

Miyoung Kim

List of Publications by Year in descending order

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119
papers

5,590
citations

136740

32
h-index

79541

73
g-index

121
all docs

121
docs citations

121
times ranked

8676
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomic structure of conducting nanofilaments in TiO ₂ resistive switching memory. Nature Nanotechnology, 2010, 5, 148-153.	15.6	1,866
2	Atomic and electronic reconstruction at the van der Waals interface in twisted bilayer graphene. Nature Materials, 2019, 18, 448-453.	13.3	454
3	Ferroelectrically tunable magnetic skyrmions in ultrathin oxide heterostructures. Nature Materials, 2018, 17, 1087-1094.	13.3	265
4	Nonstoichiometry and the Electrical Activity of Grain Boundaries in SrTiO ₃ . Physical Review Letters, 2001, 86, 4056-4059.	2.9	176
5	Nearly single-crystalline GaN light-emitting diodes on amorphous glass substrates. Nature Photonics, 2011, 5, 763-769.	15.6	156
6	Quasi-graphitic carbon shell-induced Cu confinement promotes electrocatalytic CO ₂ reduction toward C ₂₊ products. Nature Communications, 2021, 12, 3765.	5.8	99
7	Growth and characterizations of GaN micro-rods on graphene films for flexible light emitting diodes. APL Materials, 2014, 2, .	2.2	98
8	Electrically driven mid-submicrometre pixelation of InGaN micro-light-emitting diode displays for augmented-reality glasses. Nature Photonics, 2021, 15, 449-455.	15.6	91
9	Aligned networks of cadmium sulfide nanowires for highly flexible photodetectors with improved photoconductive responses. Journal of Materials Chemistry, 2012, 22, 2173-2179.	6.7	84
10	Flexible GaN Light-Emitting Diodes Using GaN Microdisks Epitaxially Laterally Overgrown on Graphene Dots. Advanced Materials, 2016, 28, 7688-7694.	11.1	75
11	Nanoscale Spin-State Ordering in LaCoO ₃ Epitaxial Thin Films. Chemistry of Materials, 2014, 26, 2496-2501.	3.2	74
12	Microstructures of GaN Thin Films Grown on Graphene Layers. Advanced Materials, 2012, 24, 515-518.	11.1	72
13	Epitaxial Brownmillerite Oxide Thin Films for Reliable Switching Memory. ACS Applied Materials & Interfaces, 2016, 8, 7902-7911.	4.0	72
14	Position- and Morphology-Controlled ZnO Nanostructures Grown on Graphene Layers. Advanced Materials, 2012, 24, 5565-5569.	11.1	68
15	Heteroepitaxial fabrication and structural characterizations of ultrafine GaN/ZnO coaxial nanorod heterostructures. Applied Physics Letters, 2004, 84, 3612-3614.	1.5	62
16	Topotactic Phase Transition Driving Memristive Behavior. Advanced Materials, 2019, 31, e1903391.	11.1	61
17	The Role of Zr Doping in Stabilizing Li[Ni _{0.6} Co _{0.2} Mn _{0.2}]O ₂ as a Cathode Material for Lithium-Ion Batteries. ChemSusChem, 2019, 12, 2439-2446.	3.6	61
18	Interface Control of Ferroelectricity in an SrRuO ₃ /BaTiO ₃ /SrRuO ₃ Capacitor and its Critical Thickness. Advanced Materials, 2017, 29, 1602795.	11.1	57

