

Zhen Zhang

List of Publications by Year in descending order

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58
papers

1,256
citations

471509

17
h-index

377865

34
g-index

59
all docs

59
docs citations

59
times ranked

1504
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase-modulated mechanical and thermoelectric properties of Ag ₂ S _{1-x} Te _x ductile semiconductors. <i>Journal of Materiomics</i> , 2022, 8, 656-661.	5.7	31
2	All-electrical antibiotic susceptibility testing within 30 min using silicon nano transistors. <i>Sensors and Actuators B: Chemical</i> , 2022, 357, 131458.	7.8	6
3	Direct Transition from Ultrathin Orthorhombic Dinickel Silicides to Epitaxial Nickel Disilicide Revealed by In Situ Synthesis and Analysis. <i>Small</i> , 2022, 18, 2106093.	10.0	3
4	High Performance Full-Inorganic Flexible Memristor with Combined Resistance-Switching. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 21173-21180.	8.0	21
5	Docking and Activity of DNA Polymerase on Solid-State Nanopores. <i>ACS Sensors</i> , 2022, , .	7.8	1
6	Analysis of Low Frequency Noise in Schottky Junction Trigate Silicon Nanowire FET on Bonded SOI Substrate. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 4667-4673.	3.0	0
7	Detection of gingipain activity using solid state nanopore sensors. <i>Sensors and Actuators B: Chemical</i> , 2022, 368, 132209.	7.8	2
8	Improving selectivity of ion-sensitive membrane by polyethylene glycol doping. <i>Sensors and Actuators B: Chemical</i> , 2021, 328, 128955.	7.8	7
9	Ultra-Low Noise Schottky Junction Tri-Gate Silicon Nanowire FET on Bonded Silicon-on-Insulator Substrate. <i>IEEE Electron Device Letters</i> , 2021, 42, 469-472.	3.9	3
10	Redox Buffering Effects in Potentiometric Detection of DNA Using Thiol-Modified Gold Electrodes. <i>ACS Sensors</i> , 2021, 6, 2546-2552.	7.8	3
11	Facile one-step synthesis and enhanced photocatalytic activity of a WC/ferroelectric nanocomposite. <i>Journal of Materials Chemistry A</i> , 2021, 9, 22861-22870.	10.3	5
12	Self-Limited Formation of Bowl-Shaped Nanopores for Directional DNA Translocation. <i>ACS Nano</i> , 2021, 15, 17938-17946.	14.6	4
13	Ion sensing with single charge resolution using sub-10-nm electrical double layer-gated silicon nanowire transistors. <i>Science Advances</i> , 2021, 7, eabj6711.	10.3	10
14	Effects of Substrate Bias on Low-Frequency Noise in Lateral Bipolar Transistors Fabricated on Silicon-on-Insulator Substrate. <i>IEEE Electron Device Letters</i> , 2020, 41, 4-7.	3.9	3
15	A Nanopore Array of Individual Addressability Enabled by Integrating Microfluidics and a Multiplexer. <i>IEEE Sensors Journal</i> , 2020, 20, 1558-1563.	4.7	6
16	Estimating Detection Limits of Potentiometric DNA Sensors Using Surface Plasmon Resonance Analyses. <i>ACS Sensors</i> , 2020, 5, 217-224.	7.8	9
17	Synergy of Ionic and Dipolar Effects by Molecular Design for pH Sensing beyond the Nernstian Limit. <i>Advanced Science</i> , 2020, 7, 1901001.	11.2	4
18	Peptide decorated gold nanoparticle/carbon nanotube electrochemical sensor for ultrasensitive detection of matrix metalloproteinase-7. <i>Sensors and Actuators B: Chemical</i> , 2020, 325, 128789.	7.8	33

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19	Rapid Four-Point Sweeping Method to Investigate Hysteresis of MoS ₂ FET. IEEE Electron Device Letters, 2020, 41, 1356-1359.	3.9	3
20	In-situ characterization of ultrathin nickel silicides using 3D medium-energy ion scattering. Scientific Reports, 2020, 10, 10249.	3.3	3
21	A Suspended Silicon Single-Hole Transistor as an Extremely Scaled Gigahertz Nanoelectromechanical Beam Resonator. Advanced Materials, 2020, 32, e2005625.	21.0	5
22	Domain Wall Free Polar Structure Enhanced Photodegradation Activity in Nanoscale Ferroelectric Ba _x Sr _{1-x} TiO ₃ . Advanced Energy Materials, 2020, 10, 2001802.	19.5	21
23	Visualization of DNA Translocation and Clogging Using Photoluminescent-Free Silicon Nanopore Arrays. , 2020, , .		0
24	Current Gain Enhancement for Silicon-on-Insulator Lateral Bipolar Junction Transistors Operating at Liquid-Helium Temperature. IEEE Electron Device Letters, 2020, 41, 800-803.	3.9	2
25	Voltammetric sensing of recombinant viral dengue virus 2 NS1 based on Au nanoparticle-decorated multiwalled carbon nanotube composites. Mikrochimica Acta, 2020, 187, 363.	5.0	39
26	Ultra-high field-induced strain in lead-free ceramics. Nano Energy, 2020, 76, 105037.	16.0	85
27	Mechanism and Kinetics of Lipid Bilayer Formation in Solid-State Nanopores. Langmuir, 2020, 36, 1446-1453.	3.5	4
28	Crystalline Structure-Dependent Mechanical and Thermoelectric Performance in Ag ₂ Se _{1-x} S _x System. Research, 2020, 2020, 6591981.	5.7	55
29	Dynamics of DNA Clogging in Hafnium Oxide Nanopores. Journal of Physical Chemistry B, 2020, 124, 11573-11583.	2.6	4
30	Controlled size reduction and its underlying mechanism to form solid-state nanopores via electron beam induced carbon deposition. Nanotechnology, 2019, 30, 455303.	2.6	5
31	Top-Bottom Gate Coupling Effect on Low Frequency Noise in a Schottky Junction Gated Silicon Nanowire Field-Effect Transistor. IEEE Journal of the Electron Devices Society, 2019, 7, 696-700.	2.1	3
32	On Rectification of Ionic Current in Nanopores. Analytical Chemistry, 2019, 91, 14597-14604.	6.5	35
33	Structural Changes of Mercaptohexanol Self-Assembled Monolayers on Gold and Their Influence on Impedimetric Aptamer Sensors. Analytical Chemistry, 2019, 91, 14697-14704.	6.5	52
34	Low-Noise Schottky Junction Trigate Silicon Nanowire Field-Effect Transistor for Charge Sensing. IEEE Transactions on Electron Devices, 2019, 66, 3994-4000.	3.0	5
35	Nanoparticle Localization on Solid-State Nanopores Via Electrophoretic Force. , 2019, , .		1
36	Electronic interaction of slow hydrogen and helium ions with nickel-silicon systems. Physical Review A, 2019, 100, .	2.5	16

