

# Rui Zhang

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81  
papers

2,777  
citations

24  
h-index

52  
g-index

90  
ext. papers

3,138  
ext. citations

3  
avg, IF

5.02  
L-index

#	Paper	IF	Citations
81	Enhanced Photocatalysis of Electrospun Ag <sub>2</sub> SnO Heterostructured Nanofibers. <i>Chemistry of Materials</i> , <b>2009</b> , 21, 3479-3484	9.6	478
80	Electrospinning of Fe, Co, and Ni Nanofibers: Synthesis, Assembly, and Magnetic Properties. <i>Chemistry of Materials</i> , <b>2007</b> , 19, 3506-3511	9.6	266
79	Promising TiCT MXene/Ni Chain Hybrid with Excellent Electromagnetic Wave Absorption and Shielding Capacity. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 25399-25409	9.5	183
78	High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using $\text{HfO}_2/\text{Al}_2\text{O}_3/\text{GeO}_x/\text{Ge}$ Gate Stacks Fabricated by Plasma Postoxidation. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 927-934	2.9	164
77	GaN Nanofibers based on Electrospinning: Facile Synthesis, Controlled Assembly, Precise Doping, and Application as High Performance UV Photodetector. <i>Advanced Materials</i> , <b>2009</b> , 21, 227-231	2.4	154
76	High-Mobility Ge pMOSFET With 1-nm EOT $\text{Al}_2\text{O}_3/\text{GeO}_x/\text{Ge}$ Gate Stack Fabricated by Plasma Post Oxidation. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 335-341	2.9	150
75	Biomimetic nanofiber patterns with controlled wettability. <i>Soft Matter</i> , <b>2008</b> , 4, 2429	3.6	133
74	Al <sub>2</sub> O <sub>3</sub> /GeO <sub>x</sub> /Ge gate stacks with low interface trap density fabricated by electron cyclotron resonance plasma postoxidation. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 112902	3.4	125
73	ZnO Nanofiber Field-Effect Transistor Assembled by Electrospinning. <i>Journal of the American Ceramic Society</i> , <b>2008</b> , 91, 656-659	3.8	89
72	Facile Synthesis of Heterostructured ZnO <sub>x</sub> /SnS Nanocables and Enhanced Photocatalytic Activity. <i>Journal of the American Ceramic Society</i> , <b>2010</b> , 93, 3384-3389	3.8	54
71	High mobility CMOS technologies using III <sup>V</sup> /Ge channels on Si platform. <i>Solid-State Electronics</i> , <b>2013</b> , 88, 2-8	1.7	51
70	Preparation and electrical properties of electrospun tin-doped indium oxide nanowires. <i>Nanotechnology</i> , <b>2007</b> , 18, 465301	3.4	48
69	III <sup>V</sup> /Ge channel MOS device technologies in nano CMOS era. <i>Japanese Journal of Applied Physics</i> , <b>2015</b> , 54, 06FA01	1.4	47
68	Impact of GeO <sub>x</sub> interfacial layer thickness on Al <sub>2</sub> O <sub>3</sub> /Ge MOS interface properties. <i>Microelectronic Engineering</i> , <b>2011</b> , 88, 1533-1536	2.5	44
67	Facile Synthesis and Assembly of Ag/NiO Nanofibers with High Electrical Conductivity. <i>Chemistry of Materials</i> , <b>2007</b> , 19, 1895-1897	9.6	44
66	New materials for post-Si computing: Ge and GeSn devices. <i>MRS Bulletin</i> , <b>2014</b> , 39, 678-686	3.2	42
65	Preparation of Necklace-Structured TiO <sub>2</sub> /SnO <sub>2</sub> Hybrid Nanofibers and Their Photocatalytic Activity. <i>Journal of the American Ceramic Society</i> , <b>2009</b> , 92, 2463-2466	3.8	41

