

# Zhiyong Z Zhang

## List of Publications by Citations

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187  
papers

9,742  
citations

50  
h-index

93  
g-index

196  
ext. papers

11,356  
ext. citations

10.2  
avg, IF

6.26  
L-index

#	Paper	IF	Citations
187	Repeated growth and bubbling transfer of graphene with millimetre-size single-crystal grains using platinum. <i>Nature Communications</i> , <b>2012</b> , 3, 699	17.4	884
186	Exploring atomic defects in molybdenum disulphide monolayers. <i>Nature Communications</i> , <b>2015</b> , 6, 6293	17.4	851
185	Scaling carbon nanotube complementary transistors to 5-nm gate lengths. <i>Science</i> , <b>2017</b> , 355, 271-276	33.3	364
184	Ultrasensitive label-free detection of PNA-DNA hybridization by reduced graphene oxide field-effect transistor biosensor. <i>ACS Nano</i> , <b>2014</b> , 8, 2632-8	16.7	302
183	Scalable Clean Exfoliation of High-Quality Few-Layer Black Phosphorus for a Flexible Lithium Ion Battery. <i>Advanced Materials</i> , <b>2016</b> , 28, 510-7	24	289
182	Doping-Free Fabrication of Carbon Nanotube Based Ballistic CMOS Devices and Circuits. <i>Nano Letters</i> , <b>2007</b> , 7, 3603-3607	11.5	278
181	Large-area synthesis of high-quality and uniform monolayer WS <sub>2</sub> on reusable Au foils. <i>Nature Communications</i> , <b>2015</b> , 6, 8569	17.4	273
180	Quantitative Analysis of Current-Voltage Characteristics of Semiconducting Nanowires: Decoupling of Contact Effects. <i>Advanced Functional Materials</i> , <b>2007</b> , 17, 2478-2489	15.6	256
179	Carbon nanotube electronics: recent advances. <i>Materials Today</i> , <b>2014</b> , 17, 433-442	21.8	215
178	Dirac-source field-effect transistors as energy-efficient, high-performance electronic switches. <i>Science</i> , <b>2018</b> , 361, 387-392	33.3	146
177	Aligned, high-density semiconducting carbon nanotube arrays for high-performance electronics. <i>Science</i> , <b>2020</b> , 368, 850-856	33.3	136
176	Y-contacted high-performance n-type single-walled carbon nanotube field-effect transistors: scaling and comparison with Sc-contacted devices. <i>Nano Letters</i> , <b>2009</b> , 9, 4209-14	11.5	133
175	Self-aligned ballistic n-type single-walled carbon nanotube field-effect transistors with adjustable threshold voltage. <i>Nano Letters</i> , <b>2008</b> , 8, 3696-701	11.5	132
174	Gold nanoparticles-decorated graphene field-effect transistor biosensor for femtomolar MicroRNA detection. <i>Biosensors and Bioelectronics</i> , <b>2015</b> , 74, 329-34	11.8	124
173	CMOS-based carbon nanotube pass-transistor logic integrated circuits. <i>Nature Communications</i> , <b>2012</b> , 3, 677	17.4	119
172	Growth and performance of yttrium oxide as an ideal high-kappa gate dielectric for carbon-based electronics. <i>Nano Letters</i> , <b>2010</b> , 10, 2024-30	11.5	116
171	Quantum capacitance limited vertical scaling of graphene field-effect transistor. <i>ACS Nano</i> , <b>2011</b> , 5, 2340-7	11.5	115

