Kailiang Zhang

List of Publications by Year
in descending order

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112	2,397	304743	214800
papers	citations	22 h-index	47 g-index

113	113	113	3736
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Two dimensional hexagonal boron nitride (2D-hBN): synthesis, properties and applications. Journal of Materials Chemistry C, 2017, 5, 11992-12022.	5.5	732
2	Ultrasensitive terahertz modulation by silicon-grown MoS₂nanosheets. Nanoscale, 2016, 8, 4713-4719.	5.6	119
3	Ceria concentration effect on chemical mechanical polishing of optical glass. Applied Surface Science, 2007, 253, 4951-4954.	6.1	108
4	Preparation and characterization of modified-clay-reinforced and toughened epoxy-resin nanocomposites. Journal of Applied Polymer Science, 2004, 91, 2649-2652.	2.6	93
5	Tunable interlayer coupling and Schottky barrier in graphene and Janus MoSSe heterostructures by applying an external field. Physical Chemistry Chemical Physics, 2018, 20, 24109-24116.	2.8	86
6	Facile and scalable fabrication of MnO2 nanocrystallines and enhanced electrochemical performance of MnO2/MoS2 inner heterojunction structure for supercapacitor application. Journal of Power Sources, 2020, 450, 227616.	7.8	81
7	Investigation on the final polishing slurry and technique of silicon substrate in ULSI. Microelectronic Engineering, 2003, 66, 438-444.	2.4	75
8	High efficiency graphene/MoS 2 /Si Schottky barrier solar cells using layer-controlled MoS 2 films. Solar Energy, 2018, 160, 76-84.	6.1	64
9	Temperature tunability of photonic crystal fiber filled with Fe3O4 nanoparticle fluid. Applied Physics Letters, 2011, 98, .	3.3	53
10	Scalable Synthesis of Highly Crystalline MoSe₂ and Its Ambipolar Behavior. ACS Applied Materials & Interfaces, 2017, 9, 36009-36016.	8.0	52
11	Ferrofluid-Infiltrated Microstructured Optical Fiber Long-Period Grating. IEEE Photonics Technology Letters, 2013, 25, 306-309.	2.5	48
12	Synthesis of Large-Area Highly Crystalline Monolayer Molybdenum Disulfide with Tunable Grain Size in a H₂ Atmosphere. ACS Applied Materials & Interfaces, 2015, 7, 22587-22593.	8.0	47
13	Low temperature sensitive intensity-interrogated magnetic field sensor based on modal interference in thin-core fiber and magnetic fluid. Applied Physics Letters, 2014, 104, .	3.3	41
14	Simultaneous measurement of temperature and magnetic field based on a long period grating concatenated with multimode fiber. Applied Physics Letters, 2015, 106, .	3.3	41
15	In situvisualization and detection of surface potential variation of mono and multilayer MoS₂under different humidities using Kelvin probe force microscopy. Nanotechnology, 2017, 28, 295705.	2.6	33
16	High-performance photodetector and its optoelectronic mechanism of MoS2/WS2 vertical heterostructure. Applied Surface Science, 2021, 546, 149074.	6.1	33
17	Tunable gap opening and spin polarization of two dimensional graphene/hafnene van der Waals heterostructures. Carbon, 2017, 120, 121-127.	10.3	32
18	Low consumption two-terminal artificial synapse based on transfer-free single-crystal MoS₂ memristor. Nanotechnology, 2020, 31, 265202.	2.6	32

