

# Xiao Qin Cheng

## List of Publications by Year in descending order

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75  
papers

4,223  
citations

126708

33  
h-index

106150

65  
g-index

76  
all docs

76  
docs citations

76  
times ranked

7096  
citing authors

#	ARTICLE	IF	CITATIONS
1	Flexible and Highly Sensitive Strain Sensors Fabricated by Pencil Drawn for Wearable Monitor. <i>Advanced Functional Materials</i> , 2015, 25, 2395-2401.	7.8	439
2	A Highly Stretchable ZnO@Fiber-Based Multifunctional Nanosensor for Strain/Temperature/UV Detection. <i>Advanced Functional Materials</i> , 2016, 26, 3074-3081.	7.8	239
3	Enhanced photoelectrochemical efficiency and stability using a conformal TiO <sub>2</sub> film on a black silicon photoanode. <i>Nature Energy</i> , 2017, 2, .	19.8	217
4	Band alignment engineering for improved performance and stability of ZnFe <sub>2</sub> O <sub>4</sub> modified CdS/ZnO nanostructured photoanode for PEC water splitting. <i>Nano Energy</i> , 2016, 24, 25-31.	8.2	196
5	3D-Branched ZnO/CdS Nanowire Arrays for Solar Water Splitting and the Service Safety Research. <i>Advanced Energy Materials</i> , 2016, 6, 1501459.	10.2	177
6	Highly transparent triboelectric nanogenerator for harvesting water-related energy reinforced by antireflection coating. <i>Scientific Reports</i> , 2015, 5, 9080.	1.6	165
7	Electronic Structure Engineering of Cu <sub>2</sub> O Film/ZnO Nanorods Array All-Oxide p-n Heterostructure for Enhanced Photoelectrochemical Property and Self-powered Biosensing Application. <i>Scientific Reports</i> , 2015, 5, 7882.	1.6	151
8	Self-Powered Photoelectrochemical Biosensor Based on CdS/RGO/ZnO Nanowire Array Heterostructure. <i>Small</i> , 2016, 12, 245-251.	5.2	142
9	Recyclable and Green Triboelectric Nanogenerator. <i>Advanced Materials</i> , 2017, 29, 1604961.	11.1	141
10	Enhanced photoelectrochemical property of ZnO nanorods array synthesized on reduced graphene oxide for self-powered biosensing application. <i>Biosensors and Bioelectronics</i> , 2015, 64, 499-504.	5.3	133
11	Design of sandwich-structured ZnO/ZnS/Au photoanode for enhanced efficiency of photoelectrochemical water splitting. <i>Nano Research</i> , 2015, 8, 2891-2900.	5.8	104
12	High On-Off Ratio Improvement of ZnO-Based Forming-Free Memristor by Surface Hydrogen Annealing. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 7382-7388.	4.0	102
13	Photoelectrochemical performance enhancement of ZnO photoanodes from ZnIn <sub>2</sub> S <sub>4</sub> nanosheets coating. <i>Nano Energy</i> , 2015, 14, 392-400.	8.2	98
14	A self-powered ultraviolet photodetector based on solution-processed p-NiO/n-ZnO nanorod array heterojunction. <i>RSC Advances</i> , 2015, 5, 5976-5981.	1.7	97
15	Enhanced Efficiency and Stability of Perovskite Solar Cells via Anti-Solvent Treatment in Two-Step Deposition Method. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 7224-7231.	4.0	97
16	Temperature-dependent electrochemical capacitive performance of the $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> hollow nanoshuttles as supercapacitor electrodes. <i>Journal of Colloid and Interface Science</i> , 2016, 466, 291-296.	5.0	94
17	Enhanced photoresponse of Cu <sub>2</sub> O/ZnO heterojunction with piezo-modulated interface engineering. <i>Nano Research</i> , 2014, 7, 860-868.	5.8	93
18	Improved Photoresponse Performance of Self-Powered ZnO/Spiro-MeOTAD Heterojunction Ultraviolet Photodetector by Piezo-Phototronic Effect. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 6137-6143.	4.0	92

