Zhuo Kang

List of Publications by Year in Descending Order

121 papers	5,263 citations	43 h-index	69 g-index
124 ext. papers	6,759 ext. citations	14.4 avg, IF	6.07 L-index

#	Paper	IF	Citations
121	Interpretation of Rubidium-based Perovskite Recipes towards Electronic Passivation and Ion Diffusion Mitigation.. *Advanced Materials*, **2022**, e2109998	24	5
120	Record-high saturation current in end-bond contacted monolayer MoS2 transistors. *Nano Research*, **2022**, 15, 475	10	9
119	A van der Waals Ferroelectric Tunnel Junction for Ultrahigh-Temperature Operation Memory.. *Small Methods*, **2022**, e2101583	12.8	2
118	Architecture Design and Interface Engineering of Self-assembly VS/rGO Heterostructures for Ultrathin Absorbent.. *Nano-Micro Letters*, **2022**, 14, 67	19.5	2
117	All-van-der-Waals Barrier-Free Contacts for High-Mobility Transistors.. *Advanced Materials*, **2022**, e2109521	24	4
116	Ion migration in hybrid perovskites: Classification, identification, and manipulation. *Nano Today*, **2022**, 44, 101503	17.9	8
115	Tough and Degradable Self-Healing Elastomer from Synergistic Soft-Hard Segments Design for Biomechano-Robust Artificial Skin. *ACS Nano*, **2021**,	16.7	4
114	Single-Atom Engineering to Ignite 2D Transition Metal Dichalcogenide Based Catalysis: Fundamentals, Progress, and Beyond. *Chemical Reviews*, **2021**,	68.1	20
113	In situ microscopy techniques for characterizing the mechanical properties and deformation behavior of two-dimensional (2D) materials. *Materials Today*, **2021**, 51, 247-247	21.8	2
112	Near-ideal van der Waals rectifiers based on all-two-dimensional Schottky junctions. *Nature Communications*, **2021**, 12, 1522	17.4	31
111	Grain Boundary Perfection Enabled by Pyridinic Nitrogen Doped Graphdiyne in Hybrid Perovskite. *Advanced Functional Materials*, **2021**, 31, 2104633	15.6	6
110	Fingerprint-inspired electronic skin based on triboelectric nanogenerator for fine texture recognition. *Nano Energy*, **2021**, 85, 106001	17.1	26
109	Ultra-stable ZnO nanobelts in electrochemical environments. *Materials Chemistry Frontiers*, **2021**, 5, 430-437	7.3	7
108	Self-powered ultrasensitive pulse sensors for noninvasive multi-indicators cardiovascular monitoring. *Nano Energy*, **2021**, 81, 105614	17.1	23
107	Gate-Controlled Polarity-Reversible Photodiodes with Ambipolar 2D Semiconductors. *Advanced Functional Materials*, **2021**, 31, 2007559	15.6	13
106	The coupling effect characterization for van der Waals structures based on transition metal dichalcogenides. *Nano Research*, **2021**, 14, 1734-1751	10	2
105	Direct synthesis of 1T-phase MoS2 nanosheets with abundant sulfur-vacancies through (CH3)4N+ cation-intercalation for the hydrogen evolution reaction. *Journal of Materials Chemistry A*, **2021**, 9, 13996-14003	13	5