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19	Controlled Growth of Bilayerâ€MoS₂ Films and MoS₂â€Based Fieldâ€Effect Transistor (FET) Performance Optimization. Advanced Electronic Materials, 2018, 4, 1700524.	5.1	29
20	Facile synthesis of reduced graphene oxide/tungsten disulfide/tungsten oxide nanohybrids for high performance supercapacitor with excellent rate capability. Applied Surface Science, 2019, 463, 150-158.	6.1	26
21	Dual-Direction Magnetic Field Sensor Based on Core-Offset Microfiber and Ferrofluid. IEEE Photonics Technology Letters, 2014, 26, 1581-1584.	2.5	25
22	Oxygen Vacancy-Dependent Synaptic Dynamic Behavior of TiO _x -Based Transparent Memristor. IEEE Transactions on Electron Devices, 2021, 68, 1950-1955.	3.0	25
23	Effective boron doping in three-dimensional nitrogen-containing carbon foam with mesoporous structure for enhanced all-solid-state supercapacitor performance. Applied Surface Science, 2019, 493, 1205-1214.	6.1	23
24	Study on the cleaning of silicon after CMP in ULSI. Microelectronic Engineering, 2003, 66, 433-437.	2.4	22
25	Research of micro area piezoelectric properties of AlN films and fabrication of high frequency SAW devices. Microelectronic Engineering, 2018, 199, 63-68.	2.4	22
26	Ultra-Low Power Ni/HfO₂/TiO_{<italic>x</italic>}/TiN Resistive Random Access Memory With Sub-30-nA Reset Current. IEEE Electron Device Letters, 2015, 36, 1018-1020.	3.9	21
27	Controlled synthesis of highly crystalline CVD-derived monolayer MoSe 2 and shape evolution mechanism. Materials Letters, 2018, 216, 261-264.	2.6	18
28	Improvement of Resistive Switching Performance in Sulfur-Doped HfOx-Based RRAM. Materials, 2021, 14, 3330.	2.9	18
29	Nonlinear electrical properties of Si three-terminal junction devices. Applied Physics Letters, 2010, 97, .	3.3	16
30	VO2 -Based Selection Device for Passive Resistive Random Access Memory Application. IEEE Electron Device Letters, 2016, , 1-1.	3.9	16
31	Magnetic Field Tunability of Square Tapered No-Core Fibers Based on Magnetic Fluid. Journal of Lightwave Technology, 2014, 32, 4600-4605.	4.6	15
32	Design and fabrication of flexible supercapacitor devices by using mesoporous carbon/polyaniline ink. Surface and Coatings Technology, 2017, 320, 595-600.	4.8	15
33	Insight into interface behavior and microscopic switching mechanism for flexible HfO2 RRAM. Applied Surface Science, 2020, 526, 146723.	6.1	15
34	Transparent HfO x -based memristor with robust flexibility and synapse characteristics by interfacial control of oxygen vacancies movement. Nanotechnology, 2021, 32, 145202.	2.6	15
35	Self-Rectifying Al₂O₃/TaO _x Memristor With Gradual Operation at Low Current by Interfacial Layer. IEEE Transactions on Electron Devices, 2021, 68, 6100-6105.	3.0	15
36	Crosstalk analysis of carbon nanotube bundle interconnects. Nanoscale Research Letters, 2012, 7, 138.	5.7	14