64	Aggressive EOT Scaling of Ge pMOSFETs With HfO <sub>2</sub> /AlO <sub>x</sub> /GeO <sub>x</sub> Gate-Stacks Fabricated by Ozone Postoxidation. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 831-834	4.4	37
63	Photocatalytic and Magnetic Properties of the Fe-TiO <sub>2</sub> /SnO <sub>2</sub> Nanofiber Via Electrospinning. <i>Journal of the American Ceramic Society</i> , <b>2010</b> , 93, 605-608	3.8	37
62	III-V/Ge MOS device technologies for low power integrated systems. <i>Solid-State Electronics</i> , <b>2016</b> , 125, 82-102	1.7	30
61	Impact of Plasma Postoxidation Temperature on the Electrical Properties of $\text{Al}_2\text{O}_3/\text{GeO}_x/\text{Ge}$ pMOSFETs and nMOSFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 416-422	2.9	29
60	1-nm-thick EOT high mobility Ge n- and p-MOSFETs with ultrathin GeO <sub>x</sub> /Ge MOS interfaces fabricated by plasma post oxidation <b>2011</b> ,		27
59	Ge gate stacks based on Ge oxide interfacial layers and the impact on MOS device properties. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 389-395	2.5	26
58	Suppression of ALD-Induced Degradation of Ge MOS Interface Properties by Low Power Plasma Nitridation of GeO <sub>2</sub> . <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, G178	3.9	26
57	Suppression of dark current in GeO <sub>x</sub> -passivated germanium metal-semiconductor-metal photodetector by plasma post-oxidation. <i>Optics Express</i> , <b>2015</b> , 23, 16967-76	3.3	23
56	III-V/Ge High Mobility Channel Integration of InGaAs n-Channel and Ge p-Channel MetalOxideSemiconductor Field-Effect Transistors with Self-Aligned Ni-Based Metal Source/Drain Using Direct Wafer Bonding. <i>Applied Physics Express</i> , <b>2012</b> , 5, 076501	2.4	23
55	. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 2316-2323	2.9	21
54	Atomic layer-by-layer oxidation of Ge (100) and (111) surfaces by plasma post oxidation of Al <sub>2</sub> O <sub>3</sub> /Ge structures. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 081603	3.4	20
53	Synthesis of core-shell fishbone-like Cu@Ni composites and their electromagnetic wave absorption properties. <i>Powder Technology</i> , <b>2017</b> , 319, 245-252	5.2	18
52	Oriented Nanofibers by a Newly Modified Electrospinning Method. <i>Journal of the American Ceramic Society</i> , <b>2007</b> , 90, 632-634	3.8	18
51	Impact of plasma post oxidation temperature on interface trap density and roughness at GeO <sub>x</sub> /Ge interfaces. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 97-100	2.5	17
50	Reduction in Interface Trap Density of Al <sub>2</sub> O <sub>3</sub> /SiGe Gate Stack by Electron Cyclotron Resonance Plasma Post-nitridation. <i>Applied Physics Express</i> , <b>2013</b> , 6, 051302	2.4	17
49	Fabrication and MOS interface properties of ALD AlYO <sub>3</sub> /GeO <sub>x</sub> /Ge gate stacks with plasma post oxidation. <i>Microelectronic Engineering</i> , <b>2015</b> , 147, 244-248	2.5	16
48	Impact of plasma post-nitridation on HfO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> /SiGe gate stacks toward EOT scaling. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 266-269	2.5	16
47	Preparation of ZnS Nanofibers Via Electrospinning. <i>Journal of the American Ceramic Society</i> , <b>2007</b> , 90, 3664-3666	3.8	16