104	Advent of alkali metal doping: a roadmap for the evolution of perovskite solar cells. *Chemical Society Reviews*, **2021**, 50, 2696-2736	58.5	34
103	Manipulation of Perovskite Crystallization Kinetics via Lewis Base Additives. *Advanced Functional Materials*, **2021**, 31, 2009425	15.6	21
102	A-Site Management Prompts the Dynamic Reconstructed Active Phase of Perovskite Oxide OER Catalysts. *Advanced Energy Materials*, **2021**, 11, 2003755	21.8	42
101	Fully Organic Self-Powered Electronic Skin with Multifunctional and Highly Robust Sensing Capability. *Research*, **2021**, 2021, 9801832	7.8	2
100	Interface Engineering for High-Performance Photoelectrochemical Cells via Atomic Layer Deposition Technique. *Energy Technology*, **2021**, 9, 2170023	3.5	
99	Single-Atom Vacancy Doping in Two-Dimensional Transition Metal Dichalcogenides. *Accounts of Materials Research*, **2021**, 2, 655-668	7.5	6
98	Direct Charge Trapping Multilevel Memory with Graphdiyne/MoS Van der Waals Heterostructure. *Advanced Science*, **2021**, 8, e2101417	13.6	7
97	Nanowelding in Whole-Lifetime Bottom-Up Manufacturing: From Assembly to Service.. *Small Methods*, **2021**, 5, e2100654	12.8	2
96	Information accessibility oriented self-powered and ripple-inspired fingertip interactors with auditory feedback. *Nano Energy*, **2021**, 87, 106117	17.1	2
95	Molecule-Upgraded van der Waals Contacts for Schottky-Barrier-Free Electronics. *Advanced Materials*, **2021**, 33, e2104935	24	5
94	Hidden Vacancy Benefit in Monolayer 2D Semiconductors. *Advanced Materials*, **2021**, 33, e2007051	24	27
93	Interface Engineering for High-Performance Photoelectrochemical Cells via Atomic Layer Deposition Technique. *Energy Technology*, **2021**, 9, 2000819	3.5	4
92	Layer-dependent band to band tunneling in WSe2/ReS2 van der Waals heterojunction. *Journal Physics D: Applied Physics*, **2020**, 53, 374001	3	1
91	Self-powered user-interactive electronic skin for programmable touch operation platform. *Science Advances*, **2020**, 6, eaba4294	14.3	55
90	Tumbler-shaped hybrid triboelectric nanogenerators for amphibious self-powered environmental monitoring. *Nano Energy*, **2020**, 76, 104960	17.1	19
89	Edge induced band bending in van der Waals heterojunctions: A first principle study. *Nano Research* , **2020**, 13, 701-708	10	5
88	Perovskite Crystallization: A-Site Management for Highly Crystalline Perovskites (Adv. Mater. 4/2020). *Advanced Materials*, **2020**, 32, 2070031	24	
87	Tailored TiO2 Protection Layer Enabled Efficient and Stable Microdome Structured p-GaAs Photoelectrochemical Cathodes. *Advanced Energy Materials*, **2020**, 10, 1902985	21.8	17

86	Emerging Conductive Atomic Force Microscopy for Metal Halide Perovskite Materials and Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1903922	21.8	27
85	Graphdiyne: Bridging SnO2 and Perovskite in Planar Solar Cells. *Angewandte Chemie*, **2020**, 132, 11670-11679	3.6	4
84	Graphdiyne: Bridging SnO and Perovskite in Planar Solar Cells. *Angewandte Chemie - International Edition*, **2020**, 59, 11573-11582	16.4	76
83	A-Site Management for Highly Crystalline Perovskites. *Advanced Materials*, **2020**, 32, e1904702	24	37
82	Defect-Engineered Atomically Thin MoS Homogeneous Electronics for Logic Inverters. *Advanced Materials*, **2020**, 32, e1906646	24	46
81	Dual-passivation of ionic defects for highly crystalline perovskite. *Nano Energy*, **2020**, 68, 104320	17.1	34
80	Probing photoelectrical transport in lead halide perovskites with van der Waals contacts. *Nature Nanotechnology*, **2020**, 15, 768-775	28.7	23
79	Highly Robust and Self-Powered Electronic Skin Based on Tough Conductive Self-Healing Elastomer. *ACS Nano*, **2020**, 14, 9066-9072	16.7	47
78	Single-Atom Vacancy Defect to Trigger High-Efficiency Hydrogen Evolution of MoS. *Journal of the American Chemical Society*, **2020**, 142, 4298-4308	16.4	287
77	Synergistic engineering of dielectric and magnetic losses in M-Co/RGO nanocomposites for use in high-performance microwave absorption. *Materials Chemistry Frontiers*, **2020**, 4, 3013-3021	7.8	8
76	Atomic-Thin ZnO Sheet for Visible-Blind Ultraviolet Photodetection. *Small*, **2020**, 16, e2005520	11	19
75	3D Holey-Graphene Architecture Expedites Ion Transport Kinetics to Push the OER Performance. *Advanced Energy Materials*, **2020**, 10, 2001005	21.8	22
74	Point defect induced intervalley scattering for the enhancement of interlayer electron transport in bilayer MoS homojunctions. *Nanoscale*, **2020**, 12, 9859-9865	7.7	2
73	A Universal Strategy for Improving the Energy Transmission Efficiency and Load Power of Triboelectric Nanogenerators. *Advanced Energy Materials*, **2019**, 9, 1901881	21.8	5
72	Facile one-pot synthesis of Mg-doped g-CN for photocatalytic reduction of CO.. *RSC Advances*, **2019**, 9, 28894-28901	3.7	9
71	Self-powered flexible antibacterial tactile sensor based on triboelectric-piezoelectric-pyroelectric multi-effect coupling mechanism. *Nano Energy*, **2019**, 66, 104105	17.1	32
70	Recent Advances in Triboelectric Nanogenerator-Based Health Monitoring. *Advanced Functional Materials*, **2019**, 29, 1808849	15.6	97
69	Ligand Engineering for Improved All-Inorganic Perovskite Quantum Dot-MoS2 Monolayer Mixed Dimensional van der Waals Phototransistor. *Small Methods*, **2019**, 3, 1900117	12.8	26