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19	Lithiation Mechanism of Tunnel-Structured MnO ₂ Electrode Investigated by In Situ Transmission Electron Microscopy. <i>Advanced Materials</i> , 2017, 29, 1703186.	11.1	52
20	Tris(2-benzimidazolylmethyl)amine-Directed Synthesis of Single-Atom Nickel Catalysts for Electrochemical CO Production from CO ₂ . <i>Chemistry - A European Journal</i> , 2018, 24, 18444-18454.	1.7	50
21	Synaptic devices based on two-dimensional layered single-crystal chromium thiophosphate (CrPS ₄). <i>NPG Asia Materials</i> , 2018, 10, 23-30.	3.8	48
22	A wafer-scale antireflective protection layer of solution-processed TiO ₂ nanorods for high performance silicon-based water splitting photocathodes. <i>Journal of Materials Chemistry A</i> , 2016, 4, 9477-9485.	5.2	47
23	Controlled epitaxial growth modes of ZnO nanostructures using different substrate crystal planes. <i>Journal of Materials Chemistry</i> , 2009, 19, 941.	6.7	45
24	Architected van der Waals epitaxy of ZnO nanostructures on hexagonal BN. <i>NPG Asia Materials</i> , 2014, 6, e145-e145.	3.8	43
25	Thermodynamically driven self-formation of copper-embedded nitrogen-doped carbon nanofiber catalysts for a cascade electroreduction of carbon dioxide to ethylene. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11632-11641.	5.2	42
26	Structural and optical characteristics of GaN/ZnO coaxial nanotube heterostructure arrays for light-emitting device applications. <i>New Journal of Physics</i> , 2009, 11, 125021.	1.2	40
27	Vertically ordered SnO ₂ nanobamboos for substantially improved detection of volatile reducing gases. <i>Journal of Materials Chemistry A</i> , 2015, 3, 17939-17945.	5.2	40
28	Unraveling the Origin and Mechanism of Nanofilament Formation in Polycrystalline SrTiO ₃ Resistive Switching Memories. <i>Advanced Materials</i> , 2019, 31, e1901322.	11.1	38
29	Effects of Residual Stress on the Electrical Properties of PZT Films. <i>Journal of the American Ceramic Society</i> , 2007, 90, 1077-1080.	1.9	37
30	Brownmillerite thin films as fast ion conductors for ultimate-performance resistance switching memory. <i>Nanoscale</i> , 2017, 9, 10502-10510.	2.8	37
31	Fully Flexible GaN Light-Emitting Diodes through Nanovoid-Mediated Transfer. <i>Advanced Optical Materials</i> , 2014, 2, 267-274.	3.6	35
32	Structural-relaxation-driven electron doping of amorphous oxide semiconductors by increasing the concentration of oxygen vacancies in shallow-donor states. <i>NPG Asia Materials</i> , 2016, 8, e250-e250.	3.8	35
33	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS ₄ . <i>ACS Nano</i> , 2021, 15, 16904-16912.	7.3	34
34	Microscopic Evidence for Strong Interaction between Pd and Graphene Oxide that Results in Metal-Decorated-Induced Reduction of Graphene Oxide. <i>Advanced Materials</i> , 2017, 29, 1605929.	11.1	32
35	Transferable single-crystal GaN thin films grown on chemical vapor-deposited hexagonal BN sheets. <i>NPG Asia Materials</i> , 2017, 9, e410-e410.	3.8	32
36	Dielectric and magnetic properties in Ta-substituted BiFeO ₃ ceramics. <i>Journal of Materials Research</i> , 2007, 22, 3397-3403.	1.2	31

