

Miyoung Kim

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115
papers

4,214
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h-index

63
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121
ext. papers

4,863
ext. citations

9.9
avg, IF

5.05
L-index

#	Paper	IF	Citations
115	Atomic structure of conducting nanofilaments in TiO ₂ resistive switching memory. <i>Nature Nanotechnology</i> , 2010 , 5, 148-53	28.7	1672
114	Atomic and electronic reconstruction at the van der Waals interface in twisted bilayer graphene. <i>Nature Materials</i> , 2019 , 18, 448-453	27	282
113	Nonstoichiometry and the electrical activity of grain boundaries in SrTiO ₃ . <i>Physical Review Letters</i> , 2001 , 86, 4056-9	7.4	165
112	Ferroelectrically tunable magnetic skyrmions in ultrathin oxide heterostructures. <i>Nature Materials</i> , 2018 , 17, 1087-1094	27	158
111	Nearly single-crystalline GaN light-emitting diodes on amorphous glass substrates. <i>Nature Photonics</i> , 2011 , 5, 763-769	33.9	135
110	Growth and characterizations of GaN micro-rods on graphene films for flexible light emitting diodes. <i>APL Materials</i> , 2014 , 2, 092512	5.7	86
109	Aligned networks of cadmium sulfide nanowires for highly flexible photodetectors with improved photoconductive responses. <i>Journal of Materials Chemistry</i> , 2012 , 22, 2173-2179		77
108	Nanoscale Spin-State Ordering in LaCoO ₃ Epitaxial Thin Films. <i>Chemistry of Materials</i> , 2014 , 26, 2496-2501	16	60
107	Flexible GaN Light-Emitting Diodes Using GaN Microdisks Epitaxial Laterally Overgrown on Graphene Dots. <i>Advanced Materials</i> , 2016 , 28, 7688-94	24	58
106	Microstructures of GaN thin films grown on graphene layers. <i>Advanced Materials</i> , 2012 , 24, 515-8	24	58
105	Position- and morphology-controlled ZnO nanostructures grown on graphene layers. <i>Advanced Materials</i> , 2012 , 24, 5565-9, 5564	24	57
104	Heteroepitaxial fabrication and structural characterizations of ultrafine GaN/ZnO coaxial nanorod heterostructures. <i>Applied Physics Letters</i> , 2004 , 84, 3612-3614	3.4	57
103	Epitaxial Brownmillerite Oxide Thin Films for Reliable Switching Memory. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 7902-11	9.5	48
102	Lithiation Mechanism of Tunnel-Structured MnO Electrode Investigated by In Situ Transmission Electron Microscopy. <i>Advanced Materials</i> , 2017 , 29, 1703186	24	41
101	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	13.4	41
100	Tris(2-benzimidazolylmethyl)amine-Directed Synthesis of Single-Atom Nickel Catalysts for Electrochemical CO Production from CO. <i>Chemistry - A European Journal</i> , 2018 , 24, 18444-18454	4.8	40
99	Interface Control of Ferroelectricity in an SrRuO ₃ /BaTiO ₃ /SrRuO ₃ Capacitor and its Critical Thickness. <i>Advanced Materials</i> , 2017 , 29, 1602795	24	39

