Hyun Myung Jang

List of Publications by Year
in descending order

59 papers	2,501 citations	201674 27 h-index	197818 49 g-index
61 all docs	61 docs citations	61 times ranked	4227 citing authors

#	Article	IF	Citations
1	Spin-Canting-Induced Improper Ferroelectricity and Spontaneous Magnetization Reversal in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>SmFe</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2011, 107, 117201.	7.8	343
2	Resolving the Physical Origin of Octahedral Tilting in Halide Perovskites. Chemistry of Materials, 2016, 28, 4259-4266.	6.7	211
3	The nature of hydrogen-bonding interaction in the prototypic hybrid halide perovskite, tetragonal CH3NH3PbI3. Scientific Reports, 2016, 6, 21687.	3.3	123
4	Size-tunable mesoporous spherical TiO2 as a scattering overlayer in high-performance dye-sensitized solar cells. Journal of Materials Chemistry, 2011, 21, 9582.	6.7	119
5	Lattice strain-enhanced exsolution of nanoparticles in thin films. Nature Communications, 2019, 10, 1471.	12.8	114
6	Proton-transfer-induced 3D/2D hybrid perovskites suppress ion migration and reduce luminance overshoot. Nature Communications, 2020, 11, 3378.	12.8	108
7	Structurally Tailored Hexagonal Ferroelectricity and Multiferroism in Epitaxial YbFeO₃ Thin-Film Heterostructures. Journal of the American Chemical Society, 2012, 134, 1450-1453.	13.7	98
8	Facet-Dependent in Situ Growth of Nanoparticles in Epitaxial Thin Films: The Role of Interfacial Energy. Journal of the American Chemical Society, 2019, 141, 7509-7517.	13.7	89
9	Epitaxially Constrained Hexagonal Ferroelectricity and Canted Triangular Spin Order in LuFeO₃ Thin Films. Chemistry of Materials, 2012, 24, 2426-2428.	6.7	77
10	Variations of ferroelectric off-centering distortion and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>3</mml:mn><mml:mi>d</mml:mi><mml:mtext>â”</mml:mtext><mml:mn>4</mml:mn><mml:mi mixing in La-doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>BiFeO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:n Physical Review B, 2010, 82, .	3.2	74
11	Ferroelectric polarization switching with a remarkably high activation energy in orthorhombic GaFeO3 thin films. NPG Asia Materials, 2016, 8, e242-e242.	7.9	72
12	Switchable Photovoltaic Effects in Hexagonal Manganite Thin Films Having Narrow Band Gaps. Chemistry of Materials, 2015, 27, 7425-7432.	6.7	67
13	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
14	Rhombohedralâ€“orthorhombic morphotropic phase boundary in BiFeO3-based multiferroics: first-principles prediction. Journal of Materials Chemistry, 2012, 22, 1667-1672.	6.7	51
15	In-plane strain control of the magnetic remanence and cation-charge redistribution inCoFe2O4thin film grown on a piezoelectric substrate. Physical Review B, 2010, 81, .	3.2	47
16	Enhanced Switchable Ferroelectric Photovoltaic Effects in Hexagonal Ferrite Thin Films via Strain Engineering. ACS Applied Materials & Interfaces, 2018, 10, 1846-1853.	8.0	47
17	Electronâ”hole separation in ferroelectric oxides for efficient photovoltaic responses. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6566-6571.	7.1	40
18	Leeet al.Reply:. Physical Review Letters, 2012, 108, .	7.8	38

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19	Reduced charge recombination by the formation of an interlayer using a novel dendron coadsorbent in solid-state dye-sensitized solar cells. RSC Advances, 2012, 2, 3467.	3.6	38
20	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>4</mml:mn><mml:mi>d</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mn>5</mml:mn><mml:mi>p</mml:mi></mml:math>Orbital Mixing and Asymmetric In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>4</mml:mn><mml:mi>d</mml:mi><mml:mo>â€“</mml:mo><mml:mi mathvariant="normal">O</mml:mi></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/	7.8	35
21	Switchable ferroelectric photovoltaic effects in epitaxial h-RFeO₃ thin films. Nanoscale, 2018, 10, 13261-13269.	5.6	35
22	Influence of tensile-strain-induced oxygen deficiency on metal-insulator transitions in NdNiO3â^'Î´ epitaxial thin films. Scientific Reports, 2017, 7, 4681.	3.3	34
23	Hydrogen-doped Brookite TiO2 Nanobullets Array as a Novel Photoanode for Efficient Solar Water Splitting. Scientific Reports, 2016, 6, 36099.	3.3	33
24	SnS44â€“, SbS43â€“, and AsS33â€“ Metal Chalcogenide Surface Ligands: Couplings to Quantum Dots, Electron Transfers, and All-Inorganic Multilayered Quantum Dot Sensitized Solar Cells. Journal of the American Chemical Society, 2015, 137, 13827-13835.	13.7	32
25	Implementing Roomâ€Temperature Multiferroism by Exploiting Hexagonalâ€Orthorhombic Morphotropic Phase Coexistence in LuFeO₃ Thin Films. Advanced Materials, 2016, 28, 7430-7435.	21.0	31
26	Broadband light confinement using a hierarchically structured TiO2 multi-layer for dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 9707.	10.3	29
27	Artificially imposed hexagonal ferroelectricity in canted antiferromagnetic YFeO3 epitaxial thin films. Materials Chemistry and Physics, 2013, 138, 929-936.	4.0	29
28	Enhanced photocatalytic activity of {101}-oriented bipyramidal TiO2 agglomerates through interparticle charge transfer. Applied Catalysis B: Environmental, 2015, 176-177, 76-82.	20.2	28
29	Î²-CuGaO₂ as a Strong Candidate Material for Efficient Ferroelectric Photovoltaics. Chemistry of Materials, 2017, 29, 7596-7603.	6.7	28
30	Modulation of metal-insulator transitions by field-controlled strain in NdNiO3/SrTiO3/PMN-PT (001) heterostructures. Scientific Reports, 2016, 6, 22228.	3.3	25
31	Multiferroism in hexagonally stabilized TmFeO₃ thin films below 120 K. Journal of Materials Chemistry C, 2014, 2, 4521-4525.	5.5	24
32	Low-Temperature Solid-State Synthesis of High-Purity BiFeO₃ Ceramic for Ferroic Thin-Film Deposition. Inorganic Chemistry, 2017, 56, 11911-11916.	4.0	24
33	New Class of 3.7 V Fe-Based Positive Electrode Materials for Na-Ion Battery Based on Cation-Disordered Polyanion Framework. Chemistry of Materials, 2018, 30, 6346-6352.	6.7	23
34	Enhancing photoluminescence quantum efficiency of metal halide perovskites by examining luminescence-limiting factors. APL Materials, 2020, 8, .	5.1	22
35	Electroluminescence of Perovskite Nanocrystals with Ligand Engineering. Trends in Chemistry, 2020, 2, 837-849.	8.5	22
36	Rare earth doped CaSO4luminescence phosphors for applications in novel displays - new recipes. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 565-577.	1.8	18