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55	High-Resolution Observation of Nucleation and Growth Behavior of Nanomaterials Using a Graphene Template. <i>Advanced Materials</i> , 2014, 26, 2011-2015.	11.1	20
56	Growth and optical characteristics of high-quality ZnO thin films on graphene layers. <i>APL Materials</i> , 2015, 3, .	2.2	20
57	Individually addressable and flexible pressure sensor matrixes with ZnO nanotube arrays on graphene. <i>NPG Asia Materials</i> , 2022, 14, .	3.8	18
58	Diffusion-controlled recrystallization and grain growth-induced plasticity of steel under externally applied stress. <i>Philosophical Magazine</i> , 2008, 88, 1811-1824.	0.7	17
59	Emission color-tuned light-emitting diode microarrays of nonpolar In _x Ga _{1-x} N/GaN multishell nanotube heterostructures. <i>Scientific Reports</i> , 2015, 5, 18020.	1.6	17
60	Dynamical Origin of Highly Efficient Energy Dissipation in Soft Magnetic Nanoparticles for Magnetic Hyperthermia Applications. <i>Physical Review Applied</i> , 2018, 9, .	1.5	17
61	Electrical Transport and Thermoelectric Properties of SnSe-SnTe Solid Solution. <i>Materials</i> , 2019, 12, 3854.	1.3	17
62	Exciton Recombination, Energy-, and Charge Transfer in Single- and Multilayer Quantum-Dot Films on Silver Plasmonic Resonators. <i>Scientific Reports</i> , 2016, 6, 26204.	1.6	16
63	Microtube Light-Emitting Diode Arrays with Metal Cores. <i>ACS Nano</i> , 2016, 10, 3114-3120.	7.3	16
64	Room Temperature Deposition of Crystalline Nanoporous ZnO Nanostructures for Direct Use as Flexible DSSC Photoanode. <i>Nanoscale Research Letters</i> , 2016, 11, 221.	3.1	15
65	Anomalous optical excitations from arrays of whirlpooled lattice distortions in moiré superlattices. <i>Nature Materials</i> , 2022, 21, 890-895.	13.3	15
66	Photoluminescence induced by thermal annealing in SrTiO ₃ thin film. <i>Applied Physics Letters</i> , 2009, 95, 241906.	1.5	14
67	Catalyst-free growth of InAs/In _x Ga _{1-x} As coaxial nanorod heterostructures on graphene layers using molecular beam epitaxy. <i>NPG Asia Materials</i> , 2015, 7, e206-e206.	3.8	14
68	High photo-conversion efficiency in double-graded Cu(In,Ga)(S,Se) ₂ thin film solar cells with two-step sulfurization post-treatment. <i>Progress in Photovoltaics: Research and Applications</i> , 2017, 25, 139-148.	4.4	14
69	In situ observations of topotactic phase transitions in a ferrite memristor. <i>Journal of Applied Physics</i> , 2020, 128, 074501.	1.1	14
70	Double-layer buffer template to grow commensurate epitaxial BaBiO ₃ thin films. <i>APL Materials</i> , 2016, 4, .	2.2	13
71	Effects of the Heterointerface on the Growth Characteristics of a Brownmillerite SrFeO _{2.5} Thin Film Grown on SrRuO ₃ and SrTiO ₃ Perovskites. <i>Scientific Reports</i> , 2020, 10, 3807.	1.6	13
72	Superconducting Sr ₂ RuO ₄ Thin Films without Out-of-Phase Boundaries by Higher-Order Ruddlesden-Popper Intergrowth. <i>Nano Letters</i> , 2021, 21, 4185-4192.	4.5	13