46	Demonstration of ultra-thin buried oxide germanium-on-insulator MOSFETs by direct wafer bonding and polishing techniques. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 023503	3.4	16
45	Impact of Channel Orientation on Electrical Properties of Ge p- and n-MOSFETs With 1-nm EOT Al <sub>2</sub> O <sub>3</sub> /GeO <sub>x</sub> /Ge Gate-Stacks Fabricated by Plasma Postoxidation. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 3668-3675	2.9	15
44	Synthesis and properties of Ag/ZnO/g-C <sub>3</sub> N <sub>4</sub> ternary micro/nano composites by microwave-assisted method. <i>Materials Research Express</i> , <b>2018</b> , 5, 015021	1.7	14
43	Impact of back interface passivation on electrical properties of ultrathin-body Germanium-on-insulator (GeOI) MOSFETs. <i>Microelectronic Engineering</i> , <b>2015</b> , 147, 196-200	2.5	13
42	High-Performance Germanium pMOSFETs With NiGe Metal Source/Drain Fabricated by Microwave Annealing. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 2665-2670	2.9	13
41	Ge-Based Asymmetric RRAM Enable $\{F\}^2$ Content Addressable Memory. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 1294-1297	4.4	13
40	High-quality germanium dioxide thin films with low interface state density using a direct neutral beam oxidation process. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 213108	3.4	12
39	Formation of Thin Germanium Dioxide Film with a High-Quality Interface Using a Direct Neutral Beam Oxidation Process. <i>Japanese Journal of Applied Physics</i> , <b>2012</b> , 51, 125603	1.4	12
38	Characterization of ultrathin-body Germanium-on-insulator (GeOI) structures and MOSFETs on flipped Smart-Cut GeOI substrates. <i>Solid-State Electronics</i> , <b>2016</b> , 115, 120-125	1.7	11
37	Quantitative evaluation of slow traps near Ge MOS interfaces by using time response of MOS capacitance. <i>Japanese Journal of Applied Physics</i> , <b>2015</b> , 54, 04DA02	1.4	11
36	Impact of Postdeposition Annealing Ambient on the Mobility of Ge nMOSFETs With 1-nm EOT Al <sub>2</sub> O <sub>3</sub> /GeO <sub>x</sub> /Ge Gate-Stacks. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 558-564	2.9	10
35	Investigation of Self-Heating Effect on Ballistic Transport Characterization for Si FinFETs Featuring Ultrafast Pulsed IV Technique. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 909-915	2.9	9
34	Comparison of Different Scattering Mechanisms in the Ge (111), (110), and (100) Inversion Layers of nMOSFETs With Si nMOSFETs Under High Normal Electric Fields. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 1136-1142	2.9	9
33	(Invited) III-V/Ge CMOS Device Technologies for High Performance Logic Applications. <i>ECS Transactions</i> , <b>2013</b> , 53, 85-96	1	9
32	High performance Ge ultra-shallow junctions fabricated by a novel formation technique featuring spin-on dopant and laser annealing for sub-10 nm technology applications. <i>Microelectronic Engineering</i> , <b>2017</b> , 168, 1-4	2.5	7
31	Physical mechanism determining Ge p- and n-MOSFETs mobility in high N <sub>s</sub> region and mobility improvement by atomically flat GeO <sub>x</sub> /Ge interfaces <b>2012</b> ,		7
30	(Invited) MOS Interface Control Technologies for III-V/Ge Channel MOSFETs. <i>ECS Transactions</i> , <b>2011</b> , 41, 3-20	1	7
29	The past and future of multi-gate field-effect transistors: Process challenges and reliability issues. <i>Journal of Semiconductors</i> , <b>2021</b> , 42, 023102	2.3	7