170	Efficient photovoltage multiplication in carbon nanotubes. <i>Nature Photonics</i> , <b>2011</b> , 5, 672-676	33.9	104
169	A high-performance top-gate graphene field-effect transistor based frequency doubler. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 173104	3.4	103
168	Ultrasensitive Monolayer MoS Field-Effect Transistor Based DNA Sensors for Screening of Down Syndrome. <i>Nano Letters</i> , <b>2019</b> , 19, 1437-1444	11.5	103
167	Fabrication of Ultrasensitive Field-Effect Transistor DNA Biosensors by a Directional Transfer Technique Based on CVD-Grown Graphene. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 16953-9	9.5	99
166	High-Performance Complementary Transistors and Medium-Scale Integrated Circuits Based on Carbon Nanotube Thin Films. <i>ACS Nano</i> , <b>2017</b> , 11, 4124-4132	16.7	97
165	Growth of high-density horizontally aligned SWNT arrays using Trojan catalysts. <i>Nature Communications</i> , <b>2015</b> , 6, 6099	17.4	94
164	Detection of heart failure-related biomarker in whole blood with graphene field effect transistor biosensor. <i>Biosensors and Bioelectronics</i> , <b>2017</b> , 91, 1-7	11.8	91
163	High-performance photodetectors for visible and near-infrared lights based on individual WS2 nanotubes. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 243101	3.4	89
162	Repeated growth-etching-regrowth for large-area defect-free single-crystal graphene by chemical vapor deposition. <i>ACS Nano</i> , <b>2014</b> , 8, 12806-13	16.7	87
161	Top-gated graphene field-effect transistors with high normalized transconductance and designable dirac point voltage. <i>ACS Nano</i> , <b>2011</b> , 5, 5031-7	16.7	87
160	Gigahertz integrated circuits based on carbon nanotube films. <i>Nature Electronics</i> , <b>2018</b> , 1, 40-45	28.4	85
159	Highly Uniform Carbon Nanotube Field-Effect Transistors and Medium Scale Integrated Circuits. <i>Nano Letters</i> , <b>2016</b> , 16, 5120-8	11.5	84
158	Almost perfectly symmetric SWCNT-based CMOS devices and scaling. <i>ACS Nano</i> , <b>2009</b> , 3, 3781-7	16.7	83
157	High-performance carbon nanotube light-emitting diodes with asymmetric contacts. <i>Nano Letters</i> , <b>2011</b> , 11, 23-9	11.5	81
156	Carbon nanotube arrays based high-performance infrared photodetector [Invited]. <i>Optical Materials Express</i> , <b>2012</b> , 2, 839	2.6	79
155	Room Temperature Broadband Infrared Carbon Nanotube Photodetector with High Detectivity and Stability. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 238-245	8.1	78
154	Carbon nanotube photoelectronic and photovoltaic devices and their applications in infrared detection. <i>Small</i> , <b>2013</b> , 9, 1225-36	11	76
153	Measurements and microscopic model of quantum capacitance in graphene. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 133122	3.4	74

152	Facile preparation of nitrogen-doped few-layer graphene via supercritical reaction. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2011</b> , 3, 2259-64	9.5	69
151	High-Performance Carbon Nanotube Complementary Electronics and Integrated Sensor Systems on Ultrathin Plastic Foil. <i>ACS Nano</i> , <b>2018</b> , 12, 2773-2779	16.7	66
150	Water-Assisted Preparation of High-Purity Semiconducting (14,4) Carbon Nanotubes. <i>ACS Nano</i> , <b>2017</b> , 11, 186-193	16.7	66
149	Realization of low contact resistance close to theoretical limit in graphene transistors. <i>Nano Research</i> , <b>2015</b> , 8, 1669-1679	10	65
148	Batch-fabricated high-performance graphene Hall elements. <i>Scientific Reports</i> , <b>2013</b> , 3, 1207	4.9	61
147	Governing Rule for Dynamic Formation of Grain Boundaries in Grown Graphene. <i>ACS Nano</i> , <b>2015</b> , 9, 5792-8.7	8.7	59
146	A Doping-Free Carbon Nanotube CMOS Inverter-Based Bipolar Diode and Ambipolar Transistor. <i>Advanced Materials</i> , <b>2008</b> , 20, 3258-3262	24	59
145	Low-power carbon nanotube-based integrated circuits that can be transferred to biological surfaces. <i>Nature Electronics</i> , <b>2018</b> , 1, 237-245	28.4	58
144	Carbon nanotube based ultra-low voltage integrated circuits: Scaling down to 0.4 V. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 263116	3.4	57
143	Carbon nanotube feedback-gate field-effect transistor: suppressing current leakage and increasing on/off ratio. <i>ACS Nano</i> , <b>2015</b> , 9, 969-77	16.7	56
142	High-performance n-type carbon nanotube field-effect transistors with estimated sub-10-ps gate delay. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 133117	3.4	56
141	Carbon nanotube digital electronics. <i>Nature Electronics</i> , <b>2019</b> , 2, 499-505	28.4	56
140	Low Residual Carrier Concentration and High Mobility in 2D Semiconducting BiOSe. <i>Nano Letters</i> , <b>2019</b> , 19, 197-202	11.5	56
139	Electrical and Label-Free Quantification of Exosomes with a Reduced Graphene Oxide Field Effect Transistor Biosensor. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 10679-10686	7.8	54
138	Real-Time Monitoring of Nitric Oxide at Single-Cell Level with Porphyrin-Functionalized Graphene Field-Effect Transistor Biosensor. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 11115-11122	7.8	53
137	Controlled growth of single-crystal twelve-pointed graphene grains on a liquid Cu surface. <i>Advanced Materials</i> , <b>2014</b> , 26, 6423-9	24	50
136	Scalable fabrication of graphene devices through photolithography. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 113102	3.4	50
135	High mobility flexible graphene field-effect transistors and ambipolar radio-frequency circuits. <i>Nanoscale</i> , <b>2015</b> , 7, 10954-62	7.7	46

