

# Kailiang Zhang

## List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Ultrasensitive BOD Detection of Fiber Integrated With Nb <sub>2</sub> CT <sub>x</sub> MXene for Water Pollution. Journal of Lightwave Technology, 2022, 40, 2173-2180.	4.6	6
2	Simulations of ultrathin monolayer/multilayer molybdenum disulfide heterojunction solar cell. Optical Materials, 2022, 124, 112021.	3.6	1
3	Electric field manipulation of transport properties for ultra-thin Fe <sub>70</sub> Ga <sub>30</sub> films on BaZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> -0.5Ba <sub>0.7</sub> Ca <sub>0.3</sub> TiO <sub>3</sub> films. Journal of Materials Science: Materials in Electronics, 2022, 33, 7995-8002.	2.2	1
4	Nb <sub>2</sub> CT <sub>x</sub> 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
5	Optically switchable ultra-broadband terahertz perfect absorption in doped superlattice photonic-crystal silicon. Optical Engineering, 2022, 61, .	1.0	0
6	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
7	High-performance photodetector and its optoelectronic mechanism of MoS <sub>2</sub> /WS <sub>2</sub> vertical heterostructure. Applied Surface Science, 2021, 546, 149074.	6.1	33
8	Oxygen Vacancy-Dependent Synaptic Dynamic Behavior of TiO <sub>x</sub> -Based Transparent Memristor. IEEE Transactions on Electron Devices, 2021, 68, 1950-1955.	3.0	25
9	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
10	Controlled growth of high spatial uniformity of monolayer single crystal MoS <sub>2</sub> . Journal of Materials Science: Materials in Electronics, 2021, 32, 17009-17020.	2.2	0
11	A Synaptic Transistor Based on Monolayer Monocrystalline MoS <sub>2</sub> for Neuromorphic Applications. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100007.	2.4	0
12	Improvement of Resistive Switching Performance in Sulfur-Doped HfO <sub>x</sub> -Based RRAM. Materials, 2021, 14, 3330.	2.9	18
13	Wafer-scale MoS <sub>2</sub> for P-type field effect transistor arrays and defects-related electrical characteristics. Thin Solid Films, 2021, 732, 138798.	1.8	0
14	Multi-Narrowband Tunable Plasmonic Induced Transparency for Sensing. IEEE Sensors Journal, 2021, 21, 18688-18695.	4.7	1
15	A Microfiber-Based Sensor for Simultaneous Measurement of Acetaminophen and Temperature. IEEE Sensors Journal, 2021, 21, 20055-20060.	4.7	1
16	Transparent HfO <sub>x</sub> -based memristor with robust flexibility and synapse characteristics by interfacial control of oxygen vacancies movement. Nanotechnology, 2021, 32, 145202.	2.6	15
17	Photodetector based on Fiber integrated with MXene Nb <sub>2</sub> CT <sub>x</sub> . , 2021, , .		0
18	Nb <sub>2</sub> CT <sub>x</sub> MXene-tilted fiber Bragg grating optofluidic system based on photothermal spectroscopy for pesticide detection. Biomedical Optics Express, 2021, 12, 7051.	2.9	12

