Yang-Kyu Choi

List of Publications by Year
in descending order

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421 papers	15,969 citations	20759 60 h-index	24915 109 g-index
432 all docs	432 docs citations	432 times ranked	15211 citing authors

#	Article	IF	Citations
1	Metallic Ti₃C₂T_x MXene Gas Sensors with Ultrahigh Signal-to-Noise Ratio. ACS Nano, 2018, 12, 986-993.	7.3	1,153
2	A Polydimethylsiloxane (PDMS) Sponge for the Selective Absorption of Oil from Water. ACS Applied Materials & Interfaces, 2011, 3, 4552-4556.	4.0	606
3	Chemical sensors based on nanostructured materials. Sensors and Actuators B: Chemical, 2007, 122, 659-671.	4.0	587
4	A dielectric-modulated field-effect transistor for biosensing. Nature Nanotechnology, 2007, 2, 430-434.	15.6	448
5	Triboelectric Nanogenerator: Structure, Mechanism, and Applications. ACS Nano, 2021, 15, 258-287.	7.3	343
6	A robust superhydrophobic and superoleophobic surface with inverse-trapezoidal microstructures on a large transparent flexible substrate. Soft Matter, 2010, 6, 1401.	1.2	319
7	Aspartate Aminotransferase (AST/GOT) and Alanine Aminotransferase (ALT/GPT) Detection Techniques. Sensors, 2006, 6, 756-782.	2.1	314
8	Sensitivity of Threshold Voltage to Nanowire Width Variation in Junctionless Transistors. IEEE Electron Device Letters, 2011, 32, 125-127.	2.2	285
9	Sub-50 nm P-channel FinFET. IEEE Transactions on Electron Devices, 2001, 48, 880-886.	1.6	243
10	Extremely scaled silicon nano-CMOS devices. Proceedings of the IEEE, 2003, 9, 1860-1873.	16.4	214
11	Self-cleaning effect of highly water-repellent microshell structures for solar cell applications. Journal of Materials Chemistry, 2011, 21, 633-636.	6.7	189
12	A spacer patterning technology for nanoscale CMOS. IEEE Transactions on Electron Devices, 2002, 49, 436-441.	1.6	178
13	Ultrathin-body SOI MOSFET for deep-sub-tenth micron era. IEEE Electron Device Letters, 2000, 21, 254-255.	2.2	173
14	Vertically stacked thin triboelectric nanogenerator for wind energy harvesting. Nano Energy, 2015, 14, 201-208.	8.2	170
15	Fabrication of Sub-10-nm Silicon Nanowire Arrays by Size Reduction Lithography. Journal of Physical Chemistry B, 2003, 107, 3340-3343.	1.2	169
16	Self-cleaning hybrid energy harvester to generate power from raindrop and sunlight. Nano Energy, 2015, 12, 636-645.	8.2	166
17	Resistive Switching Characteristics of Solâ€“Gel Zinc Oxide Films for Flexible Memory Applications. IEEE Transactions on Electron Devices, 2009, 56, 696-699.	1.6	164
18	Natureâ€Replicated Nanoâ€inâ€Micro Structures for Triboelectric Energy Harvesting. Small, 2014, 10, 3887-3894.	5.2	163