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73	Free-standing and ultrathin inorganic light-emitting diode array. NPG Asia Materials, 2019, 11, .	3.8	12
74	Anion Extraction-Induced Polymorph Control of Transition Metal Dichalcogenides. Nano Letters, 2019, 19, 8644-8652.	4.5	12
75	Analyzing the microstructure and related properties of 2D materials by transmission electron microscopy. Applied Microscopy, 2019, 49, 10.	0.8	12
76	Dimension- and position-controlled growth of GaN microstructure arrays on graphene films for flexible device applications. Scientific Reports, 2021, 11, 17524.	1.6	11
77	Electrochemical oxidation of boron-doped nickel-iron layered double hydroxide for facile charge transfer in oxygen evolution electrocatalysts. RSC Advances, 2021, 11, 8198-8206.	1.7	10
78	Vertical monolithic integration of wide- and narrow-bandgap semiconductor nanostructures on graphene films. NPG Asia Materials, 2021, 13, .	3.8	10
79	Strain-induced Modulation of Localized Surface Plasmon Resonance in Ultrathin Hexagonal Gold Nanoplates. Advanced Materials, 2021, 33, e2100653.	11.1	10
80	Observation of the Ni ₂ O ₃ phase in a NiO thin film resistive switching system. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700048.	1.2	9
81	Dimensionality reduction and unsupervised clustering for EELS-SI. Ultramicroscopy, 2021, 231, 113314.	0.8	9
82	Preferred diffusion paths for copper electromigration by in situ transmission electron microscopy. Ultramicroscopy, 2017, 181, 160-164.	0.8	9
83	Solid-phase epitaxy of amorphous Si using single-crystalline Si nanowire seed templates. Applied Physics Letters, 2007, 91, 223107.	1.5	8
84	Cu Diffusion-Driven Dynamic Modulation of the Electrical Properties of Amorphous Oxide Semiconductors. Advanced Functional Materials, 2017, 27, 1700336.	7.8	8
85	Thermally Stable Amorphous Oxide-based Schottky Diodes through Oxygen Vacancy Control at Metal/Oxide Interfaces. Scientific Reports, 2019, 9, 7872.	1.6	8
86	Coherent-strained superconducting $BaPb_{1-x}Bi_xO_{3-y}$ thin films. $Bi_{1-x}Pb_xO_{3-y}$ thin films. $Bi_{1-x}Pb_xO_{3-y}$ thin films.	0.9	8
87	Electronic-Reconstruction-Enhanced Tunneling Conductance at Terrace Edges of Ultrathin Oxide Films. Advanced Materials, 2017, 29, 1702001.	11.1	7
88	Inorganic Optoelectronics: Visible-Color-Tunable Light-Emitting Diodes (Adv. Mater. 29/2011). Advanced Materials, 2011, 23, 3224-3224.	11.1	6
89	Local Crystallization of LaB_6 Yielding Compact, Strong Thermionic Electron Emission Source. IEEE Electron Device Letters, 2013, 34, 1322-1324.	2.2	6
90	Growth and Atomically Resolved Polarization Mapping of Ferroelectric Bi ₂ WO ₆ Thin Films. ACS Applied Electronic Materials, 2021, 3, 1023-1030.	2.0	6

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91	Understanding luminescence properties of grain boundaries in GaN thin films and their atomistic origin. Applied Physics Letters, 2018, 112, . Roughening and strain-field evolution at a grain boundary in $\text{Al}_x\text{Ga}_{1-x}\text{N}$	1.5	5
92	Physical Review Materials, 2018, 2, . In Situ Cryogenic HAADF-STEM Observation of Spontaneous Transition of Ferroelectric Polarization Domain Structures at Low Temperatures. Nano Letters, 2021, 21, 8679-8686.	0.9	5
93	Phase stability of the intermetallic L21 Heusler alloys of $\text{A}_2(\text{Hf}_{1-x}\text{Zr}_x)\text{Al}$ (where A=Pd and Pt) for an Nb-based high-temperature materials design. Applied Physics Letters, 2005, 87, 261908.	1.5	4
94	Spatial Investigation on Structural Properties of $\text{GdBa}_2\text{Cu}_3\text{O}_{7-x}$ Coated Conductors Grown on IBAD-MgO Based Stainless-Steel Substrates. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.1	4
95	Solid-Phase Epitaxial Growth of an Alumina Layer Having a Stacking-Mismatched Domain Structure of the Intermediate R_3 -Phase. ACS Applied Materials & Interfaces, 2018, 10, 41487-41496.	4.0	4
96	Effects of paramagnetic fluctuations on the thermochemistry of MnO(100) surfaces in the oxygen evolution reaction. Physical Chemistry Chemical Physics, 2021, 23, 859-865.	1.3	4
97	Role of anisotropic Coulomb interactions in the superexchange coupling of mixed-valent Mn^{3+} ions in MnO . Physical Review B, 2021, 104, .	1.1	4
98	A facile, one-pot synthesis of ultra-long nanoparticle-chained polyaniline wires. Journal of Materials Chemistry, 2011, 21, 17304.	6.7	3
99	Electrically Driven Diffraction Grating Designed for Visible-Wavelength Region. IEEE Electron Device Letters, 2013, 34, 84-86.	2.2	3
100	Thermoelectric Properties of $\text{Cu}_2\text{SnSe}_3\text{-SnS}$ Composite. Materials, 2019, 12, 2040.	1.3	3
101	Microstructure Modification of Liquid Phase Sintered Fe-Ni-B-C Alloys for Improved Mechanical Properties. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 4395-4401.	1.1	3
102	Tunable Two-Channel Magnetotransport in SrRuO_3 Ultrathin Films Achieved by Controlling the Kinetics of Heterostructure Deposition. Advanced Electronic Materials, 2022, 8, 2100804.	2.6	3
103	Flexible LEDs: Fully Flexible GaN Light-Emitting Diodes through Nanovoid-Mediated Transfer (Advanced) Tj ETQqO 0.0 rgBT /Oyerlock 10	3.6	2
104	Latent Order in High-Angle Grain Boundary of GaN. Scientific Reports, 2018, 8, 4647.	1.6	2
105	Increased mobility of an Al_2O_3 grain boundary by electron-beam irradiation. Journal of Materials Science, 2018, 53, 2383-2388.	1.7	2
106	Resistive Switching: Unraveling the Origin and Mechanism of Nanofilament Formation in Polycrystalline SrTiO_3 Resistive Switching Memories (Adv. Mater. 28/2019). Advanced Materials, 2019, 31, 1970205.	11.1	2
107	Thermodynamically driven self-formation of Ag nanoparticles in Zn-embedded carbon nanofibers for efficient electrochemical CO_2 reduction. RSC Advances, 2021, 11, 24702-24708.	1.7	2