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19	Self-powered photoelectrochemical biosensing platform based on Au NPs@ZnO nanorods array. Nano Research, 2016, 9, 344-352.	5.8	92
20	Gold nanoparticle/ZnO nanorod hybrids for enhanced reactive oxygen species generation and photodynamic therapy. Nano Research, 2015, 8, 2004-2014.	5.8	85
21	Vertical $\text{TaS}_2$ Synthesis on Nanoporous Gold for High-Performance Electrocatalytic Applications. Advanced Materials, 2018, 30, e1705916.	11.1	75
22	ZnO nanostructures in enzyme biosensors. Science China Materials, 2015, 58, 60-76.	3.5	70
23	Fiber-shaped asymmetric supercapacitors with ultrahigh energy density for flexible/wearable energy storage. Journal of Materials Chemistry A, 2016, 4, 17704-17710.	5.2	69
24	Synergistic Effect of Surface Plasmonic particles and Surface Passivation layer on ZnO Nanorods Array for Improved Photoelectrochemical Water Splitting. Scientific Reports, 2016, 6, 29907.	1.6	68
25	Highly sensitive uric acid biosensor based on individual zinc oxide micro/nanowires. Mikrochimica Acta, 2013, 180, 759-766.	2.5	65
26	Functional nanogenerators as vibration sensors enhanced by piezotronic effects. Nano Research, 2014, 7, 190-198.	5.8	56
27	Scalable Production of Two-Dimensional Metallic Transition Metal Dichalcogenide Nanosheet Powders Using NaCl Templates toward Electrocatalytic Applications. Journal of the American Chemical Society, 2019, 141, 18694-18703.	6.6	56
28	3D architecture of a graphene/CoMoO <sub>4</sub> composite for asymmetric supercapacitors usable at various temperatures. Journal of Colloid and Interface Science, 2017, 493, 42-50.	5.0	53
29	Bioinspired Tribotronic Resistive Switching Memory for Self-Powered Memorizing Mechanical Stimuli. ACS Applied Materials & Interfaces, 2017, 9, 43822-43829.	4.0	42
30	A potassium thiocyanate additive for hysteresis elimination in highly efficient perovskite solar cells. Inorganic Chemistry Frontiers, 2019, 6, 434-442.	3.0	39
31	Ag nanoparticle embedded Cu nanoporous hybrid arrays for the selective electrocatalytic reduction of CO <sub>2</sub> towards ethylene. Inorganic Chemistry Frontiers, 2020, 7, 2097-2106.	3.0	39
32	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.	5.2	37
33	Efficient Yttrium(III) Chloride-Treated TiO <sub>2</sub> Electron Transfer Layers for Performance-Improved and Hysteresis-Less Perovskite Solar Cells. ChemSusChem, 2018, 11, 171-177.	3.6	36
34	Influence of carrier concentration on the resistive switching characteristics of a ZnO-based memristor. Nano Research, 2016, 9, 1116-1124.	5.8	35
35	Gold nanoparticles coated zinc oxide nanorods as the matrix for enhanced Lactate sensing. Colloids and Surfaces B: Biointerfaces, 2015, 126, 476-480.	2.5	32
36	In-memory computing with emerging nonvolatile memory devices. Science China Information Sciences, 2021, 64, 1.	2.7	31

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37	A self-powered strain sensor based on a ZnO/PEDOT:PSS hybrid structure. RSC Advances, 2013, 3, 17011.	1.7	30
38	Current progress of metallic and carbon-based nanostructure catalysts towards the electrochemical reduction of CO <sub>2</sub> . Inorganic Chemistry Frontiers, 2019, 6, 3363-3380.	3.0	29
39	Zinc oxide nanowires-based electrochemical biosensor for L-lactic acid amperometric detection. Journal of Nanoparticle Research, 2014, 16, 1.	0.8	27
40	High carrier concentration ZnO nanowire arrays for binder-free conductive support of supercapacitors electrodes by Al doping. Journal of Colloid and Interface Science, 2016, 484, 155-161.	5.0	26
41	Band alignment engineering for high-energy-density solid-state asymmetric supercapacitors with TiO <sub>2</sub> insertion at the ZnO/Ni(OH) <sub>2</sub> interface. Journal of Materials Chemistry A, 2016, 4, 17981-17987.	5.2	25
42	Tailored TiO <sub>2</sub> Protection Layer Enabled Efficient and Stable Microdome Structured p-GaAs Photoelectrochemical Cathodes. Advanced Energy Materials, 2020, 10, 1902985.	10.2	25
43	Ultraviolet and visible photoresponse properties of a ZnO/Si heterojunction at zero bias. RSC Advances, 2013, 3, 17682.	1.7	24
44	Integrated active sensor system for real time vibration monitoring. Scientific Reports, 2015, 5, 16063.	1.6	23
45	Effect of carrier screening on ZnO-based resistive switching memory devices. Nano Research, 2017, 10, 77-86.	5.8	23
46	Nanorod arrays composed of zinc oxide modified with gold nanoparticles and glucose oxidase for enzymatic sensing of glucose. Mikrochimica Acta, 2015, 182, 605-610.	2.5	22
47	Facile fabrication of large-scale patterned ZnO nanorod arrays with tunable arrangement, period and morphology. CrystEngComm, 2013, 15, 8022.	1.3	19
48	Bipolar to unipolar mode transition and imitation of metaplasticity in oxide based memristors with enhanced ionic conductivity. Journal of Applied Physics, 2018, 124, .	1.1	19
49	A Memristor-Based In-Memory Computing Network for Hamming Code Error Correction. IEEE Electron Device Letters, 2019, 40, 1080-1083.	2.2	17
50	Illumination-dependent free carrier screening effect on the performance evolution of ZnO piezotronic strain sensor. Nano Research, 2016, 9, 1091-1100.	5.8	16
51	Tunable channel width of a UV-gate field effect transistor based on ZnO micro-nano wire. RSC Advances, 2014, 4, 18378.	1.7	14
52	High-throughput fabrication of large-scale highly ordered ZnO nanorod arrays via three-beam interference lithography. CrystEngComm, 2013, 15, 8416.	1.3	13
53	Polarity-Dependent Piezotronic Effect and Controllable Transport Modulation of ZnO with Multifield Coupled Interface Engineering. Advanced Materials Interfaces, 2017, 4, 1600842.	1.9	12
54	Silver modified copper foam electrodes for enhanced reduction of CO <sub>2</sub> to C <sub>2+</sub> products. Materials Advances, 2022, 3, 4964-4972.	2.6	11