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37	Effect of growth temperature on large surface area, ultrathin MoS2 nanofilms fabrication and photovoltaic efficiency. Solar Energy, 2018, 159, 88-96.	6.1	13
38	Optimization of the annealing process and nanoscale piezoelectric properties of (002) AlN thin films. Journal of Materials Science: Materials in Electronics, 2017, 28, 9295-9300.	2.2	12
39	Nb₂CT_x MXene-tilted fiber Bragg grating optofluidic system based on photothermal spectroscopy for pesticide detection. Biomedical Optics Express, 2021, 12, 7051.	2.9	12
40	Field effect properties of single-layer MoS2(1â^'x)Se2x nanosheets produced by a one-step CVD process. Journal of Materials Science, 2018, 53, 14447-14455.	3.7	11
41	Chemical Mechanical Polishing and a Succedent Reactive Ion Etching Processing of Sapphire Wafer. Journal of the Electrochemical Society, 2007, 154, H166.	2.9	10
42	Antireflection and absorption properties of silicon parabolic-shaped nanocone arrays. Optik, 2017, 128, 133-138.	2.9	10
43	Facile synthesis of Sb-Sb2O5@P@C composite and study for the supercapacitor application. Journal of Materials Science: Materials in Electronics, 2020, 31, 2406-2415.	2.2	10
44	Microstructure and bending piezoelectric characteristics of AlN film for high-frequency flexible SAW devices. Journal of Materials Science: Materials in Electronics, 2021, 32, 13146-13155.	2.2	10
45	Strong photoluminescence enhancement of MoS2 monolayer via low-power Ar/O2 plasma treatment. Materials Letters, 2019, 235, 129-132.	2.6	9
46	Ultralow power switching of Ta₂O₅/AlO_X bilayer synergistic resistive random access memory. Journal Physics D: Applied Physics, 2020, 53, 335104.	2.8	9
47	Size-controlled nc-Si:H/a-SiC:H quantum dots superlattice and its application to hydrogenated amorphous silicon solar cells. Solar Energy Materials and Solar Cells, 2016, 157, 923-929.	6.2	8
48	Electronic bipolar resistive switching behavior in Ni/VOx/Al device. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2017, 221, 35-40.	3.5	8
49	A controllable synthesis of uniform MoS 2 monolayers on annealed molybdenum foils. Materials Letters, 2017, 204, 35-38.	2.6	8
50	Controlled synthesis of WS2 with different layers by tuning flow rates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2020, 261, 114756.	3.5	8
51	Simultaneous measurement of the BOD concentration and temperature based on a tapered microfiber for water pollution monitoring. Applied Optics, 2020, 59, 7364.	1.8	8
52	Exploration on chemical mechanical planarization of ZnO functional thin films for novel devices. Microelectronic Engineering, 2013, 101, 37-41.	2.4	7
53	Optimization and Mechanism on Chemical Mechanical Planarization of Hafnium Oxide for RRAM Devices. ECS Journal of Solid State Science and Technology, 2014, 3, P249-P252.	1.8	7
54	Fabrication and characterization of a magnetoelectric memory cell of 50Ba(Zr0.2Ti0.8)O3â€“50Ba0.7Ca0.3TiO3/Fe70Ga30. Materials Letters, 2016, 170, 192-195.	2.6	7

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55	Structural evolution of nanocrystalline silicon in hydrogenated nanocrystalline silicon solar cells. Surface and Coatings Technology, 2017, 320, 362-365.	4.8	6
56	Prediction of two-dimensional d-block elemental materials with normal honeycomb, triangular-dodecagonal, and square-octagonal structures from first principles. Applied Surface Science, 2017, 419, 484-496.	6.1	6
57	High-performance FET arrays enabled by improved uniformity of wafer-scale MoS2 synthesized via thermal vapor sulfurization. Applied Surface Science, 2019, 483, 1136-1141.	6.1	6
58	Ultrasensitive BOD Detection of Fiber Integrated With Nb₂CT_X MXene for Water Pollution. Journal of Lightwave Technology, 2022, 40, 2173-2180.	4.6	6
59	An sd2hybridized transition-metal monolayer with a hexagonal lattice: reconstruction between the Dirac and kagome bands. Physical Chemistry Chemical Physics, 2017, 19, 8046-8054.	2.8	5
60	Controllable Unidirectional Emission With Double-Resonant Plasmonic Antenna. IEEE Photonics Journal, 2017, 9, 1-10.	2.0	5
61	Controllable growth of continuous monolayer MoS₂ by balancing the moles of gaseous precursors via argon flow. CrystEngComm, 2019, 21, 6969-6977.	2.6	5
62	Improved Uniformity of TaO_x-Based Resistive Random Access Memory with Ultralow Operating Voltage by Electrodes Engineering. ECS Journal of Solid State Science and Technology, 2020, 9, 041005.	1.8	5
63	Nb₂CT_x MXene Integrated Tapered Microfiber Based on Light-Controlled Light for Ultra-Sensitive and Wide-Range Hemoglobin Detection. IEEE Sensors Journal, 2022, 22, 11456-11462.	4.7	5
64	Influence of p-layer on the performance of n-i-p Î¼c-Si:H thin film solar cells. Science China: Physics, Mechanics and Astronomy, 2010, 53, 2042-2046.	5.1	4
65	Electric-field switch of magnetization in BaTiO3â€“Na0.5Bi0.5TiO3â€“NiFe2O4 composite. Journal of Materials Science: Materials in Electronics, 2015, 26, 8261-8266.	2.2	4
66	Annealing effect on the optical and electronic properties of Î²-Ga2O3/AZO multilayered films. Journal of Materials Science: Materials in Electronics, 2016, 27, 11390-11395.	2.2	4
67	Electric field induced modulation of transport characteristics in multiferroic BZTâ€“BCT/FeCo thin films. Journal of Materials Science: Materials in Electronics, 2018, 29, 4786-4790.	2.2	4
68	2D-MoS₂/BMN Ceramic Hybrid Structure Flexible TFTs with Tunable Device Properties. ACS Applied Materials & Interfaces, 2020, 12, 38306-38313.	8.0	4
69	Effect of Complexing Agent in Slurry on CMP Property for Barrier Material Cobalt. , 2020, , .		4
70	Linear edge and temperature characteristic of tilted fiber Bragg gratings cladding-mode envelope. Optical Fiber Technology, 2011, 17, 286-290.	2.7	3
71	Microstructure and Nanometer Scale Piezoelectric Properties of c-BN Thin Films With Cu Buffer Layer by Piezoresponse Force Microscopy. IEEE Nanotechnology Magazine, 2014, 13, 442-445.	2.0	3
72	Piezoelectric properties of bilayer ferroelectric thin films based on (1â^'x)[Ba(Zr0.2Ti0.8)O3] â€“x(Ba0.7Ca0.3TiO3). Materials Letters, 2016, 177, 68-70.	2.6	3