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109	<p>http://www.w3.org/1998/Math/MathML <math>\text{Bi}_2\text{Se}_3</math> thin films heteroepitaxially grown on <math>\text{Bi}_2\text{Se}_3</math> Physical Review Materials, 2020, 4, .</p>	0.9	2
110	Fabrication of Ni Nanoparticle-Embedded Porous Carbon Nanofibers Through Selective Etching of Selectively Oxidized MgO. Electronic Materials Letters, 2022, 18, 198.	1.0	2
111	Understanding the Behavior of Oxygen Vacancies in an SrFeO _x /Nb:SrTiO ₃ Memristor. Electronic Materials Letters, 2022, 18, 168-175.	1.0	2
112	Graphene Oxide: Microscopic Evidence for Strong Interaction between Pd and Graphene Oxide that Results in Metal-Decorated-Induced Reduction of Graphene Oxide (Adv. Mater. 15/2017). Advanced Materials, 2017, 29, .	11.1	1
113	Electrical properties of the amorphous interfacial layer between Al electrodes and epitaxial NiO films. Applied Physics Letters, 2012, 100, 172101.	1.5	0
114	Graphene: Position- and Morphology-Controlled ZnO Nanostructures Grown on Graphene Layers (Adv. Mater. 41/2012). Advanced Materials, 2012, 24, 5564-5564.	11.1	0
115	B23-P-08 Investigation on atomic and electronic structures of LaAlO ₃ /Sr _x Ca _{1-x} TiO ₃ interfaces using Cs-corrected STEM and EELS. Microscopy (Oxford, England), 2015, 64, i115.2-i115.	0.7	0
116	B21-P-05 Characterization of In _x Ga _{1-x} As/InAs Coaxial Nanorod Grown on Graphene Layers by Catalyst-Free Molecular Beam Epitaxy. Microscopy (Oxford, England), 2015, 64, i99.2-i99.	0.7	0
117	Frontispiece: Tris(2-benzimidazolylmethyl)amine-Directed Synthesis of Single-Atom Nickel Catalysts for Electrochemical CO Production from CO ₂ . Chemistry - A European Journal, 2018, 24, .	1.7	0
118	Effects of sintering conditions on the microstructure and mechanical properties of SiC prepared using powders recovered from kerf loss sludge. Bulletin of Materials Science, 2018, 41, 1.	0.8	0
119	Suppression of metal-to-insulator transition using strong interfacial coupling at cubic and orthorhombic perovskite oxide heterointerfaces. Nanoscale, 2021, 13, 708-715.	2.8	0