98	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	2.9	39
97	Architected van der Waals epitaxy of ZnO nanostructures on hexagonal BN. <i>NPG Asia Materials</i> , 2014 , 6, e145-e145	10.3	37
96	Controlled epitaxial growth modes of ZnO nanostructures using different substrate crystal planes. <i>Journal of Materials Chemistry</i> , 2009 , 19, 941		37
95	Effects of Residual Stress on the Electrical Properties of PZT Films. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 1077-1080	3.8	36
94	Synaptic devices based on two-dimensional layered single-crystal chromium thiophosphate (CrPS4). <i>NPG Asia Materials</i> , 2018 , 10, 23-30	10.3	35
93	Vertically ordered SnO ₂ nanobamboos for substantially improved detection of volatile reducing gases. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 17939-17945	13	34
92	Fully Flexible GaN Light-Emitting Diodes through Nanovoid-Mediated Transfer. <i>Advanced Optical Materials</i> , 2014 , 2, 267-274	8.1	33
91	Topotactic Phase Transition Driving Memristive Behavior. <i>Advanced Materials</i> , 2019 , 31, e1903391	24	32
90	The Role of Zr Doping in Stabilizing Li[Ni Co Mn]O as a Cathode Material for Lithium-Ion Batteries. <i>ChemSusChem</i> , 2019 , 12, 2439-2446	8.3	30
89	Dielectric and magnetic properties in Ta-substituted BiFeO ₃ ceramics. <i>Journal of Materials Research</i> , 2007 , 22, 3397-3403	2.5	30
88	Surface morphology and growth mechanism of catalyst-free ZnO and Mg _x Zn _{1-x} O nanorods. <i>Physica Status Solidi - Rapid Research Letters</i> , 2008 , 2, 197-199	2.5	28
87	Unraveling the Origin and Mechanism of Nanofilament Formation in Polycrystalline SrTiO Resistive Switching Memories. <i>Advanced Materials</i> , 2019 , 31, e1901322	24	25
86	Formation and photoluminescent properties of embedded ZnO quantum dots in ZnO/nMgO multiple-quantum-well-structured nanorods. <i>Applied Physics Letters</i> , 2006 , 89, 113106	3.4	24
85	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	10.3	24
84	Microscopic Evidence for Strong Interaction between Pd and Graphene Oxide that Results in Metal-Decoration-Induced Reduction of Graphene Oxide. <i>Advanced Materials</i> , 2017 , 29, 1605929	24	23
83	Brownmillerite thin films as fast ion conductors for ultimate-performance resistance switching memory. <i>Nanoscale</i> , 2017 , 9, 10502-10510	7.7	23
82	Microstructural defects in GaN thin films grown on chemically vapor-deposited graphene layers. <i>Applied Physics Letters</i> , 2013 , 102, 051908	3.4	23
81	GaN light-emitting diodes on glass substrates with enhanced electroluminescence. <i>Journal of Materials Chemistry</i> , 2012 , 22, 22942		22

80	Electrically driven mid-submicrometre pixelation of InGaN micro-light-emitting diode displays for augmented-reality glasses. <i>Nature Photonics</i> ,	33.9	22
79	Centimeter-sized epitaxial h-BN films. <i>NPG Asia Materials</i> , 2016 , 8, e330-e330	10.3	22
78	Effect of annealing temperature on the phase transition, band gap and thermoelectric properties of Cu ₂ SnSe ₃ . <i>Journal of Materials Chemistry C</i> , 2018 , 6, 1780-1788	7.1	21
77	Transferable single-crystal GaN thin films grown on chemical vapor-deposited hexagonal BN sheets. <i>NPG Asia Materials</i> , 2017 , 9, e410-e410	10.3	21
76	Investigation of oxygen-related defects and the electrical properties of atomic layer deposited HfO ₂ films using electron energy-loss spectroscopy. <i>Journal of Applied Physics</i> , 2011 , 109, 023718	2.5	21
75	Heteroepitaxial Growth of GaN on Unconventional Templates and Layer-Transfer Techniques for Large-Area, Flexible/Stretchable Light-Emitting Diodes. <i>Advanced Optical Materials</i> , 2016 , 4, 505-521	8.1	20
74	Real-Time Characterization Using in situ RHEED Transmission Mode and TEM for Investigation of the Growth Behaviour of Nanomaterials. <i>Scientific Reports</i> , 2018 , 8, 1694	4.9	19
73	Growth and optical characteristics of high-quality ZnO thin films on graphene layers. <i>APL Materials</i> , 2015 , 3, 016103	5.7	18
72	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	13	17
71	High-resolution observation of nucleation and growth behavior of nanomaterials using a graphene template. <i>Advanced Materials</i> , 2014 , 26, 2011-5	24	17
70	Oxygen Vacancy Engineering for Highly Tunable Ferromagnetic Properties: A Case of SrRuO ₃ Ultrathin Film with a SrTiO ₃ Capping Layer. <i>Advanced Functional Materials</i> , 2020 , 30, 2001486	15.6	17
69	Quasi-graphitic carbon shell-induced Cu confinement promotes electrocatalytic CO reduction toward C products. <i>Nature Communications</i> , 2021 , 12, 3765	17.4	17
68	Axial oxygen vacancy-regulated microwave absorption in micron-sized tetragonal BaTiO ₃ particles. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 9749-9755	7.1	16
67	Confining vertical conducting filament for reliable resistive switching by using a Au-probe tip as the top electrode for epitaxial brownmillerite oxide memristive device. <i>Scientific Reports</i> , 2019 , 9, 1188	4.9	15
66	Diffusion-controlled recrystallization and grain growth-induced plasticity of steel under externally applied stress. <i>Philosophical Magazine</i> , 2008 , 88, 1811-1824	1.6	15
65	Metal-organic Framework-driven Porous Cobalt Disulfide Nanoparticles Fabricated by Gaseous Sulfurization as Bifunctional Electrocatalysts for Overall Water Splitting. <i>Scientific Reports</i> , 2019 , 9, 19539	4.9	15
64	Constructing Polymorphic Nanodomains in BaTiO ₃ Films via Epitaxial Symmetry Engineering. <i>Advanced Functional Materials</i> , 2020 , 30, 1910569	15.6	14
63	Exciton Recombination, Energy-, and Charge Transfer in Single- and Multilayer Quantum-Dot Films on Silver Plasmonic Resonators. <i>Scientific Reports</i> , 2016 , 6, 26204	4.9	14