134	Comparison of mobility extraction methods based on field-effect measurements for graphene. <i>AIP Advances</i> , <b>2015</b> , 5, 057136	1.5	45
133	Field-effect characteristics and screening in double-walled carbon nanotube field-effect transistors. <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 17361-5	3.4	45
132	Rapid and unamplified identification of COVID-19 with morpholino-modified graphene field-effect transistor nanosensor. <i>Biosensors and Bioelectronics</i> , <b>2021</b> , 183, 113206	11.8	45
131	Scalable Preparation of High-Density Semiconducting Carbon Nanotube Arrays for High-Performance Field-Effect Transistors. <i>ACS Nano</i> , <b>2018</b> , 12, 627-634	16.7	43
130	Wafer-Scale Uniform Carbon Nanotube Transistors for Ultrasensitive and Label-Free Detection of Disease Biomarkers. <i>ACS Nano</i> , <b>2020</b> , 14, 8866-8874	16.7	42
129	Electronic transport in single-walled carbon nanotube/graphene junction. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 113102	3.4	42
128	Multifunctional graphene sensors for magnetic and hydrogen detection. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 9581-8	9.5	41
127	A field effect transistor modified with reduced graphene oxide for immunodetection of Ebola virus. <i>Mikrochimica Acta</i> , <b>2019</b> , 186, 223	5.8	39
126	Graphene/Si CMOS hybrid hall integrated circuits. <i>Scientific Reports</i> , <b>2014</b> , 4, 5548	4.9	39
125	Probing the anisotropic behaviors of black phosphorus by transmission electron microscopy, angular-dependent Raman spectra, and electronic transport measurements. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 021906	3.4	39
124	Batch Fabrication of Ultrasensitive Carbon Nanotube Hydrogen Sensors with Sub-ppm Detection Limit. <i>ACS Sensors</i> , <b>2018</b> , 3, 749-756	9.2	39
123	How good can CVD-grown monolayer graphene be?. <i>Nanoscale</i> , <b>2014</b> , 6, 15255-61	7.7	39
122	Molybdenum disulfide field-effect transistor biosensor for ultrasensitive detection of DNA by employing morpholino as probe. <i>Biosensors and Bioelectronics</i> , <b>2018</b> , 110, 71-77	11.8	38
121	Ultra-sensitive graphene Hall elements. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 183106	3.4	38
120	Dirac Electrons at the Source: Breaking the 60-mV/Decade Switching Limit. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 2736-2743	2.9	38
119	Photovoltaic Effects in Asymmetrically Contacted CNT Barrier-Free Bipolar Diode. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 6891-6893	3.8	37
118	Photocatalysis-Induced Renewable Field-Effect Transistor for Protein Detection. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 4048-54	7.8	36
117	Electrical transport properties of individual WS <sub>2</sub> nanotubes and their dependence on water and oxygen absorption. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 113112	3.4	35