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73	Thermal and electrical performance analysis of silicon vertical multi-junction solar cell under non-uniform illumination. Renewable Energy, 2016, 90, 77-82.	8.9	3
74	Bias voltage modulated resistance states in small-area Fe70Ga30 films on ferroelectric Ba(Zr0.2Ti0.8)O3-0.5(Ba0.7Ca0.3TiO3) films. Thin Solid Films, 2020, 709, 138241.	1.8	3
75	A novel magnetoelectric memory cell based on bilayer ferroelectric films of (1Ââ^'Âx)[Ba(Zr0.2Ti0.8)O3]â€"x(Ba0.7Ca0.3TiO3). Journal of Materials Science: Materials in Electronics, 2016, 27, 7374-7378.	2.2	2
76	One-pot synthesis of graphite/MnO2 hybrids and electrochemical supercapacitor performance on different substrates. Journal of Materials Science: Materials in Electronics, 2018, 29, 13681-13686.	2.2	2
77	Optimization on Chemical Mechanical Planarization of Chromium Doped Antimony Telluride (Cr-SbTe) for PCM Devices. , 2019, , .		2
78	Dualâ€Functional Nonvolatile and Volatile Memory in Resistively Switching Indium Tin Oxide/HfOx Devices. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900555.	1.8	2
79	Enhanced photothermal signal detection by graphene oxide integrated long period fiber grating for on-site quantification of sodium copper chlorophyllin. Analyst, The, 2021, 146, 3617-3622.	3.5	2
80	IDT Structure Optimization Design based on ALN/SI Substrate for Saw Devices. , 2020, , .		2
81	Electrostatic capacitance extraction for carbon nanotube bundle interconnects. , 2011, , .		1
82	Synthesis of WSe2 by Chemical Vapor Deposition and Influence of Hydrogen on Morphology. , 2019, , .		1
83	Simulation of Low-Pass Filter Circuit Based on Tiox-Based Memristive Device. , 2019, , .		1
84	In situ observation of electric-field induced magnetic domain evolution in (Ba,Ca)(Ti,Zr)O3â€"CoFe2O4 multiferroic films. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	1
85	Reactive ion etching of Cr-doped Sb2Te3 phase change materials in CHF3/O2 gas. Microelectronic Engineering, 2020, 222, 111198.	2.4	1
86	Multi-Narrowband Tunable Plasmonic Induced Transparency for Sensing. IEEE Sensors Journal, 2021, 21, 18688-18695.	4.7	1
87	A Microfiber-Based Sensor for Simultaneous Measurement of Acetaminophen and Temperature. IEEE Sensors Journal, 2021, 21, 20055-20060.	4.7	1
88	Piezoelectric performance improvement of ScAlN film and twoâ€port SAW resonator application. Electronics Letters, 2019, 55, 1355-1357.	1.0	1
89	Simulations of ultrathin monolayer/multilayer molybdenum disulfide heterojunction solar cell. Optical Materials, 2022, 124, 112021.	3.6	1
90	Electric field manipulation of transport properties for ultra-thin Fe70Ga30 films on BaZr0.2Ti0.8O3-0.5Ba0.7Ca0.3TiO3 films. Journal of Materials Science: Materials in Electronics, 2022, 33, 7995-8002.	2.2	1