68	Interface Engineering for Modulation of Charge Carrier Behavior in ZnO Photoelectrochemical Water Splitting. *Advanced Functional Materials*, **2019**, 29, 1808032	15.6	95
67	Self-Healing Originated van der Waals Homojunctions with Strong Interlayer Coupling for High-Performance Photodiodes. *ACS Nano*, **2019**, 13, 3280-3291	16.7	43
66	Li+-clipping for edge S-vacancy MoS2 quantum dots as an efficient bifunctional electrocatalyst enabling discharge growth of amorphous Li2O2 film. *Nano Energy*, **2019**, 65, 103996	17.1	34
65	Strain-Engineered van der Waals Interfaces of Mixed-Dimensional Heterostructure Arrays. *ACS Nano*, **2019**, 13, 9057-9066	16.7	53
64	Graphene-Based Mixed-Dimensional van der Waals Heterostructures for Advanced Optoelectronics. *Advanced Materials*, **2019**, 31, e1806411	24	67
63	Toward the Application of High Frequency Electromagnetic Wave Absorption by Carbon Nanostructures. *Advanced Science*, **2019**, 6, 1801057	13.6	175
62	Kelvin probe force microscopy for perovskite solar cells. *Science China Materials*, **2019**, 62, 776-789	7.1	52
61	Self-powered visualization system by conjunction of photovoltaic effect and contact-electrification. *Nano Energy*, **2019**, 57, 528-534	17.1	7
60	Engineering an Earth-Abundant Element-Based Bifunctional Electrocatalyst for Highly Efficient and Durable Overall Water Splitting. *Advanced Functional Materials*, **2019**, 29, 1807031	15.6	89
59	Piezotronic effect on interfacial charge modulation in mixed-dimensional Van der Waals heterostructure for ultrasensitive flexible photodetectors. *Nano Energy*, **2019**, 58, 85-93	17.1	41
58	Green hybrid power system based on triboelectric nanogenerator for wearable/portable electronics. *Nano Energy*, **2019**, 55, 151-163	17.1	94
57	Facile synthesis of NiCo2S4 nanowire arrays on 3D graphene foam for high-performance electrochemical capacitors application. *Journal of Materials Science*, **2018**, 53, 10292-10301	4.3	25
56	A three-dimensional reticulate CNT-aerogel for a high mechanical flexibility fiber supercapacitor. *Nanoscale*, **2018**, 10, 9360-9368	7.7	51
55	Development, applications, and future directions of triboelectric nanogenerators. *Nano Research*, **2018**, 11, 2951-2969	10	66
54	Ferroelectric polarization-enhanced charge separation in a vanadium-doped ZnO photoelectrochemical system. *Inorganic Chemistry Frontiers*, **2018**, 5, 1533-1539	6.8	21
53	Enhanced field emission properties of graphene-based cathodes fabricated by ultrasonic atomization spray.. *RSC Advances*, **2018**, 8, 16207-16213	3.7	4
52	Ultralight, self-powered and self-adaptive motion sensor based on triboelectric nanogenerator for perceptual layer application in Internet of things. *Nano Energy*, **2018**, 48, 312-319	17.1	39
51	Interfacial Charge Behavior Modulation in Perovskite Quantum Dot-Monolayer MoS2 0D-2D Mixed-Dimensional van der Waals Heterostructures. *Advanced Functional Materials*, **2018**, 28, 1802015	15.6	75