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19	Double-Gate Nanowire Field Effect Transistor for a Biosensor. Nano Letters, 2010, 10, 2934-2938.	4.5	162
20	Simple Analytical Bulk Current Model for Long-Channel Double-Gate Junctionless Transistors. IEEE Electron Device Letters, 2011, 32, 704-706.	2.2	160
21	Nanoscale CMOS spacer FinFET for the terabit era. IEEE Electron Device Letters, 2002, 23, 25-27.	2.2	154
22	Sub 50-nm FinFET: PMOS. , 0, , .		150
23	High-performance nanopattern triboelectric generator by block copolymer lithography. Nano Energy, 2015, 12, 331-338.	8.2	146
24	A Full-Range Drain Current Model for Double-Gate Junctionless Transistors. IEEE Transactions on Electron Devices, 2011, 58, 4219-4225.	1.6	138
25	Sub-60-nm quasi-planar FinFETs fabricated using a simplified process. IEEE Electron Device Letters, 2001, 22, 487-489.	2.2	131
26	Ferrofluid-based triboelectric-electromagnetic hybrid generator for sensitive and sustainable vibration energy harvesting. Nano Energy, 2017, 31, 233-238.	8.2	127
27	Impact of contact pressure on output voltage of triboelectric nanogenerator based on deformation of interfacial structures. Nano Energy, 2015, 17, 63-71.	8.2	126
28	Resistive switching of aluminum oxide for flexible memory. Applied Physics Letters, 2008, 92, .	1.5	123
29	Nanogap Fieldâ€Effect Transistor Biosensors for Electrical Detection of Avian Influenza. Small, 2009, 5, 2407-2412.	5.2	121
30	First Demonstration of a Logic-Process Compatible Junctionless Ferroelectric FinFET Synapse for Neuromorphic Applications. IEEE Electron Device Letters, 2018, 39, 1445-1448.	2.2	121
31	Analytical Modeling of a Nanogap-Embedded FET for Application as a Biosensor. IEEE Transactions on Electron Devices, 2010, 57, 3477-3484.	1.6	115
32	Integration of field effect transistor-based biosensors with a digital microfluidic device for a lab-on-a-chip application. Lab on A Chip, 2012, 12, 1533.	3.1	108
33	â€œLockâ€andâ€Keyâ€•Geometry Effect of Patterned Surfaces: Wettability and Switching of Adhesive Force. Small, 2009, 5, 90-94.	5.2	104
34	Investigation of Silicon Nanowire Gate-All-Around Junctionless Transistors Built on a Bulk Substrate. IEEE Transactions on Electron Devices, 2013, 60, 1355-1360.	1.6	103
35	Surface structural analysis of a friction layer for a triboelectric nanogenerator. Nano Energy, 2017, 42, 34-42.	8.2	89
36	Structure Effects on Resistive Switching of $ hbox{Al/TiO}_{x}/hbox{Al}$ Devices for RRAM Applications. IEEE Electron Device Letters, 2008, 29, 331-333.	2.2	86

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37	A Compact Model of Quantum Electron Density at the Subthreshold Region for Double-Gate Junctionless Transistors. IEEE Transactions on Electron Devices, 2012, 59, 1008-1012.	1.6	86
38	Hybrid energy harvester with simultaneous triboelectric and electromagnetic generation from an embedded floating oscillator in a single package. Nano Energy, 2016, 23, 50-59.	8.2	86
39	Direct-laser-patterned friction layer for the output enhancement of a triboelectric nanogenerator. Nano Energy, 2017, 35, 379-386.	8.2	86
40	Direct Observation of a Carbon Filament in Water-Resistant Organic Memory. ACS Nano, 2015, 9, 7306-7313.	7.3	85
41	Nonvolatile memory based on sol-gel ZnO thin-film transistors with Ag nanoparticles embedded in the ZnO/gate insulator interface. Applied Physics Letters, 2008, 93, 224106.	1.5	80
42	An Underlap Channel-Embedded Field-Effect Transistor for Biosensor Application in Watery and Dry Environment. IEEE Nanotechnology Magazine, 2012, 11, 390-394.	1.1	80
43	A Comprehensive Study of the Resistive Switching Mechanism in $hbox{Al/TiO}_{x}/hbox{TiO}_{2}/hbox{Al}$-Structured RRAM. IEEE Transactions on Electron Devices, 2009, 56, 3049-3054.	1.6	79
44	Surface-modified microelectrode array with flake nanostructure for neural recording and stimulation. Nanotechnology, 2010, 21, 085303.	1.3	76
45	Direct Electrochemistry of Uric Acid at Chemically Assembled Carboxylated Single-Walled Carbon Nanotubes Netlike Electrode. Journal of Physical Chemistry B, 2006, 110, 21850-21856.	1.2	74
46	Comprehensive Analysis of Gate-Induced Drain Leakage in Vertically Stacked Nanowire FETs: Inversion-Mode Versus Junctionless Mode. IEEE Electron Device Letters, 2016, 37, 541-544.	2.2	74
47	Triboelectric nanogenerator based on rolling motion of beads for harvesting wind energy as active wind speed sensor. Nano Energy, 2018, 52, 256-263.	8.2	74
48	Network Polydiacetylene Films: Preparation, Patterning, and Sensor Applications. Advanced Functional Materials, 2011, 21, 1032-1039.	7.8	72
49	Self-powered wearable keyboard with fabric based triboelectric nanogenerator. Nano Energy, 2018, 53, 596-603.	8.2	72
50	Sublithographic nanofabrication technology for nanocatalysts and DNA chips. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 2951.	1.6	70
51	First Demonstration of Junctionless Accumulation-Mode Bulk FinFETs With Robust Junction Isolation. IEEE Electron Device Letters, 2013, 34, 1479-1481.	2.2	70
52	A Triboelectric Sponge Fabricated from a Cube Sugar Template by 3D Soft Lithography for Superhydrophobicity and Elasticity. Advanced Electronic Materials, 2016, 2, 1500331.	2.6	70
53	A New Sensing Metric to Reduce Data Fluctuations in a Nanogap-Embedded Field-Effect Transistor Biosensor. IEEE Transactions on Electron Devices, 2012, 59, 2825-2831.	1.6	69
54	Nonvolatile Memory by All-Around-Gate Junctionless Transistor Composed of Silicon Nanowire on Bulk Substrate. IEEE Electron Device Letters, 2011, 32, 602-604.	2.2	68