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19	Self-Rectifying Al <sub>2</sub> O <sub>3</sub> /TaO <sub>x</sub> Memristor With Gradual Operation at Low Current by Interfacial Layer. IEEE Transactions on Electron Devices, 2021, 68, 6100-6105.	3.0	15
20	In situ observation of electric-field induced magnetic domain evolution in (Ba,Ca)(Ti,Zr)O <sub>3</sub> CoFe <sub>2</sub> O <sub>4</sub> multiferroic films. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	1
21	Reactive ion etching of Cr-doped Sb <sub>2</sub> Te <sub>3</sub> phase change materials in CHF <sub>3</sub> /O <sub>2</sub> gas. Microelectronic Engineering, 2020, 222, 111198.	2.4	1
22	Facile and scalable fabrication of MnO <sub>2</sub> nanocrystallines and enhanced electrochemical performance of MnO <sub>2</sub> /MoS <sub>2</sub> inner heterojunction structure for supercapacitor application. Journal of Power Sources, 2020, 450, 227616.	7.8	81
23	2D-MoS <sub>2</sub> /BMN Ceramic Hybrid Structure Flexible TFTs with Tunable Device Properties. ACS Applied Materials & Interfaces, 2020, 12, 38306-38313.	8.0	4
24	Bias voltage modulated resistance states in small-area Fe <sub>70</sub> Ga <sub>30</sub> films on ferroelectric Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3-0.5</sub> (Ba <sub>0.7</sub> Ca <sub>0.3</sub> TiO <sub>3</sub> ) films. Thin Solid Films, 2020, 709, 138241.	1.8	3
25	Controlled synthesis of WS <sub>2</sub> with different layers by tuning flow rates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2020, 261, 114756.	3.5	8
26	Insight into interface behavior and microscopic switching mechanism for flexible HfO <sub>2</sub> RRAM. Applied Surface Science, 2020, 526, 146723.	6.1	15
27	Low consumption two-terminal artificial synapse based on transfer-free single-crystal MoS <sub>2</sub> memristor. Nanotechnology, 2020, 31, 265202.	2.6	32
28	Facile synthesis of Sb-Sb <sub>2</sub> O <sub>5</sub> @P@C composite and study for the supercapacitor application. Journal of Materials Science: Materials in Electronics, 2020, 31, 2406-2415.	2.2	10
29	Improved Uniformity of TaO <sub>x</sub> -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
30	Ultralow power switching of Ta <sub>2</sub> O <sub>5</sub> /AlO <sub>x</sub> bilayer synergistic resistive random access memory. Journal Physics D: Applied Physics, 2020, 53, 335104.	2.8	9
31	Synthesis of Mos <sub>2</sub> /ws <sub>2</sub> Vertical Heterostructure and Its Photoelectric Properties. , 2020, , .		0
32	Improvement on Electronic Characteristics of TAOX/TIOX Dual-Layer Structure Resiative Memory. , 2020, , .		0
33	IDT Structure Optimization Design based on ALN/SI Substrate for Saw Devices. , 2020, , .		2
34	Gate Tunable Memtransistor based on Monolayer Molybdenum Disulfide. , 2020, , .		0
35	Effect of Complexing Agent in Slurry on CMP Property for Barrier Material Cobalt. , 2020, , .		4
36	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

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37	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
38	Reactive-Ion Etching of Cr-Doped Sb <sub>2</sub> Te <sub>3</sub> Thin Film in SF <sub>6</sub> /O <sub>2</sub> Plasma for Non-Volatile Phase-Change Memories. , 2019, , .		0
39	Effect of Different Top Electrodes on Performance of Low-Power Flexible RRAM Based on TE/HfO <sub>2</sub> /TiN Cell. , 2019, , .		0
40	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
41	Optimization on Chemical Mechanical Planarization of Chromium Doped Antimony Telluride (Cr-SbTe) for PCM Devices. , 2019, , .		2
42	Dual-Functional Nonvolatile and Volatile Memory in Resistively Switching Indium Tin Oxide/HfO <sub>2</sub> Devices. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900555.	1.8	2
43	Synthesis of WSe <sub>2</sub> by Chemical Vapor Deposition and Influence of Hydrogen on Morphology. , 2019, , .		1
44	Performance Optimization of HfO <sub>x</sub> -Based Transparent Resistance Random Access Memory. , 2019, , .		0
45	Fabrication of Flexible Surface Acoustic Wave Devices Based on Aluminium Nitride. , 2019, , .		0
46	Improved Crystal Quality of C-Axis Oriented AlN Films With ZnO Buffer Layer. , 2019, , .		0
47	Thickness-Dominated Forming Conditions of TaO <sub>x</sub> -Based Memristor. , 2019, , .		0
48	Simulation of Low-Pass Filter Circuit Based on TiO <sub>x</sub> -Based Memristive Device. , 2019, , .		1
49	High-performance FET arrays enabled by improved uniformity of wafer-scale MoS <sub>2</sub> synthesized via thermal vapor sulfurization. Applied Surface Science, 2019, 483, 1136-1141.	6.1	6
50	Controllable growth of continuous monolayer MoS <sub>2</sub> by balancing the moles of gaseous precursors via argon flow. CrystEngComm, 2019, 21, 6969-6977.	2.6	5
51	and Nanotechnology, 2019, 19, 231-234.	0.9	0
52	Strong photoluminescence enhancement of MoS <sub>2</sub> monolayer via low-power Ar/O <sub>2</sub> plasma treatment. Materials Letters, 2019, 235, 129-132.	2.6	9
53	Piezoelectric performance improvement of ScAlN film and two-port SAW resonator application. Electronics Letters, 2019, 55, 1355-1357.	1.0	1
54	Controlled synthesis of highly crystalline CVD-derived monolayer MoSe <sub>2</sub> and shape evolution mechanism. Materials Letters, 2018, 216, 261-264.	2.6	18