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37	Rectification of protein translocation in truncated pyramidal nanopores. <i>Nature Nanotechnology</i> , 2019, 14, 1056-1062.	31.5	46
38	Metal filling by high power impulse magnetron sputtering. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 365202.	2.8	4
39	Autogenic analyte translocation in nanopores. <i>Nano Energy</i> , 2019, 60, 503-509.	16.0	9
40	Device Noise Reduction for Silicon Nanowire Field-Effect-Transistor Based Sensors by Using a Schottky Junction Gate. <i>ACS Sensors</i> , 2019, 4, 427-433.	7.8	18
41	Revisiting the factors influencing gold electrodes prepared using cyclic voltammetry. <i>Sensors and Actuators B: Chemical</i> , 2019, 283, 146-153.	7.8	32
42	An impedance model for the low-frequency noise originating from the dynamic hydrogen ion reactivity at the solid/liquid interface. <i>Sensors and Actuators B: Chemical</i> , 2018, 254, 363-369.	7.8	9
43	Group Behavior of Nanoparticles Translocating Multiple Nanopores. <i>Analytical Chemistry</i> , 2018, 90, 13483-13490.	6.5	13
44	Protein Sensing Beyond the Debye Length Using Graphene Field-Effect Transistors. <i>IEEE Sensors Journal</i> , 2018, 18, 6497-6503.	4.7	23
45	Multiplexed analysis of molecular and elemental ions using nanowire transistor sensors. <i>Sensors and Actuators B: Chemical</i> , 2018, 270, 89-96.	7.8	15
46	Nanoarrays on Passivated Aluminum Surface for Site-Specific Immobilization of Biomolecules. <i>ACS Applied Bio Materials</i> , 2018, 1, 125-135.	4.6	3
47	Perovskite $Sr_x(\text{Bi}_{1-x}\text{Na}_{0.97-x}\text{Li}_{0.03})_{0.5}\text{TiO}_3$ ceramics with polar nano regions for high power energy storage. <i>Nano Energy</i> , 2018, 50, 723-732.	16.0	293
48	Generalized Noise Study of Solid-State Nanopores at Low Frequencies. <i>ACS Sensors</i> , 2017, 2, 300-307.	7.8	57
49	Biomimetic supercontainers for size-selective electrochemical sensing of molecular ions. <i>Scientific Reports</i> , 2017, 7, 45786.	3.3	3
50	Physical Model for Rapid and Accurate Determination of Nanopore Size via Conductance Measurement. <i>ACS Sensors</i> , 2017, 2, 1523-1530.	7.8	28
51	Systematic Approach to the Development of Microfabricated Biosensors: Relationship between Gold Surface Pretreatment and Thiolated Molecule Binding. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26610-26621.	8.0	17
52	Correlation of Low-Frequency Noise to the Dynamic Properties of the Sensing Surface in Electrolytes. <i>ACS Sensors</i> , 2017, 2, 1160-1166.	7.8	5
53	Direct assessment of solid-liquid interface noise in ion sensing using a differential method. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	12
54	On nanopore DNA sequencing by signal and noise analysis of ionic current. <i>Nanotechnology</i> , 2016, 27, 215502.	2.6	17

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55	An ion-gated bipolar amplifier for ion sensing with enhanced signal and improved noise performance. Applied Physics Letters, 2014, 105, .	3.3	10
56	Dopant-Segregation Technique for Leakage Reduction and Performance Improvement in Trigate Transistors Without Raised Source/Drain Epitaxy. IEEE Electron Device Letters, 2014, 35, 512-514.	3.9	3
57	Sharp Reduction of Contact Resistivities by Effective Schottky Barrier Lowering With Silicides as Diffusion Sources. IEEE Electron Device Letters, 2010, 31, 731-733.	3.9	50
58	Schottky-Barrier Height Tuning by Means of Ion Implantation Into Preformed Silicide Films Followed by Drive-In Anneal. IEEE Electron Device Letters, 2007, 28, 565-568.	3.9	100