingâ€dependent electronic and magnetic properties of monolayer SnS₂. Journal of the American Ceramic Society, 2020, 103, 391-402.	3.8	16
48	A HfO2 Thin Film Resistive Switch Based on Conducting Atomic Force Microscopy. Electrochemical and Solid-State Letters, 2011, 14, H311.	2.2	15
49	Piezoelectric enhancement by surface effect in hydrofluorinated graphene bilayer. Journal of Applied Physics, 2015, 117, 145304.	2.5	15
50	Ultrahigh and anisotropic thermal transport in the hybridized monolayer (BC₂N) of boron nitride and graphene: a first-principles study. Physical Chemistry Chemical Physics, 2019, 21, 17306-17313.	2.8	15
51	Bistable resistive states of amorphous SrRuO3 thin films. Applied Physics Letters, 2008, 92, 133510.	3.3	14
52	Writing ferroelectric domain bits on the PbZr0.48Ti0.52O3 thin film. Journal of Applied Physics, 2008, 104, 064101.	2.5	13
53	Surface charge dynamics on ferroelectric PbZr0.48Ti0.52O3 films responding to the switching bias of electric force microscope. Applied Physics Letters, 2009, 94, 162902.	3.3	13
54	Strainâ€Induced High Polarization of a <scp><scp>KNbO</scp></scp>₃ Thin Film on a Single Crystalline <scp>R</scp>h Substrate. Journal of the American Ceramic Society, 2012, 95, 2773-2776.	3.8	13

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55	Computational predictions of stable phase for antiperovskite Na3OCl via tilting of Na6O octahedra. Journal of Applied Physics, 2018, 124, .	2.5	13
56	H2S adsorption process on (0001) Î±-quartz SiO2 surfaces. Journal of Applied Physics, 2018, 124, .	2.5	12
57	Interface roughness effect between gate oxide and metal gate on dielectric property. Thin Solid Films, 2009, 517, 3892-3895.	1.8	11
58	TiO₂ Nanorod Array Conformally Coated with a Monolayer MoS₂ Film: An Efficient Electrocatalyst for Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2020, 3, 10854-10862.	5.1	11
59	Formation of Self-Assembled Polyelectrolyte Multilayer Nanodots by Scanning Probe Microscopy. Journal of the American Chemical Society, 2009, 131, 1634-1635.	13.7	10
60	Kelvin probe force microscopy for conducting nanobits of NiO thin films. Nanotechnology, 2010, 21, 215704.	2.6	10
61	Nanoscale resistive random access memory consisting of a NiO nanodot and Au nanowires formed by dip-pen nanolithography. Applied Surface Science, 2011, 257, 9885-9887.	6.1	10
62	Multiferroic Properties of Highly c-Oriented BiFeO[sub 3] Thin Films on Glass Substrates. Electrochemical and Solid-State Letters, 2010, 13, G5.	2.2	9
63	Intaglio Nanotemplates Based on Atomic Force Microscopy for Ferroelectric Nanodots. Journal of Physical Chemistry C, 2011, 115, 14077-14080.	3.1	9
64	Formation of Locally Crystallized Ferroelectric Poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Td (fluoride-ran-trifluoro of Physical Chemistry C, 2013, 117, 12890-12894.	3.1	9
65	Enhanced out-of-plane electromechanical response of Janus ZrSeO. Physical Chemistry Chemical Physics, 2021, 23, 16289-16295.	2.8	9
66	Lyapunov instability of rigid diatomic molecules via diatomic potential molecular dynamics. Physical Review E, 1998, 58, 7243-7248.	2.1	8
67	Thin film growth and magnetic anisotropy of epitaxial Sr0.775Y0.225CoO3â^'Î´. Journal of Crystal Growth, 2008, 310, 3649-3652.	1.5	8
68	Computational Studies of Lead-based Relaxor Ferroelectrics. Ferroelectrics, 2014, 469, 1-13.	0.6	8
69	Domain switching of fatigued ferroelectric thin films. Applied Physics Letters, 2014, 104, 192902.	3.3	7
70	Effect of Hydrogen on Carbon Diffusion on Ni(111). Japanese Journal of Applied Physics, 2004, 43, 773-774.	1.5	6
71	Stability, spontaneous and induced polarization in monolayer MoC, WC, WS, and WSe. Journal of Physics Condensed Matter, 2019, 31, 045301.	1.8	6
72	Highly c-Oriented PbZr[sub 0.48]Ti[sub 0.52]O[sub 3] Thin Films on Glass Substrates. Electrochemical and Solid-State Letters, 2009, 12, G20.	2.2	5

