

Weihua Guan

List of Publications by Year in descending order

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Version: 2024-02-01

68
papers

2,656
citations

236925

25
h-index

182427

51
g-index

69
all docs

69
docs citations

69
times ranked

3146
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonpolar Nonvolatile Resistive Switching in Cu Doped ZrO_2 . IEEE Electron Device Letters, 2008, 29, 434-437.	3.9	260
2	Resistive switching memory effect of ZrO_2 films with Zr^+ implanted. Applied Physics Letters, 2008, 92, .	3.3	235
3	Field-effect reconfigurable nanofluidic ionic diodes. Nature Communications, 2011, 2, 506.	12.8	211
4	On the resistive switching mechanisms of $\text{Cu/ZrO}_2\text{:Cu/Pt}$. Applied Physics Letters, 2008, 93, .	3.3	190
5	Nonvolatile resistive switching memory utilizing gold nanocrystals embedded in zirconium oxide. Applied Physics Letters, 2007, 91, 062111.	3.3	182
6	Multilevel resistive switching with ionic and metallic filaments. Applied Physics Letters, 2009, 94, .	3.3	152
7	Older Adultsâ€™ Experiences Using a Commercially Available Monitor to Self-Track Their Physical Activity. JMIR MHealth and UHealth, 2016, 4, e35.	3.7	117
8	CRISPR-based detection of SARS-CoV-2: A review from sample to result. Biosensors and Bioelectronics, 2021, 178, 113012.	10.1	94
9	Sequence-Specific Recognition of HIV-1 DNA with Solid-State CRISPR-Cas12a-Assisted Nanopores (SCAN). ACS Sensors, 2020, 5, 1273-1280.	7.8	88
10	Direct Observation of Charge Inversion in Divalent Nanofluidic Devices. Nano Letters, 2015, 15, 5046-5051.	9.1	74
11	Voltage gated ion and molecule transport in engineered nanochannels: theory, fabrication and applications. Nanotechnology, 2014, 25, 122001.	2.6	71
12	Highly specific and sensitive non-enzymatic determination of uric acid in serum and urine by extended gate field effect transistor sensors. Biosensors and Bioelectronics, 2014, 51, 225-231.	10.1	69
13	Resistive switching characteristics of MnO_x -based ReRAM. Journal Physics D: Applied Physics, 2009, 42, 055112.	2.8	67
14	Fabrication and charging characteristics of MOS capacitor structure with metal nanocrystals embedded in gate oxide. Journal Physics D: Applied Physics, 2007, 40, 2754-2758.	2.8	56
15	Organic thin-film transistor memory with gold nanocrystals embedded in polyimide gate dielectric. Journal Physics D: Applied Physics, 2008, 41, 135111.	2.8	51
16	Paul trapping of charged particles in aqueous solution. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9326-9330.	7.1	48
17	Electric Field Modulation of the Membrane Potential in Solid-State Ion Channels. Nano Letters, 2012, 12, 6441-6447.	9.1	47
18	Sample-to-answer palm-sized nucleic acid testing device towards low-cost malaria mass screening. Biosensors and Bioelectronics, 2018, 115, 83-90.	10.1	46