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55	High efficiency graphene/MoS <sub>2</sub> /Si Schottky barrier solar cells using layer-controlled MoS <sub>2</sub> films. Solar Energy, 2018, 160, 76-84.	6.1	64
56	Electric field induced modulation of transport characteristics in multiferroic BZT/BCT/FeCo thin films. Journal of Materials Science: Materials in Electronics, 2018, 29, 4786-4790.	2.2	4
57	Effect of growth temperature on large surface area, ultrathin MoS <sub>2</sub> nanofilms fabrication and photovoltaic efficiency. Solar Energy, 2018, 159, 88-96.	6.1	13
58	Controlled Growth of Bilayer MoS <sub>2</sub> Films and MoS <sub>2</sub> -Based Field-Effect Transistor (FET) Performance Optimization. Advanced Electronic Materials, 2018, 4, 1700524.	5.1	29
59	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
60	One-pot synthesis of graphite/MnO <sub>2</sub> hybrids and electrochemical supercapacitor performance on different substrates. Journal of Materials Science: Materials in Electronics, 2018, 29, 13681-13686.	2.2	2
61	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
62	Field effect properties of single-layer MoS <sub>2</sub> (1-x)Se <sub>2x</sub> nanosheets produced by a one-step CVD process. Journal of Materials Science, 2018, 53, 14447-14455.	3.7	11
63	Structural evolution of nanocrystalline silicon in hydrogenated nanocrystalline silicon solar cells. Surface and Coatings Technology, 2017, 320, 362-365.	4.8	6
64	An sd <sub>2</sub> hybridized 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
65	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
66	Optimization of slurry and process parameter on chemical mechanical polishing of CR-doped Sb <sub>2</sub> Te <sub>3</sub> thin film. , 2017, , .		0
67	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
68	Tunable gap opening and spin polarization of two dimensional graphene/hafnene van der Waals heterostructures. Carbon, 2017, 120, 121-127.	10.3	32
69	A controllable synthesis of uniform MoS <sub>2</sub> monolayers on annealed molybdenum foils. Materials Letters, 2017, 204, 35-38.	2.6	8
70	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
71	Synthesis of bilayer MoS <sub>2</sub> and corresponding field effect characteristics. Journal of Physics: Conference Series, 2017, 864, 012032.	0.4	0
72	Scalable Synthesis of Highly Crystalline MoSe <sub>2</sub> and Its Ambipolar Behavior. ACS Applied Materials & Interfaces, 2017, 9, 36009-36016.	8.0	52

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73	Two dimensional hexagonal boron nitride (2D-hBN): synthesis, properties and applications. Journal of Materials Chemistry C, 2017, 5, 11992-12022.	5.5	732
74	<i>In situ</i> visualization and detection of surface potential variation of mono and multilayer MoS <sub>2</sub> under different humidities using Kelvin probe force microscopy. Nanotechnology, 2017, 28, 295705.	2.6	33
75	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
76	Design and fabrication of flexible supercapacitor devices by using mesoporous carbon/polyaniline ink. Surface and Coatings Technology, 2017, 320, 595-600.	4.8	15
77	Antireflection and absorption properties of silicon parabolic-shaped nanocone arrays. Optik, 2017, 128, 133-138.	2.9	10
78	Controllable Unidirectional Emission With Double-Resonant Plasmonic Antenna. IEEE Photonics Journal, 2017, 9, 1-10.	2.0	5
79	Piezoelectric properties of bilayer ferroelectric thin films based on (1-x)[Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> ]-x[Ba <sub>0.7</sub> Ca <sub>0.3</sub> TiO <sub>3</sub> ]. Materials Letters, 2016, 177, 68-70.	2.6	3
80	A novel magnetoelectric memory cell based on bilayer ferroelectric films of (1-x)[Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> ]-x[Ba <sub>0.7</sub> Ca <sub>0.3</sub> TiO <sub>3</sub> ]. Journal of Materials Science: Materials in Electronics, 2016, 27, 7374-7378.	2.2	2
81	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
82	Annealing effect on the optical and electronic properties of Î²-Ga <sub>2</sub> O <sub>3</sub> /AZO multilayered films. Journal of Materials Science: Materials in Electronics, 2016, 27, 11390-11395.	2.2	4
83	VO <sub>2</sub> -Based Selection Device for Passive Resistive Random Access Memory Application. IEEE Electron Device Letters, 2016, , 1-1.	3.9	16
84	Fabrication and characterization of a magnetoelectric memory cell of 50Ba(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> -50Ba <sub>0.7</sub> Ca <sub>0.3</sub> TiO <sub>3</sub> /Fe <sub>70</sub> Ga <sub>30</sub> . Materials Letters, 2016, 170, 192-195.	2.6	7
85	Ultrasensitive terahertz modulation by silicon-grown MoS <sub>2</sub> nanosheets. Nanoscale, 2016, 8, 4713-4719.	5.6	119
86	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
87	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
88	Synthesis of Large-Area Highly Crystalline Monolayer Molybdenum Disulfide with Tunable Grain Size in a H <sub>2</sub> Atmosphere. ACS Applied Materials & Interfaces, 2015, 7, 22587-22593.	8.0	47
89	Schottky-barrier modulated HfO <sub>2</sub> -resistive switching memory with ultra-low power. , 2015, , .		0
90	Ultra-Low Power Ni/HfO <sub>2</sub> /TiO <sub>2</sub> /TiN Resistive Random Access Memory With Sub-30-nA Reset Current. IEEE Electron Device Letters, 2015, 36, 1018-1020.	3.9	21