50	Flexible Triboelectric Nanogenerators **2018**, 383-423		1
49	Hydrophobic Polystyrene Passivation Layer for Simultaneously Improved Efficiency and Stability in Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 18787-18795	9.5	76
48	Van Der Waals Heterostructures: Interfacial Charge Behavior Modulation in Perovskite Quantum Dot-Monolayer MoS2 0D-2D Mixed-Dimensional van der Waals Heterostructures (Adv. Funct. Mater. 34/2018). *Advanced Functional Materials*, **2018**, 28, 1870239	15.6	3
47	Uniformly assembled vanadium doped ZnO microflowers/ bacterial cellulose hybrid paper for flexible piezoelectric nanogenerators and self-powered sensors. *Nano Energy*, **2018**, 52, 501-509	17.1	39
46	3D graphene foam/ZnO nanorods array mixed-dimensional heterostructure for photoelectrochemical biosensing. *Inorganic Chemistry Frontiers*, **2018**, 5, 364-369	6.8	11
45	Efficient Yttrium(III) Chloride-Treated TiO Electron Transfer Layers for Performance-Improved and Hysteresis-Less Perovskite Solar Cells. *ChemSusChem*, **2018**, 11, 171-177	8.3	29
44	Electromagnetic Shielding Hybrid Nanogenerator for Health Monitoring and Protection. *Advanced Functional Materials*, **2018**, 28, 1703801	15.6	139
43	Optoelectronics: All-Inorganic Perovskite Quantum Dot-Monolayer MoS2 Mixed-Dimensional van der Waals Heterostructure for Ultrasensitive Photodetector (Adv. Sci. 12/2018). *Advanced Science*, **2018**, 5, 1870078	13.6	78
42	All-Inorganic Perovskite Quantum Dot-Monolayer MoS Mixed-Dimensional van der Waals Heterostructure for Ultrasensitive Photodetector. *Advanced Science*, **2018**, 5, 1801219	13.6	101
41	Thermo-responsive phase-transition polymer grafted magnetic FePt nanoparticles with tunable critical temperature for controlled drug release. *Materials Chemistry Frontiers*, **2018**, 2, 1609-1617	7.8	6
40	Effect of photocatalytic reduction of carbon dioxide by N-Zr co-doped nano TiO. *Environmental Technology (United Kingdom)*, **2017**, 38, 2677-2683	2.6	4
39	Enhanced Efficiency and Stability of Perovskite Solar Cells via Anti-Solvent Treatment in Two-Step Deposition Method. *ACS Applied Materials & Interfaces*, **2017**, 9, 7224-7231	9.5	76
38	Deciphering the NH4PbI3 Intermediate Phase for Simultaneous Improvement on Nucleation and Crystal Growth of Perovskite. *Advanced Functional Materials*, **2017**, 27, 1701804	15.6	89
37	Poly(4-styrenesulfonate)-induced sulfur vacancy self-healing strategy for monolayer MoS homojunction photodiode. *Nature Communications*, **2017**, 8, 15881	17.4	129
36	Carbon Quantum Dots Decorated C3N4/TiO2Heterostructure Nanorod Arrays for Enhanced Photoelectrochemical Performance. *Journal of the Electrochemical Society*, **2017**, 164, H515-H520	3.9	19
35	Strain modulation on graphene/ZnO nanowire mixed-dimensional van der Waals heterostructure for high-performance photosensor. *Nano Research*, **2017**, 10, 3476-3485	10	37
34	Cactus-like hierarchical nanorod-nanosheet mixed dimensional photoanode for efficient and stable water splitting. *Nano Energy*, **2017**, 35, 189-198	17.1	63
33	Ultrasensitive and stretchable resistive strain sensors designed for wearable electronics. *Materials Horizons*, **2017**, 4, 502-510	14.4	151