116	Direct Growth of Single-Walled Carbon Nanotubes without Metallic Residues by Using Lead as a Catalyst. <i>Chemistry of Materials</i> , <b>2008</b> , 20, 7521-7525	9.6	34
115	Excellent Device Performance of Sub-5-nm Monolayer Tellurene Transistors. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900226	6.4	33
114	Flicker noise and magnetic resolution of graphene hall sensors at low frequency. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 112405	3.4	33
113	Large signal operation of small band-gap carbon nanotube-based ambipolar transistor: a high-performance frequency doubler. <i>Nano Letters</i> , <b>2010</b> , 10, 3648-55	11.5	33
112	Significantly High Modulation Efficiency of Compact Graphene Modulator Based on Silicon Waveguide. <i>Scientific Reports</i> , <b>2018</b> , 8, 991	4.9	32
111	Carbon Nanotube Complementary Gigahertz Integrated Circuits and Their Applications on Wireless Sensor Interface Systems. <i>ACS Nano</i> , <b>2019</b> , 13, 2526-2535	16.7	31
110	Visible Light Response of Unintentionally Doped ZnO Nanowire Field Effect Transistors. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 16796-16801	3.8	31
109	Large-area growth of ultra-high-density single-walled carbon nanotube arrays on sapphire surface. <i>Nano Research</i> , <b>2015</b> , 8, 3694-3703	10	30
108	Layer-stacking growth and electrical transport of hierarchical graphene architectures. <i>Advanced Materials</i> , <b>2014</b> , 26, 3218-24	24	30
107	Plasmonic enhancement of photocurrent in carbon nanotube by Au nanoparticles. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 103102	3.4	30
106	A Graphene-Based Vacuum Transistor with a High ON/OFF Current Ratio. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 5972-5978	15.6	30
105	Exploring the Performance Limit of Carbon Nanotube Network Film Field-Effect Transistors for Digital Integrated Circuit Applications. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1808574	15.6	29
104	Self-aligned U-gate carbon nanotube field-effect transistor with extremely small parasitic capacitance and drain-induced barrier lowering. <i>ACS Nano</i> , <b>2011</b> , 5, 2512-9	16.7	29
103	Dual-Aptamer Modified Graphene Field-Effect Transistor Nanosensor for Label-Free and Specific Detection of Hepatocellular Carcinoma-Derived Microvesicles. <i>Analytical Chemistry</i> , <b>2020</b> , 92, 4006-4015 <sup>7.8</sup>	7.8	28
102	Contact length scaling in graphene field-effect transistors. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 103501	3.4	28
101	Radiation-hardened and repairable integrated circuits based on carbon nanotube transistors with ion gel gates. <i>Nature Electronics</i> , <b>2020</b> , 3, 622-629	28.4	28
100	Direct extraction of carrier mobility in graphene field-effect transistor using current-voltage and capacitance-voltage measurements. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 213103	3.4	27
99	Effect of H <sub>2</sub> on the electrical transport properties of single Bi <sub>2</sub> S <sub>3</sub> nanowires. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 21408-11	3.4	27