#	ARTICLE	IF	CITATIONS
19	Detection of SARS-CoV-2 with Solid-State CRISPR-Cas12a-Assisted Nanopores. Nano Letters, 2021, 21, 8393-8400.	9.1	42
20	Resistance switching of Au-implanted-ZrO ₂ film for nonvolatile memory application. Journal of Applied Physics, 2008, 104, .	2.5	39
21	A field-deployable mobile molecular diagnostic system for malaria at the point of need. Lab on A Chip, 2016, 16, 4341-4349.	6.0	39
22	Noise in nanopore sensors: Sources, models, reduction, and benchmarking. Nami Jishu Yu Jingmi Gongcheng/Nanotechnology and Precision Engineering, 2020, 3, 9-17.	3.2	37
23	Modeling of retention characteristics for metal and semiconductor nanocrystal memories. Solid-State Electronics, 2007, 51, 806-811.	1.4	32
24	Loop-Mediated Isothermal Amplification-Coupled Glass Nanopore Counting Toward Sensitive and Specific Nucleic Acid Testing. Nano Letters, 2019, 19, 7927-7934.	9.1	32
25	Droplet Digital Enzyme-Linked Oligonucleotide Hybridization Assay for Absolute RNA Quantification. Scientific Reports, 2015, 5, 13795.	3.3	28
26	High-throughput and label-free parasitemia quantification and stage differentiation for malaria-infected red blood cells. Biosensors and Bioelectronics, 2017, 98, 408-414.	10.1	26
27	Quantitative probing of surface charges at dielectric-electrolyte interfaces. Lab on A Chip, 2013, 13, 1431.	6.0	25
28	High fidelity moving Z-score based controlled breakdown fabrication of solid-state nanopore. Nanotechnology, 2019, 30, 095502.	2.6	23
29	Microfluidic multiple cross-correlated Coulter counter for improved particle size analysis. Sensors and Actuators B: Chemical, 2019, 296, 126615.	7.8	22
30	Fingerpick Blood-Based Nucleic Acid Testing on A USB Interfaced Device towards HIV self-testing. Biosensors and Bioelectronics, 2022, 209, 114255.	10.1	20
31	Arbitrarily Accessible 3D Microfluidic Device for Combinatorial High-Throughput Drug Screening. Sensors, 2016, 16, 1616.	3.8	19
32	A long DNA segment in a linear nanoscale Paul trap. Nanotechnology, 2010, 21, 015103.	2.6	18
33	Calibration-Free Nanopore Digital Counting of Single Molecules. Analytical Chemistry, 2019, 91, 11178-11184.	6.5	18
34	Rapid detection of novel coronavirus SARS-CoV-2 by RT-LAMP coupled solid-state nanopores. Biosensors and Bioelectronics, 2022, 197, 113759.	10.1	18
35	Figure of Merit for CRISPR-Based Nucleic Acid-Sensing Systems: Improvement Strategies and Performance Comparison. ACS Sensors, 2022, 7, 900-911.	7.8	16
36	Microfluidic deformability-activated sorting of single particles. Microsystems and Nanoengineering, 2020, 6, 11.	7.0	13