32	Enhanced photoelectrochemical efficiency and stability using a conformal TiO2 film on a black silicon photoanode. *Nature Energy*, **2017**, 2,	62.3	186
31	A facile method for the preparation of three-dimensional CNT sponge and a nanoscale engineering design for high performance fiber-shaped asymmetric supercapacitors. *Journal of Materials Chemistry A*, **2017**, 5, 22559-22567	13	27
30	Design and tailoring of patterned ZnO nanostructures for energy conversion applications. *Science China Materials*, **2017**, 60, 793-810	7.1	31
29	Photovoltaics: Deciphering the NH4PbI3 Intermediate Phase for Simultaneous Improvement on Nucleation and Crystal Growth of Perovskite (Adv. Funct. Mater. 30/2017). *Advanced Functional Materials*, **2017**, 27,	15.6	4
28	Synergistic Effect of Surface Plasmonic particles and Surface Passivation layer on ZnO Nanorods Array for Improved Photoelectrochemical Water Splitting. *Scientific Reports*, **2016**, 6, 29907	4.9	55
27	Self-Powered Photoelectrochemical Biosensor Based on CdS/RGO/ZnO Nanowire Array Heterostructure. *Small*, **2016**, 12, 245-51	11	121
26	An innovative design of perovskite solar cells with Al2O3 inserting at ZnO/perovskite interface for improving the performance and stability. *Nano Energy*, **2016**, 22, 223-231	17.1	130
25	Self-powered photoelectrochemical biosensing platform based on Au NPs@ZnO nanorods array. *Nano Research*, **2016**, 9, 344-352	10	80
24	Nonenzymatic Glucose Sensor Based on In Situ Reduction of Ni/NiO-Graphene Nanocomposite. *Sensors*, **2016**, 16,	3.8	54
23	3D-Branched ZnO/CdS Nanowire Arrays for Solar Water Splitting and the Service Safety Research. *Advanced Energy Materials*, **2016**, 6, 1501459	21.8	158
22	Band alignment engineering for improved performance and stability of ZnFe2O4 modified CdS/ZnO nanostructured photoanode for PEC water splitting. *Nano Energy*, **2016**, 24, 25-31	17.1	160
21	Nanorod arrays composed of zinc oxide modified with gold nanoparticles and glucose oxidase for enzymatic sensing of glucose. *Mikrochimica Acta*, **2015**, 182, 605-610	5.8	19
20	ZnO nanostructures in enzyme biosensors. *Science China Materials*, **2015**, 58, 60-76	7.1	58
19	Design of sandwich-structured ZnO/ZnS/Au photoanode for enhanced efficiency of photoelectrochemical water splitting. *Nano Research*, **2015**, 8, 2891-2900	10	89
18	Gold nanoparticle/ZnO nanorod hybrids for enhanced reactive oxygen species generation and photodynamic therapy. *Nano Research*, **2015**, 8, 2004-2014	10	68
17	Photoelectrochemical performance enhancement of ZnO photoanodes from ZnIn2S4 nanosheets coating. *Nano Energy*, **2015**, 14, 392-400	17.1	83
16	Enhanced photoelectrochemical property of ZnO nanorods array synthesized on reduced graphene oxide for self-powered biosensing application. *Biosensors and Bioelectronics*, **2015**, 64, 499-504	11.8	111
15	Large-scale patterned ZnO nanorod arrays for efficient photoelectrochemical water splitting. *Applied Surface Science*, **2015**, 339, 122-127	6.7	34

14	Gold nanoparticles coated zinc oxide nanorods as the matrix for enhanced L-lactate sensing. *Colloids and Surfaces B: Biointerfaces*, **2015**, 126, 476-80	6	26
13	Electronic structure engineering of Cu2O film/ZnO nanorods array all-oxide p-n heterostructure for enhanced photoelectrochemical property and self-powered biosensing application. *Scientific Reports*, **2015**, 5, 7882	4.9	131
12	Single-stranded DNA functionalized single-walled carbon nanotubes for microbiosensors via layer-by-layer electrostatic self-assembly. *ACS Applied Materials & Interfaces*, **2014**, 6, 3784-9	9.5	26
11	In situ transmission electron microscopy investigation on fatigue behavior of single ZnO wires under high-cycle strain. *Nano Letters*, **2014**, 14, 480-5	11.5	57
10	Self-powered ultraviolet photodetectors based on selectively grown ZnO nanowire arrays with thermal tuning performance. *Physical Chemistry Chemical Physics*, **2014**, 16, 9525-9	3.6	45
9	Investigation on the mechanism of nanodamage and nanofailure for single ZnO nanowires under an electric field. *ACS Applied Materials & Interfaces*, **2014**, 6, 2344-9	9.5	11
8	Zinc oxide nanowires-based electrochemical biosensor for L-lactic acid amperometric detection. *Journal of Nanoparticle Research*, **2014**, 16, 1	2.3	22
7	Enzyme-coated single ZnO nanowire FET biosensor for detection of uric acid. *Sensors and Actuators B: Chemical*, **2013**, 176, 22-27	8.5	79
6	Highly sensitive uric acid biosensor based on individual zinc oxide micro/nanowires. *Mikrochimica Acta*, **2013**, 180, 759-766	5.8	57
5	Multicenter uric acid biosensor based on tetrapod-shaped ZnO nanostructures. *Journal of Nanoscience and Nanotechnology*, **2012**, 12, 513-8	1.3	19
4	Phase reconfiguration of multivalent nickel sulfides in hydrogen evolution. *Energy and Environmental Science*,	35.4	9
3	Interface Engineering in 1D ZnO-Based Heterostructures for Photoelectrical Devices. *Advanced Functional Materials*,2106887	15.6	5
2	Broadband electromagnetic wave absorption properties and mechanism of MoS2/rGO nanocomposites. *Materials Chemistry Frontiers*,	7.8	2
1	Endogenous Synergistic Enhanced Self-Powered Photodetector via Multi-Effect Coupling Strategy toward High-Efficiency Ultraviolet Communication. *Advanced Functional Materials*,2202184	15.6	2