98	Scalable fabrication of ambipolar transistors and radio-frequency circuits using aligned carbon nanotube arrays. <i>Advanced Materials</i> , <b>2014</b> , 26, 645-52	24	26
97	Towards Entire-Carbon-Nanotube Circuits: The Fabrication of Single-Walled-Carbon-Nanotube Field-Effect Transistors with Local Multiwalled-Carbon-Nanotube Interconnects. <i>Advanced Materials</i> , <b>2009</b> , 21, 1339-1343	24	26
96	Schottky barrier heights in two-dimensional field-effect transistors: from theory to experiment. <i>Reports on Progress in Physics</i> , <b>2021</b> , 84,	14.4	26
95	Modularized construction of general integrated circuits on individual carbon nanotubes. <i>Nano Letters</i> , <b>2014</b> , 14, 3102-9	11.5	25
94	Exploration of sensitivity limit for graphene magnetic sensors. <i>Carbon</i> , <b>2015</b> , 94, 585-589	10.4	24
93	Carbon Nanotube Film-Based Radio Frequency Transistors with Maximum Oscillation Frequency above 100 GHz. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 42496-42503	9.5	23
92	Length scaling of carbon nanotube electric and photo diodes down to sub-50 nm. <i>Nano Letters</i> , <b>2014</b> , 14, 5382-9	11.5	22
91	A doping-free approach to carbon nanotube electronics and optoelectronics. <i>AIP Advances</i> , <b>2012</b> , 2, 041403	10.3	22
90	Advances in High-Performance Carbon-Nanotube Thin-Film Electronics. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900122	6.4	20
89	Carbon nanotube field-effect transistors for use as pass transistors in integrated logic gates and full subtractor circuits. <i>ACS Nano</i> , <b>2012</b> , 6, 4013-9	16.7	20
88	Grain Size Engineering of Ferroelectric Zr-doped HfO <sub>2</sub> for the Highly Scaled Devices Applications. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1868-1871	4.4	19
87	Atomic-Layer-Deposition Growth of an Ultrathin HfO Film on Graphene. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 34050-34056	9.5	19
86	Performance change of few layer black phosphorus transistors in ambient. <i>AIP Advances</i> , <b>2015</b> , 5, 107112	11.5	19
85	Electrical characteristics of field-effect transistors based on indium arsenide nanowire thinner than 10 nm. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 143101	3.4	19
84	Temperature Performance of Doping-Free Top-Gate CNT Field-Effect Transistors: Potential for Low- and High-Temperature Electronics. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 1843-1849	15.6	19
83	Radiofrequency transistors based on aligned carbon nanotube arrays. <i>Nature Electronics</i> , <b>2021</b> , 4, 405-415	15.4	19
82	Chemical vapor deposition of bilayer graphene with layer-resolved growth through dynamic pressure control. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 7464-7471	7.1	19
81	Sensitive Molybdenum Disulfide Based Field Effect Transistor Sensor for Real-time Monitoring of Hydrogen Peroxide. <i>Scientific Reports</i> , <b>2019</b> , 9, 759	4.9	18