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91	Electric-field switch of magnetization in BaTiO <sub>3</sub> –Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> –NiFe <sub>2</sub> O <sub>4</sub> composite. Journal of Materials Science: Materials in Electronics, 2015, 26, 8261-8266.	2.2	4
92	Magnetic Field Tunability of Square Tapered No-Core Fibers Based on Magnetic Fluid. Journal of Lightwave Technology, 2014, 32, 4600-4605.	4.6	15
93	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
94	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
95	Effect of AlO <sub>x</sub> inserting layer on Cu/VO <sub>x</sub> /TiN RRAM devices performance. , 2014, , .		0
96	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
97	Dual-Direction Magnetic Field Sensor Based on Core-Offset Microfiber and Ferrofluid. IEEE Photonics Technology Letters, 2014, 26, 1581-1584.	2.5	25
98	Ferrofluid-Infiltrated Microstructured Optical Fiber Long-Period Grating. IEEE Photonics Technology Letters, 2013, 25, 306-309.	2.5	48
99	Exploration on chemical mechanical planarization of ZnO functional thin films for novel devices. Microelectronic Engineering, 2013, 101, 37-41.	2.4	7
100	Crosstalk analysis of carbon nanotube bundle interconnects. Nanoscale Research Letters, 2012, 7, 138.	5.7	14
101	Crosstalk analysis of carbon nanotube bundle interconnects. , 2011, , .		0
102	Electrostatic capacitance extraction for carbon nanotube bundle interconnects. , 2011, , .		1
103	Temperature tunability of photonic crystal fiber filled with Fe <sub>3</sub> O <sub>4</sub> nanoparticle fluid. Applied Physics Letters, 2011, 98, .	3.3	53
104	Linear edge and temperature characteristic of tilted fiber Bragg gratings cladding-mode envelope. Optical Fiber Technology, 2011, 17, 286-290.	2.7	3
105	Influence of p-layer on the performance of n-i-p $\text{c-Si:H}$ thin film solar cells. Science China: Physics, Mechanics and Astronomy, 2010, 53, 2042-2046.	5.1	4
106	Nonlinear electrical properties of Si three-terminal junction devices. Applied Physics Letters, 2010, 97, .	3.3	16
107	Chemical Mechanical Polishing and a Succedent Reactive Ion Etching Processing of Sapphire Wafer. Journal of the Electrochemical Society, 2007, 154, H166.	2.9	10
108	Ceria concentration effect on chemical mechanical polishing of optical glass. Applied Surface Science, 2007, 253, 4951-4954.	6.1	108

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109	Preparation and characterization of modified-clay-reinforced and toughened epoxy-resin nanocomposites. Journal of Applied Polymer Science, 2004, 91, 2649-2652.	2.6	93
110	Study on the cleaning of silicon after CMP in ULSI. Microelectronic Engineering, 2003, 66, 433-437.	2.4	22
111	Investigation on the final polishing slurry and technique of silicon substrate in ULSI. Microelectronic Engineering, 2003, 66, 438-444.	2.4	75
112	An angle-tuned polarization-independent multi-narrowband perfect absorber. Journal of Optics (United Kingdom), 0, , .	2.2	0