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37	Microfluidic Time-Division Multiplexing Accessing Resistive Pulse Sensor for Particle Analysis. ACS Sensors, 2019, 4, 1957-1963.	7.8	12
38	Quantitative Analysis of Factors Affecting the Event Rate in Glass Nanopore Sensors. ACS Sensors, 2019, 4, 3007-3013.	7.8	12
39	Older Adultsâ€™ Utilization of Community Resources Targeting Fall Prevention and Physical Activity. Gerontologist, The, 2019, 59, 436-446.	3.9	12
40	Kirigami-Inspired 3D Organic Light-Emitting Diode (OLED) Lighting Concepts. Advanced Materials Technologies, 2018, 3, 1800067.	5.8	11
41	Direct Observation of Redox-Induced Bubble Generation and Nanopore Formation Dynamics in Controlled Dielectric Breakdown. ACS Applied Electronic Materials, 2020, 2, 2954-2960.	4.3	10
42	Microfluidic high-throughput single-cell mechanotyping: Devices and applications. Nami Jishu Yu Jingmi Gongcheng/Nanotechnology and Precision Engineering, 2021, 4, .	3.2	10
43	Comparison of discrete-storage nonvolatile memories: advantage of hybrid method for fabrication of Au nanocrystal nonvolatile memory. Journal Physics D: Applied Physics, 2008, 41, 035109.	2.8	8
44	Tunable Aqueous Virtual Micropore. Small, 2012, 8, 907-912.	10.0	8
45	Non-vanishing ponderomotive AC electrophoretic effect for particle trapping. Nanotechnology, 2011, 22, 245103.	2.6	7
46	Confocal scanning photoluminescence for mapping electron and photon beam-induced microscopic changes in SiN _x during nanopore fabrication. Nanotechnology, 2020, 31, 395202.	2.6	6
47	Rolling Circle Amplification-Coupled Glass Nanopore Counting of Mild Traumatic Brain Injury-Related Salivary miRNAs. Analytical Chemistry, 2022, 94, 3865-3871.	6.5	6
48	On Stochastic Reduction in Laser-Assisted Dielectric Breakdown for Programmable Nanopore Fabrication. ACS Applied Materials & Interfaces, 2021, 13, 13383-13391.	8.0	5
49	Sample-to-Answer Microfluidic Nucleic Acid Testing (NAT) on Lab-on-a-Disc for Malaria Detection at Point of Need. Methods in Molecular Biology, 2022, 2393, 297-313.	0.9	5
50	Nanofluidic charged-coupled devices for controlled DNA transport and separation. Nanotechnology, 2021, 32, 345501.	2.6	4
51	Charge storage characteristics of metal-induced nanocrystalline in erbium-doped amorphous silicon films. Thin Solid Films, 2008, 516, 7657-7660.	1.8	3
52	Nonvolatile resistive switching characteristics of HfO ₂ with Cu doping. Materials Research Society Symposia Proceedings, 2008, 1071, 1.	0.1	3
53	An Ultracompact Real-Time Fluorescence Loop-Mediated Isothermal Amplification (LAMP) Analyzer. Methods in Molecular Biology, 2022, 2393, 257-278.	0.9	3
54	False Negative And False Positive Free Nanopore Fabrication Via Adaptive Learning Of The Controlled Dielectric Breakdown. , 2019, , .		2

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55	Excellent resistive switching characteristics of Cu doped ZrO ₂ and its 64 bit cross-point integration. , 2008, , .		1
56	Resistance Switching Characteristics of Zirconium Oxide Containing Gold Nanocrystals for Nonvolatile Memory Applications. Journal of Nanoscience and Nanotechnology, 2009, 9, 723-726.	0.9	1
57	Foreword to the special issue on micro/nano biosensors. Nami Jishu Yu Jingmi Gongcheng/Nanotechnology and Precision Engineering, 2020, 3, 1.	3.2	1
58	Analysis of Charge Retention Characteristics for Metal and Semiconductor Nanocrystal Non-volatile Memories. , 2007, , .		0
59	Fabrication and characterization of field effect reconfigurable nanofluidic ionic diodes: Towards digitally-programmed manipulation of biomolecules. , 2012, , .		0
60	Digital droplet ELOHA for nucleic acid molecule counting and analysis. , 2015, , .		0
61	Mobile all-in-one malaria molecular diagnosis for field deployment in resource-limited areas. , 2016, , .		0
62	High-throughput and label-free parasitemia quantification and stage determination for plasmodium falciparum-infected red blood cells. , 2017, , .		0
63	Extended Gate Field-Effect Transistor Biosensors for Point-Of-Care Testing of Uric Acid. Methods in Molecular Biology, 2017, 1572, 189-203.	0.9	0
64	Non-Centrifugal Microfluidic Nucleic Acid Testing on Lab-on-a-Disc. , 2019, , .		0
65	Nanopore Digital Counting of Amplicons for Ultrasensitive Electronic DNA Detection. , 2019, , .		0
66	Calibration-Free Electrical Quantification of Single Molecules Using Nanopore Digital Counting. , 2019, , .		0
67	Live Demonstration: Sample-to-Answer Nucleic Acid Testing Device for Point-of-Care Applications. , 2019, , .		0
68	Time-division multiplexed resistive pulse sensor on a microfluidic chip. , 2019, , .		0