80	Aligning Solution-Derived Carbon Nanotube Film with Full Surface Coverage for High-Performance Electronics Applications. <i>Advanced Materials</i> , <b>2018</b> , 30, e1707068	24	18
79	High mobility top gated field-effect transistors and integrated circuits based on chemical vapor deposition-derived monolayer MoS <sub>2</sub> . <i>Materials Express</i> , <b>2016</b> , 6, 198-204	13	18
78	Doping-free carbon nanotube optoelectronic devices. <i>Science Bulletin</i> , <b>2012</b> , 57, 149-156		18
77	Graphene-based ambipolar electronics for radio frequency applications. <i>Science Bulletin</i> , <b>2012</b> , 57, 2956-2970		18
76	Selective Dispersion of Large-Diameter Semiconducting Carbon Nanotubes by Functionalized Conjugated Dendritic Oligothiophenes for Use in Printed Thin Film Transistors. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1703938	15.6	17
75	Carbon nanotube network film-based ring oscillators with sub 10-ns propagation time and their applications in radio-frequency signal transmission. <i>Nano Research</i> , <b>2018</b> , 11, 300-310	10	17
74	Lowering interface state density in carbon nanotube thin film transistors through using stacked Y <sub>2</sub> O <sub>3</sub> /HfO <sub>2</sub> gate dielectric. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 083105	3.4	17
73	Reliability tests and improvements for Sc-contacted n-type carbon nanotube transistors. <i>Nano Research</i> , <b>2013</b> , 6, 535-545	10	17
72	Fabrication of high performance top-gate complementary inverter using a single carbon nanotube and via a simple process. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 223116	3.4	17
71	Performance Limit of Monolayer WSe Transistors; Significantly Outperform Their MoS Counterpart. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 20633-20644	9.5	17
70	Carbon nanotube radio-frequency electronics. <i>Nanotechnology</i> , <b>2017</b> , 28, 212001	3.4	16
69	High-Performance and Radiation-Hard Carbon Nanotube Complementary Static Random-Access Memory. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900313	6.4	16
68	Unusual Fermi-Level Pinning and Ohmic Contact at Monolayer Bi <sub>2</sub> O <sub>2</sub> Se/Metal Interface. <i>Advanced Theory and Simulations</i> , <b>2019</b> , 2, 1800178	3.5	16
67	Improving subthreshold swing to thermionic emission limit in carbon nanotube network film-based field-effect. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 053102	3.4	16
66	Carbon Nanotube Self-Gating Diode and Application in Integrated Circuits. <i>ACS Nano</i> , <b>2016</b> , 10, 6737-43	16.7	16
65	Exploration of yttria films as gate dielectrics in sub-50 nm carbon nanotube field-effect transistors. <i>Nanoscale</i> , <b>2014</b> , 6, 11316-21	7.7	16
64	Simultaneous Electrical and Thermoelectric Parameter Retrieval via Two Terminal Current/Voltage Measurements on Individual ZnO Nanowires. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 3900-3906	15.6	16
63	Analytical analysis of heat conduction in a suspended one-dimensional object. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 143109	3.4	16



62	Continuous adjustment of threshold voltage in carbon nanotube field-effect transistors through gate engineering. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 153109	3.4	15
61	Switching electron current in a semiconductor nanowire via controlling the carrier injection from the electrode. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 213108	3.4	15
60	Recent progress of integrated circuits and optoelectronic chips. <i>Science China Information Sciences</i> , <b>2021</b> , 64, 1	3.4	14
59	Insight Into Ballisticity of Room-Temperature Carrier Transport in Carbon Nanotube Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 3535-3540	2.9	13
58	Gold nanostructure-programmed flexible electrochemical biosensor for detection of glucose and lactate in sweat. <i>Journal of Electroanalytical Chemistry</i> , <b>2021</b> , 882, 115029	4.1	13
57	High-performance doping-free carbon-nanotube-based CMOS devices and integrated circuits. <i>Science Bulletin</i> , <b>2012</b> , 57, 135-148		12
56	Doping-free fabrication of carbon nanotube thin-film diodes and their photovoltaic characteristics. <i>Nano Research</i> , <b>2012</b> , 5, 33-42	10	12
55	Graphene mobility enhancement by organosilane interface engineering. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 183107	3.4	12
54	Electroluminescence from serpentine carbon nanotube based light-emitting diodes on quartz. <i>Small</i> , <b>2014</b> , 10, 1050-6	11	12
53	Can Carbon Nanotube Transistors Be Scaled Down to the Sub-5 nm Gate Length?. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 31957-31967	9.5	12
52	Speeding up carbon nanotube integrated circuits through three-dimensional architecture. <i>Nano Research</i> , <b>2019</b> , 12, 1810-1816	10	11
51	First Principles Simulation of Energy efficient Switching by Source Density of States Engineering <b>2018</b> ,		11
50	Scaling down contact length in complementary carbon nanotube field-effect transistors. <i>Nanoscale</i> , <b>2017</b> , 9, 9615-9621	7.7	10
49	Microvesicle detection by a reduced graphene oxide field-effect transistor biosensor based on a membrane biotinylation strategy. <i>Analyst, The</i> , <b>2019</b> , 144, 6055-6063	5	10
48	Receptor-Mediated Field Effect Transistor Biosensor for Real-Time Monitoring of Glutamate Release from Primary Hippocampal Neurons. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 8229-8236	7.8	10
47	Application of moisture-induced discoloration material Nickel(II) iodide in humidity detection. <i>Sensors and Actuators B: Chemical</i> , <b>2020</b> , 309, 127769	8.5	10
46	Carbon Nanotube Field-Effect Transistor Biosensor for Ultrasensitive and Label-Free Detection of Breast Cancer Exosomal miRNA21. <i>Analytical Chemistry</i> , <b>2021</b> , 93, 15501-15507	7.8	10
45	Performance projections for ballistic carbon nanotube FinFET at circuit level. <i>Nano Research</i> , <b>2016</b> , 9, 1785-1794	10	10