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91	Crosstalk analysis of carbon nanotube bundle interconnects. , 2011, , .		0
92	Effect of AlO<inf>x</inf> inserting layer on Cu/VO<inf>x</inf>/TiN RRAM devices performance. , 2014, , .		0
93	Schottky-barrier modulated HfO₂-resistive switching memory with ultra-low power. , 2015, , .		0
94	Optimization of slurry and process parameter on chemical mechanical polishing of CR-doped Sb<inf>2</inf>Te<inf>3</inf> thin film. , 2017, , .		0
95	Synthesis of bilayer MoS2 and corresponding field effect characteristics. Journal of Physics: Conference Series, 2017, 864, 012032.	0.4	0
96	The improvement of solar cells performance by optimized boron doped nc-Si:H/a-SiC:H superlattice window layer. Surface and Coatings Technology, 2017, 320, 483-488.	4.8	0
97	Reactive-Ion Etching of Cr-Doped Sb2Te3 Thin Film in SF6/O2 Plasma for Non-Volatile Phase-Change Memories. , 2019, , .		0
98	Effect of Different Top Electrodes on Performance of Low-Power Flexible RRAM Based on TE/HfO2/TiN Cell. , 2019, , .		0
99	Performance Optimization of HFOx-Based Transparent Resistance Random Access Memory. , 2019, , .		0
100	Fabrication of Flexible Surface Acoustic Wave Devices Based on Aluminium Nitride. , 2019, , .		0
101	Improved Crystal Quality of C-Axis Oriented AlN Films With ZnO Buffer Layer. , 2019, , .		0
102	Thickness-Dominated Forming Conditions of TaOx-Based Memristor. , 2019, , .		0
103	and Nanotechnology, 2019, 19, 231-234.	0.9	0
104	Controlled growth of high spatial uniformity of monolayer single crystal MoS2. Journal of Materials Science: Materials in Electronics, 2021, 32, 17009-17020.	2.2	0
105	A Synaptic Transistor Based on Monolayer Monocrystallineâ€MoS 2 for Neuromorphic Applications. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100007.	2.4	0
106	Wafer-scale MoS2 for P-type field effect transistor arrays and defects-related electrical characteristics. Thin Solid Films, 2021, 732, 138798.	1.8	0
107	Photodetector based on Fiber integrated with MXene Nb2CTx. , 2021, , .		0
108	Synthesis of Mos2/ws2Vertical Heterostructure and Its Photoelectric Properties. , 2020, , .		0

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109	Improvement on Electronic Characteristics of TAOX/TIOX Dual-Layer Structure Resiative Memory. , 2020, , .		0
110	Gate Tunable Memtransistor based on Monolayer Molybdenum Disulfide. , 2020, , .		0
111	An angle-tuned polarization-independent multi-narrowband perfect absorber. Journal of Optics (United Kingdom), 0, , .	2.2	0
112	Optically switchable ultra-broadband terahertz perfect absorption in doped superlattice photonic-crystal silicon. Optical Engineering, 2022, 61, .	1.0	0