62	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	4.9	14
61	Photoluminescence induced by thermal annealing in SrTiO ₃ thin film. <i>Applied Physics Letters</i> , 2009 , 95, 241906	3.4	14
60	Room Temperature Deposition of Crystalline Nanoporous ZnO Nanostructures for Direct Use as Flexible DSSC Photoanode. <i>Nanoscale Research Letters</i> , 2016 , 11, 221	5	13
59	Double-layer buffer template to grow commensurate epitaxial BaBiO ₃ thin films. <i>APL Materials</i> , 2016 , 4, 126106	5.7	13
58	Unconventional anomalous Hall effect from antiferromagnetic domain walls of Nd ₂ Ir ₂ O ₇ thin films. <i>Physical Review B</i> , 2018 , 98,	3.3	13
57	Catalyst-free growth of InAs/InxGa1-xAs coaxial nanorod heterostructures on graphene layers using molecular beam epitaxy. <i>NPG Asia Materials</i> , 2015 , 7, e206-e206	10.3	12
56	Microtube Light-Emitting Diode Arrays with Metal Cores. <i>ACS Nano</i> , 2016 , 10, 3114-20	16.7	12
55	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	6.8	10
54	Anion Extraction-Induced Polymorph Control of Transition Metal Dichalcogenides. <i>Nano Letters</i> , 2019 , 19, 8644-8652	11.5	9
53	Electrical Transport and Thermoelectric Properties of SnSe-SnTe Solid Solution. <i>Materials</i> , 2019 , 12,	3.5	9
52	Dynamical Origin of Highly Efficient Energy Dissipation in Soft Magnetic Nanoparticles for Magnetic Hyperthermia Applications. <i>Physical Review Applied</i> , 2018 , 9,	4.3	9
51	Strain engineering of the magnetic multipole moments and anomalous Hall effect in pyrochlore iridate thin films. <i>Science Advances</i> , 2020 , 6, eabb1539	14.3	8
50	Effects of the Heterointerface on the Growth Characteristics of a Brownmillerite SrFeO Thin Film Grown on SrRuO and SrTiO Perovskites. <i>Scientific Reports</i> , 2020 , 10, 3807	4.9	7
49	Free-standing and ultrathin inorganic light-emitting diode array. <i>NPG Asia Materials</i> , 2019 , 11,	10.3	7
48	Spectroscopic capture of a low-spin Mn(IV)-oxo species in Ni-MnO nanoparticles during water oxidation catalysis. <i>Nature Communications</i> , 2020 , 11, 5230	17.4	7
47	Observation of the Ni ₂ O ₃ phase in a NiO thin-film resistive switching system. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017 , 11, 1700048	2.5	6
46	Cu Diffusion-Driven Dynamic Modulation of the Electrical Properties of Amorphous Oxide Semiconductors. <i>Advanced Functional Materials</i> , 2017 , 27, 1700336	15.6	6
45	Electronic-Reconstruction-Enhanced Tunneling Conductance at Terrace Edges of Ultrathin Oxide Films. <i>Advanced Materials</i> , 2017 , 29, 1702001	24	6