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55	2D Metallic Transitional Metal Dichalcogenides for Electrochemical Hydrogen Evolution. Energy Technology, 2019, 7, 1801025.	1.8	10
56	Artificial Astrocyte Memristor with Recoverable Linearity for Neuromorphic Computing. Advanced Electronic Materials, 2022, 8, 2100669.	2.6	10
57	High-Quality $\text{FAPbI}_3$ Film Assisted by Lead Acetate for Efficient Solar Cells. Solar Rrl, 2021, 5, 2100747.	3.1	10
58	A reassembled nanoporous gold leaf electrocatalyst for efficient $\text{CO}_2$ reduction towards CO. Inorganic Chemistry Frontiers, 2018, 5, 1207-1212.	3.0	9
59	The Synergetic Benefits of Passivation Layer and Catalytic Layer on Hematite for Efficient Water Splitting. Energy Technology, 2019, 7, 1800899.	1.8	7
60	$\text{MnO}_2/\text{MXene-Ti}_3\text{C}_2\text{T}_x$ flexible foam for use in lithium ion storage. Materials Advances, 2021, 2, 4772-4780.	2.6	7
61	AFM investigation of nanomechanical properties of ZnO nanowires. RSC Advances, 2015, 5, 33445-33449.	1.7	6
62	Gradient Annealing of Halide Perovskite Films for Improved Performance of Solar Cells. ACS Applied Energy Materials, 2020, 3, 8130-8134.	2.5	6
63	Combined Modifications for Effectively Improving the Photoelectrochemical Performance of Hematite Photoanode. Energy Technology, 2021, 9, 2100249.	1.8	5
64	A boosting carrier transfer passivation layer for achieving efficient perovskite solar cells. Journal of Materials Chemistry C, 2022, 10, 9794-9801.	2.7	4
65	Calibration on force upon the surface of single ZnO nanowire applied by AFM tip with different scanning angles. RSC Advances, 2015, 5, 47309-47313.	1.7	1
66	OPTICAL PROPERTIES AND PHOTOCATALYTIC ACTIVITY OF MN-DOPED ZNO NANORODS. , 2012, , .		0
67	STRUCTURE AND MAGNETIC PROPERTY OF NI-DOPED ZNO NANORODS. , 2012, , .		0
68	ZNO NANOWIRES BASED MSM ULTRAVIOLET PHOTODETECTORS WITH PT CONTACT ELECTRODES. , 2012, , .		0
69	SOLUTION PROCESSED ZNO NANOROD ARRAYS/PFO HYBRID HETEROJUNCTION FOR LIGHT EMITTING. , 2012, , .		0
70	FABRICATION AND PERFORMANCE STUDY ON INDIVIDUAL ZNO NANOWIRES BASED BIOELECTRODE. , 2012, , .		0
71	A HIGH-PERFORMANCE GLUCOSE BIOSENSOR BASED ON ZNO NANOROD ARRAYS MODIFIED WITH AU NANOPARTICLES. , 2012, , .		0
72	STRAIN SENSORS BASED ON SINGLE HIGH-QUALITY ZNO MICROWIRES. , 2012, , .		0

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73	Active Flexible Strain Sensor Based on Single ZnO Micro/Nanowire. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	0
74	Realization of Nanoscale Neuromorphic Memristor Array with Low Power Consumption. , 2019, , .		0
75	Hf1-xZrxO2based bipolar selector with high uniformity and high selectivity for large-scale integration of memristor crossbars. , 2021, , .		0