44	Suppression of leakage current in carbon nanotube field-effect transistors. <i>Nano Research</i> , <b>2021</b> , 14, 976-981	10	10
43	MoS <sub>2</sub> nanosheets vertically grown on RGO by a liquid phase epitaxial method and its visible light photocatalytic properties. <i>Journal of Materials Science</i> , <b>2020</b> , 55, 6915-6927	4.3	9
42	Transient response of carbon nanotube integrated circuits. <i>Nano Research</i> , <b>2015</b> , 8, 1005-1016	10	9
41	Drain-engineered carbon-nanotube-film field-effect transistors with high performance and ultra-low current leakage. <i>Nano Research</i> , <b>2020</b> , 13, 1875-1881	10	9
40	Sensitivity enhancement of graphene Hall sensors modified by single-molecule magnets at room temperature. <i>RSC Advances</i> , <b>2017</b> , 7, 1776-1781	3.7	8
39	Computational Study of Ohmic Contact at Bilayer InSe-Metal Interfaces: Implications for Field-Effect Transistors. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 6898-6908	5.6	8
38	Geometry Optimization of Planar Hall Devices Under Voltage Biasing. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 4216-4223	2.9	8
37	Carbon Nanotube Based Multifunctional Ambipolar Transistors for AC Applications. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 446-450	15.6	8
36	Planar Direction-Dependent Interfacial Properties in Monolayer In <sub>2</sub> Se <sub>3</sub> /Metal Contacts. <i>Physica Status Solidi (B): Basic Research</i> , <b>2020</b> , 257, 1900198	1.3	8
35	Radiation-Hard and Repairable Complementary Metal-Oxide-Semiconductor Circuits Integrating n-type Indium Oxide and p-type Carbon Nanotube Field-Effect Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 49963-49970	9.5	8
34	Strengthened Complementary Metal-Oxide-Semiconductor Logic for Small-Band-Gap Semiconductor-Based High-Performance and Low-Power Application. <i>ACS Nano</i> , <b>2020</b> , 14, 15267-15275	16.7	8
33	Bilayer Tellurene: A Potential p-Type Channel Material for Sub-10 nm Transistors. <i>Advanced Theory and Simulations</i> , <b>2021</b> , 4, 2000252	3.5	8
32	Channel-length-dependent transport and photovoltaic characteristics of carbon-nanotube-based, barrier-free bipolar diode. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2012</b> , 4, 1154-7	9.5	7
31	Carbon Nanotube-Based Field-Effect Transistor-Type Sensor with a Sensing Gate for Ppb-Level Formaldehyde Detection. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 56309-56319	9.5	7
30	Highly Temperature-Stable Carbon Nanotube Transistors and Gigahertz Integrated Circuits for Cryogenic Electronics. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2100202	6.4	7
29	Enhancement-Mode Field-Effect Transistors and High-Speed Integrated Circuits Based on Aligned Carbon Nanotube Films. <i>Advanced Functional Materials</i> , 2104539	15.6	7
28	Effective passivation of black phosphorus transistor against ambient degradation by an ultra-thin tin oxide film. <i>Science Bulletin</i> , <b>2019</b> , 64, 570-574	10.6	6
27	n-Type Dirac-Source Field-Effect Transistors Based on a Graphene/Carbon Nanotube Heterojunction. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000258	6.4	6