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73	PREDICTION OF DIELECTRIC DISPERSION FOR LEAD BASED PEROVSKITES AND STUDY OF LOCAL DIELECTRIC RESPONSE IN 0.75Pb(Mg_{1/3}Nb_{2/3})O₃â€“0.25PbTiO₃. Journal of Advanced Dielectrics, 2012, 02, 1241009.	2.4	5
74	Resistive switching characteristics of epitaxial NiO thin films affected by lattice strains and external forces. Applied Surface Science, 2021, 566, 150685.	6.1	5
75	Revealing the role of dopants in mitigating degradation phenomena in sodium-ion layered cathodes. Physical Chemistry Chemical Physics, 2021, 23, 2038-2045.	2.8	5
76	Density functional study of Î±â€“Î² phase transition of polyvinylidene difluoride. Physica Status Solidi - Rapid Research Letters, 2012, 6, 217-219.	2.4	4
77	Multiferroic Properties of Selfâ€Aligned <scp><scp>BiMnO</scp></scp>₃ Nanosquares. Journal of the American Ceramic Society, 2012, 95, 2474-2477.	3.8	4
78	Switchable Polarization in Mn Embedded Graphene. Scientific Reports, 2018, 8, 4538.	3.3	4
79	Quantitative assessment of the structure of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ge</mml:mi><mml:mn>20</mml:mn></m mathvariant="normal">I</mml:mi><mml:mn>7</mml:mn></mml:msub></mml:mrow></mml:math> chalcohalide glass by first-principles molecular dynamics. Physical Review B, 2021, 103, .	3.2	4
80	Stabilization of 6H-Hexagonal SrMnO3 Polymorph by Al2O3 insertion. Journal of the European Ceramic Society, 2021, 41, 5155-5162.	5.7	4
81	Enhanced ferroelectricity in perovskite oxysulfides. Physical Review Materials, 2019, 3, .	2.4	4
82	Fabrication and optical conductivities of strained epitaxial NaxCoO2 thin films: x=0.5, 0.7. Journal of Solid State Chemistry, 2008, 181, 2020-2023.	2.9	3
83	Studies of Perovskite Materials for High-Performance Storage Media, Piezoelectric, and Solar Energy Conversion Devices. , 2010, , .		3
84	Fast Domain Wall Switching in a Thin Ferroelectric Polymer Layer. Electrochemical and Solid-State Letters, 2011, 14, G1.	2.2	3
85	Correlation between Kolmogorov-Sinai entropy and self-diffusion coefficient in simple fluids. Physical Review E, 2003, 67, 027205.	2.1	2
86	Enhanced domain wall speed in non-c-oriented SrBi₂Ta₂O₉thin film. Journal Physics D: Applied Physics, 2008, 41, 155307.	2.8	2
87	Electrical and optical observations of ferromagnetism in Ge0.7Mn0.3semiconductor. Journal Physics D: Applied Physics, 2009, 42, 085005.	2.8	2
88	Selective Ferroelectric Domain Mapping of PbTiO3 Thin Films Using Self-Assembled Polyelectrolyte. Journal of the Electrochemical Society, 2011, 158, D546.	2.9	2
89	Formation of Semiconducting ZnO Nanowires Using Dip-Pen Nanolithography and Step Edge Decoration Approach. Electrochemical and Solid-State Letters, 2011, 14, H397.	2.2	2
90	Fabrication of Ultrathin Nb Nanopin Arrays. Electrochemical and Solid-State Letters, 2011, 14, D33.	2.2	2

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91	Ferroelectric switching response of P(VDF-TrFE) nanodots with and without nanomolds. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	2
92	Effects of gallium and arsenic substitution on the electronic and magnetic properties of monolayer SnS. Physica Scripta, 2021, 96, 095803.	2.5	2
93	Bond-Valence Model of Ferroelectric PbTiO3. Journal of the Korean Physical Society, 2008, 52, 1206-1210.	0.7	2
94	Lyapunov instability of rigid diatomic molecules in three dimensions. Physical Review E, 2001, 64, 041106.	2.1	1
95	Enhanced power factor of epitaxial layered cobaltite NaxCoO2 thin film induced by strain: x=0.5,0.7. Journal of Applied Physics, 2008, 104, 033538.	2.5	1
96	Epitaxially strained Na0.7CoO2 thin films on SrTiO3 buffer layer. Journal of Crystal Growth, 2009, 311, 1021-1024.	1.5	1
97	Structural and magnetic properties of Ge0.7Mn0.3 thin films. Thin Solid Films, 2010, 518, 2665-2668.	1.8	1
98	Modeling of Materials for Naval SONAR, Pollution Control and Nonvolatile Memory Application. , 2008, , .		0
99	Spin domain mapping of a CrO2 thin film using spin-polarized current microscopy. Solid State Communications, 2011, 151, 1192-1195.	1.9	0