28	Ultrathin Body Germanium-on-Insulator (GeOI) Pseudo-MOSFETs Fabricated by Transfer of Epitaxial Ge Films on III-V Substrates. <i>ECS Solid State Letters</i> , <b>2014</b> , 4, P15-P18		6
27	Hole mobility in the ultra-thin-body junctionless germanium-on-insulator p-channel metal-oxide-semiconductor field-effect transistors. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 132101	3-4	5
26	Low temperature formation of higher-k cubic phase HfO <sub>2</sub> by atomic layer deposition on GeO <sub>x</sub> /Ge structures fabricated by in-situ thermal oxidation. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 052903	3-4	5
25	Electrical Properties of Ge pMOSFETs With Ultrathin EOT HfO <sub>2</sub> /AlO <sub>x</sub> /GeO <sub>x</sub> Gate-Stacks and NiGe Metal Source/Drain. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 4831-4837	2-9	4
24	Impact of Electrical Stress on Defect Generation in Thin GeO <sub>2</sub> /Ge Gate Stacks Fabricated by Thermal Oxidation. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 2516-2521	2-9	3
23	Growth of magnetic metals on carbon microspheres with synergetic dissipation abilities to broaden microwave absorption. <i>Journal of Materials Science and Technology</i> , <b>2022</b> , 107, 100-110	9-1	3
22	Traps Around Ge Schottky Junction Interface: Quantitative Characterization and Impact on the Electrical Properties of Ge MOS Devices. <i>IEEE Journal of the Electron Devices Society</i> , <b>2020</b> , 8, 350-357	2-3	2
21	Evidence of Layer-by-Layer Oxidation of Ge Surfaces by Plasma Oxidation Through Al <sub>2</sub> O <sub>3</sub> . <i>ECS Transactions</i> , <b>2013</b> , 50, 699-706	1	2
20	Limiting Factors of Channel Mobility in III-V/Ge MOSFETs. <i>ECS Transactions</i> , <b>2013</b> , 53, 107-122	1	2
19	Formation of 1.7-nm-thick-EOT Germanium Dioxide Film with a High-Quality Interface Using a Direct Neutral Beam Oxidation Process. <i>ECS Transactions</i> , <b>2013</b> , 50, 1085-1090	1	2
18	Gate length dependence of hot carrier injection degradation in short channel silicon on insulator planar MOSFET. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2015</b> , 64, 167305	0.6	2
17	Mobility enhancement techniques for Ge and GeSn MOSFETs. <i>Journal of Semiconductors</i> , <b>2021</b> , 42, 0231013	1	2
16	One-dimensional electrospun ceramic nanomaterials and their sensing applications. <i>Journal of the American Ceramic Society</i> ,	3.8	2
15	Gate length dependence of bias temperature instability behavior in short channel SOI MOSFETs. <i>Microelectronics Reliability</i> , <b>2016</b> , 62, 79-81	1.2	1
14	Positive Bias Temperature Instability and Hot Carrier Injection of Back Gate Ultra-thin-body In 0.53 Ga 0.47 As-on-Insulator n-Channel Metal-Oxide-Semiconductor Field-Effect Transistor. <i>Chinese Physics Letters</i> , <b>2015</b> , 32, 117302	1.8	1
13	Si- and Ge-Based Electronic Devices. <i>Advances in Condensed Matter Physics</i> , <b>2015</b> , 2015, 1-1	1	1
12	Reduction of RIE Induced Ge Surface Roughness by SF <sub>6</sub> -CF <sub>4</sub> Cyclic Etching Method. <i>ECS Transactions</i> , <b>2014</b> , 64, 231-237	1	1
11	THIS ARTICLE HAS BEEN RETRACTEDEffect of Silica Sol on the Properties of Alumina-Based Duplex Ceramic Cores. <i>International Journal of Applied Ceramic Technology</i> , <b>2008</b> , 5, 105-109	2	1

10	Thermal Stability Enhancement of NiGe Metal Source/Drain and Ge pMOSFETs by Dopant Segregation. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 5284-5288	2.9	1
9	Ge Complementary Tunneling Field-Effect Transistors Featuring Dopant Segregated NiGe Source/Drain. <i>Chinese Physics Letters</i> , <b>2018</b> , 35, 117201	1.8	1
8	Ge-based Non-Volatile Logic-Memory Hybrid Devices for NAND Memory Application <b>2018</b> ,		1
7	Reduction of Reactive-Ion Etching-Induced Ge Surface Roughness by SF 6 /CF 4 Cyclic Etching for Ge Fin Fabrication. <i>Chinese Physics Letters</i> , <b>2015</b> , 32, 045202	1.8	0
6	Direct-Bandgap Electroluminescence From Germanium With Subband Engineering Utilizing a Metal-Oxide-Semiconductor Structure. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 2016-2021	2.9	0
5	Comparative investigation into the interface passivation of Ge n- and p-MOSFETs with various 2D materials. <i>Applied Physics Express</i> , <b>2019</b> , 12, 101001	2.4	
4	Strain Engineering for Germanium-on-Insulator Mobility Enhancement with Phase Change Liner Stressors. <i>Chinese Physics Letters</i> , <b>2017</b> , 34, 108101	1.8	
3	Fabrication of Mn <sub>2</sub> O <sub>3</sub> Nanowire with Ultra Fine Morphology via an Electrospinning Technology. <i>Key Engineering Materials</i> , <b>2008</b> , 368-372, 532-534	0.4	
2	Properties of In Situ Synthesized Alumina Ceramic Core Composites. <i>Key Engineering Materials</i> , <b>2008</b> , 368-372, 724-725	0.4	
1	Impact of the Si Content on the Electrical Properties of NiSi <sub>x</sub> Ge <sub>1-x</sub> Source/Drain Contact Metal for Ge pMOSFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 5742-5746	2.9	