26	Solution-processed carbon nanotubes based transistors with current density of 1.7 mA/μm and peak transconductance of 0.8 mS/μm <b>2017</b> ,		6
25	High-performance carbon-nanotube-based complementary field-effect-transistors and integrated circuits with yttrium oxide. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 063101	3.4	6
24	A comparative study on SWCNT and DWCNT field-effect transistors. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2007</b> , 7, 1568-72	1.3	6
23	Analyzing Gamma-Ray Irradiation Effects on Carbon Nanotube Top-Gated Field-Effect Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 47756-47763	9.5	6
22	Ultrasensitive Magnetic Sensors Enabled by Heterogeneous Integration of Graphene Hall Elements and Silicon Processing Circuits. <i>ACS Nano</i> , <b>2020</b> ,	16.7	5
21	Exploration of vertical scaling limit in carbon nanotube transistors. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 193107	3.4	5
20	Sub-10 parts per billion detection of hydrogen with floating gate transistors built on semiconducting carbon nanotube film. <i>Carbon</i> , <b>2021</b> , 180, 41-47	10.4	5
19	Online Determination of Graphene Lattice Orientation Through Lateral Forces. <i>Nanoscale Research Letters</i> , <b>2016</b> , 11, 353	5	4
18	Scaling carbon nanotube CMOS FETs towards quantum limit <b>2017</b> ,		3
17	Deep-Submicrometer Complementary Metal-Oxide-Semiconductor Transistors Based on Carbon Nanotube Films. <i>Advanced Electronic Materials</i> , 2100751	6.4	3
16	Transconductance Amplification in Dirac-Source Field-Effect Transistors Enabled by Graphene/Nanotube Heterojunctions. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1901289	6.4	2
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14	Carbon nanotube-based CMOS transistors and integrated circuits. <i>Science China Information Sciences</i> , <b>2021</b> , 64, 1	3.4	2
13	Carbon Nanotube Based Radio Frequency Transistors for K-Band Amplifiers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 37475-37482	9.5	2
12	Photodetectors: Room Temperature Broadband Infrared Carbon Nanotube Photodetector with High Detectivity and Stability (Advanced Optical Materials 2/2016). <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 188-188	8.1	1
11	Graphene: Controlled Growth of Single-Crystal Twelve-Pointed Graphene Grains on a Liquid Cu Surface (Adv. Mater. 37/2014). <i>Advanced Materials</i> , <b>2014</b> , 26, 6519-6519	24	1
10	Carbon Nanotube (CNT)-Based High-Performance Electronic and Optoelectronic Devices <b>2013</b> , 321-338		1
9	Direct observation of substrate induced exciton in carbon nanotube. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 203105	3.4	1

8	Carbon nanotubes-reinforced preparation of flat MoS <sub>2</sub> nanomaterials: Co-enhancement of acoustic exfoliation efficiency and dye removal capacity. <i>FlatChem</i> , <b>2021</b> , 30, 100312	5.1	1
7	Bandgap prediction of two-dimensional materials using machine learning. <i>PLoS ONE</i> , <b>2021</b> , 16, e0255637	3.7	1
6	Carbon based electronic technology in post-Moore era: progress, applications and challenges. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2022</b> , 71, 068503	0.6	1
5	Toward practical gas sensing with rapid recovery semiconducting carbon nanotube film sensors. <i>Science China Information Sciences</i> , <b>2022</b> , 65, 1	3.4	1
4	Highly sensitive SWIR photodetector using carbon nanotube thin film transistor gated by quantum dots heterojunction. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 193103	3.4	1
3	Thin Film FETs: Exploring the Performance Limit of Carbon Nanotube Network Film Field-Effect Transistors for Digital Integrated Circuit Applications (Adv. Funct. Mater. 16/2019). <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1970106	15.6	
2	Graphene: Layer-Stacking Growth and Electrical Transport of Hierarchical Graphene Architectures (Adv. Mater. 20/2014). <i>Advanced Materials</i> , <b>2014</b> , 26, 3355-3355	24	
1	Repairable Polymer Solid Electrolyte Gated MoS <sub>2</sub> Field Effect Devices with Large Radiation Tolerance. <i>Advanced Electronic Materials</i> , 2100619	6.4	