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37	Ferroelectric Ho 5<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-O 2<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>hybridization as the origin of hexagonal ferroelectricity in multiferroic HoMnO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow />	3.2	18
38	Tertiary hierarchically structured TiO2 for CdS quantum-dot-sensitized solar cells. Electrochimica Acta, 2011, 56, 7371-7376.	5.2	18
39	Aerosol OT/Water System Coupled with Triiodide/Iodide (I₃^{â^'}/I^{â^'}) Redox Electrolytes for Highly Efficient Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2013, 3, 1344-1350.	19.5	18
40	Imprint Control of Nonvolatile Shape Memory with Asymmetric Ferroelectric Multilayers. Chemistry of Materials, 2014, 26, 6911-6914.	6.7	17
41	Non-volatile ferroelectric control of room-temperature electrical transport in perovskite oxide semiconductor La:BaSnO₃. Journal of Materials Chemistry C, 2017, 5, 11763-11768.	5.5	15
42	A light scattering polymer gel electrolyte for high performance dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 6027.	6.7	14
43	Mode coupling between nonpolar and polar phonons as the origin of improper ferroelectricity in hexagonal LuMnO₃. Journal of Materials Chemistry C, 2014, 2, 4126-4132.	5.5	13
44	High Rate Li-Ion Batteries with Cation-Disordered Cathodes. Joule, 2019, 3, 1064-1079.	24.0	12
45	Softening behavior of the ferroelectric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>A</mml:mi><mml:mn>1</mml:mn></mml:msub><mml:mrow><mml:mo>(</mml:mo> near the Curie temperature. Physical Review B, 2009, 80, .	3.2	11
46	Bandgap Tuning with Thermal Residual Stresses Induced in a Quantum Dot. Small, 2014, 10, 3678-3684.	10.0	11
47	Anomalous domain periodicity observed in ferroelectric PbTiO3 nanodots having 180Â° stripe domains. Scientific Reports, 2016, 6, 26644.	3.3	10
48	Strategic Design and Utilization of Molecular Flexibility for Straddling the Application of Organic Superbases: A DFT Study. ChemistrySelect, 2018, 3, 837-842.	1.5	10
49	Ferroelectric ground state and polarization-switching path of orthorhombic YMnO3with coexistingE-type and cycloidal spin phases. Physical Review B, 2013, 88, .	3.2	6
50	(111)-Oriented Pb(Zr0.52Ti0.48)O3 thin film on Pt(111)/Si substrate using CoFe2O4 nano-seed layer by pulsed laser deposition. Journal of Materials Science: Materials in Electronics, 2013, 24, 3736-3743.	2.2	5
51	Hybrid photoelectrode by using vertically aligned rutile TiO2 nanowires inlaid with anatase TiO2 nanoparticles for dye-sensitized solar cells. Materials Chemistry and Physics, 2014, 143, 1440-1445.	4.0	5
52	Modulated spin structure responsible for the magnetic-field-induced polarization switching in multiferroicTbMn2O5. Physical Review B, 2015, 91, .	3.2	5
53	Spin-coupling-induced Improper Polarizations and Latent Magnetization in Multiferroic BiFeO3. Scientific Reports, 2018, 8, 405.	3.3	5
54	Room-temperature ferroelectricity in SrTiO3 nanodots array formed by an ac-bias field. Applied Physics Letters, 2013, 103, .	3.3	4

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55	Quantum-confinement effect on the linewidth broadening of metal halide perovskite-based quantum dots. Journal of Physics Condensed Matter, 2021, 33, .	1.8	4
56	Pulsed laser deposition of Pb(Zr0.52Ti0.48)O3thin film on cobalt ferrite nano-seed layered Pt(111)/Si substrate: effect of oxygen pressure. Phase Transitions, 2014, 87, 666-675.	1.3	3
57	A tri-functional TiO2photoelectrode: single crystalline nanowires directly grown on nanoparticles for dye-sensitized solar cells. RSC Advances, 2014, 4, 943-947.	3.6	2
58	Quantum dot-sensitized mesoporous spherical TiO2 paste with cyclic calcination for photoelectrochemical cells. Electrochimica Acta, 2014, 132, 98-102.	5.2	2
59	Quantum Dots: Bandgap Tuning with Thermal Residual Stresses Induced in a Quantum Dot (Small) Tj ETQq1 1 0.784314 rgBT /Overlo	10.0	0