44	Local Crystallization of LaB_6 Yielding Compact, Strong Thermionic Electron Emission Source. <i>IEEE Electron Device Letters</i> , 2013 , 34, 1322-1324	4.4	6
43	Solid-phase epitaxy of amorphous Si using single-crystalline Si nanowire seed templates. <i>Applied Physics Letters</i> , 2007 , 91, 223107	3.4	6
42	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS. <i>ACS Nano</i> , 2021 , 15, 16904-16912	16.7	6
41	Inorganic Optoelectronics: Visible-Color-Tunable Light-Emitting Diodes (Adv. Mater. 29/2011). <i>Advanced Materials</i> , 2011 , 23, 3224-3224	24	5
40	Observation of metallic electronic structure in a single-atomic-layer oxide. <i>Nature Communications</i> , 2021 , 12, 6171	17.4	5
39	Preferred diffusion paths for copper electromigration by in situ transmission electron microscopy. <i>Ultramicroscopy</i> , 2017 , 181, 160-164	3.1	5
38	In situ observations of topotactic phase transitions in a ferrite memristor. <i>Journal of Applied Physics</i> , 2020 , 128, 074501	2.5	5
37	Thermally Stable Amorphous Oxide-based Schottky Diodes through Oxygen Vacancy Control at Metal/Oxide Interfaces. <i>Scientific Reports</i> , 2019 , 9, 7872	4.9	4
36	Spatial Investigation on Structural Properties of $\text{GdBa}_2\text{Cu}_3\text{O}_7$ κ Coated Conductors Grown on IBAD-MgO Based Stainless-Steel Substrates. <i>IEEE Transactions on Applied Superconductivity</i> , 2015 , 25, 1-4	1.8	4
35	Understanding luminescence properties of grain boundaries in GaN thin films and their atomistic origin. <i>Applied Physics Letters</i> , 2018 , 112, 131901	3.4	4
34	Roughening and strain-field evolution at a grain boundary in Al_2O_3 . <i>Physical Review Materials</i> , 2018 , 2,	3.2	4
33	Superconducting SrRuO Thin Films without Out-of-Phase Boundaries by Higher-Order Ruddlesden-Popper Intergrowth. <i>Nano Letters</i> , 2021 , 21, 4185-4192	11.5	4
32	Analyzing the microstructure and related properties of 2D materials by transmission electron microscopy. <i>Applied Microscopy</i> , 2019 , 49, 10	1.1	4
31	A facile, one-pot synthesis of ultra-long nanoparticle-chained polyaniline wires. <i>Journal of Materials Chemistry</i> , 2011 , 21, 17304		3
30	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. <i>Applied Physics Letters</i> , 2005 , 87, 261908	3.4	3
29	Coherent-strained superconducting $\text{BaPb}_{1-x}\text{Bi}_x\text{O}_3$ thin films by interface engineering. <i>Physical Review Materials</i> , 2019 , 3,	3.2	3
28	Vertical monolithic integration of wide- and narrow-bandgap semiconductor nanostructures on graphene films. <i>NPG Asia Materials</i> , 2021 , 13,	10.3	3
27	Electrochemical oxidation of boron-doped nickel-iron layered double hydroxide for facile charge transfer in oxygen evolution electrocatalysts. <i>RSC Advances</i> , 2021 , 11, 8198-8206	3.7	3

26	Solid-Phase Epitaxial Growth of an Alumina Layer Having a Stacking-Mismatched Domain Structure of the Intermediate β Phase. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 41487-41496	9.5	3
25	Latent Order in High-Angle Grain Boundary of GaN. <i>Scientific Reports</i> , 2018 , 8, 4647	4.9	2
24	Increased mobility of an α -Al ₂ O ₃ grain boundary by electron-beam irradiation. <i>Journal of Materials Science</i> , 2018 , 53, 2383-2388	4.3	2
23	Thermoelectric Properties of CuSnSe-SnS Composite. <i>Materials</i> , 2019 , 12,	3.5	2
22	Flexible LEDs: Fully Flexible GaN Light-Emitting Diodes through Nanovoid-Mediated Transfer (Advanced Optical Materials 3/2014). <i>Advanced Optical Materials</i> , 2014 , 2, 302-302	8.1	2
21	Electrically Driven Diffraction Grating Designed for Visible-Wavelength Region. <i>IEEE Electron Device Letters</i> , 2013 , 34, 84-86	4.4	2
20	Dimensionality reduction and unsupervised clustering for EELS-SI. <i>Ultramicroscopy</i> , 2021 , 231, 113314	3.1	2
19	Effects of paramagnetic fluctuations on the thermochemistry of MnO(100) surfaces in the oxygen evolution reaction. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 859-865	3.6	2
18	Strain-Induced Modulation of Localized Surface Plasmon Resonance in Ultrathin Hexagonal Gold Nanoplates. <i>Advanced Materials</i> , 2021 , 33, e2100653	24	2
17	Dimension- and position-controlled growth of GaN microstructure arrays on graphene films for flexible device applications. <i>Scientific Reports</i> , 2021 , 11, 17524	4.9	2
16	Graphene Oxide: Microscopic Evidence for Strong Interaction between Pd and Graphene Oxide that Results in Metal-Decoration-Induced Reduction of Graphene Oxide (Adv. Mater. 15/2017). <i>Advanced Materials</i> , 2017 , 29,	24	1
15	Resistive Switching: Unraveling the Origin and Mechanism of Nanofilament Formation in Polycrystalline SrTiO ₃ Resistive Switching Memories (Adv. Mater. 28/2019). <i>Advanced Materials</i> , 2019 , 31, 1970205	24	1
14	Bi ₂ Se ₃ thin films heteroepitaxially grown on RuCl ₃ . <i>Physical Review Materials</i> , 2020 , 4,	3.2	1
13	In Situ Cryogenic HAADF-STEM Observation of Spontaneous Transition of Ferroelectric Polarization Domain Structures at Low Temperatures. <i>Nano Letters</i> , 2021 , 21, 8679-8686	11.5	1
12	Growth and Atomically Resolved Polarization Mapping of Ferroelectric Bi ₂ WO ₆ Thin Films. <i>ACS Applied Electronic Materials</i> , 2021 , 3, 1023-1030	4	1
11	Thermodynamically driven self-formation of Ag nanoparticles in Zn-embedded carbon nanofibers for efficient electrochemical CO reduction.. <i>RSC Advances</i> , 2021 , 11, 24702-24708	3.7	1
10	Tunable Two-Channel Magnetotransport in SrRuO ₃ Ultrathin Films Achieved by Controlling the Kinetics of Heterostructure Deposition. <i>Advanced Electronic Materials</i> , 2100804	6.4	0
9	Microstructure Modification of Liquid Phase Sintered Fe-Ni-B Alloys for Improved Mechanical Properties. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021 , 52, 4395-4401	2.3	0

- 8 B23-P-08 Investigation on atomic and electronic structures of LaAlO₃/Sr_xCa_{1-x}TiO₃ interfaces using Cs-corrected STEM and EELS. *Microscopy (Oxford, England)*, **2015**, 64, i115.2-i115 1.3
- 7 B21-P-05 Characterization of In_xGa_{1-x}As/InAs Coaxial Nanorod Grown on Graphene Layers by Catalyst-Free Molecular Beam Epitaxy. *Microscopy (Oxford, England)*, **2015**, 64, i99.2-i99 1.3
- 6 Electrical properties of the amorphous interfacial layer between Al electrodes and epitaxial NiO films. *Applied Physics Letters*, **2012**, 100, 172101 3.4
- 5 Graphene: Position- and Morphology-Controlled ZnO Nanostructures Grown on Graphene Layers (Adv. Mater. 41/2012). *Advanced Materials*, **2012**, 24, 5564-5564 2.4
- 4 Fabrication of Ni Nanoparticle-Embedded Porous Carbon Nanofibers Through Selective Etching of Selectively Oxidized MgO. *Electronic Materials Letters*, **2022**, 18, 198 2.9
- 3 Understanding the Behavior of Oxygen Vacancies in an SrFeO_x/Nb:SrTiO₃ Memristor. *Electronic Materials Letters*, **2022**, 18, 168 2.9
- 2 Suppression of metal-to-insulator transition using strong interfacial coupling at cubic and orthorhombic perovskite oxide heterointerfaces. *Nanoscale*, **2021**, 13, 708-715 7.7
- 1 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 1.7