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55	A well-ordered flower-like gold nanostructure for integrated sensors via surface-enhanced Raman scattering. Nanotechnology, 2009, 20, 235302.	1.3	67
56	Comprehensive modeling of resistive switching in the Al/TiOx/TiO2/Al heterostructure based on space-charge-limited conduction. Applied Physics Letters, 2010, 97, .	1.5	67
57	FinFET process refinements for improved mobility and gate work function engineering. , 0, , .		66
58	Label-free DNA detection with a nanogap embedded complementary metal oxide semiconductor. Nanotechnology, 2011, 22, 135502.	1.3	66
59	Ferrocene Functionalized Single-Walled Carbon Nanotube Bundles. Hybrid Interdigitated Construction Film for l-Glutamate Detection. Journal of Physical Chemistry C, 2007, 111, 1200-1206.	1.5	64
60	Palladium nanoparticle decorated silicon nanowire field-effect transistor with side-gates for hydrogen gas detection. Applied Physics Letters, 2014, 104, .	1.5	63
61	Development of a Point-of-Care Testing Platform With a Nanogap-Embedded Separated Double-Gate Field Effect Transistor Array and Its Readout System for Detection of Avian Influenza. IEEE Sensors Journal, 2011, 11, 351-360.	2.4	62
62	Functional Circuitry on Commercial Fabric via Textile-Compatible Nanoscale Film Coating Process for Fibertronics. Nano Letters, 2017, 17, 6443-6452.	4.5	62
63	Self-powered electro-coagulation system driven by a wind energy harvesting triboelectric nanogenerator for decentralized water treatment. Nano Energy, 2016, 28, 288-295.	8.2	61
64	A Vertically Integrated Junctionless Nanowire Transistor. Nano Letters, 2016, 16, 1840-1847.	4.5	61
65	Design Strategy for a Piezoelectric Nanogenerator with a Well-Ordered Nanoshell Array. ACS Nano, 2013, 7, 10773-10779.	7.3	60
66	Vertically Integrated Multiple Nanowire Field Effect Transistor. Nano Letters, 2015, 15, 8056-8061.	4.5	60
67	3-Dimensional broadband energy harvester based on internal hydrodynamic oscillation with a package structure. Nano Energy, 2015, 17, 82-90.	8.2	60
68	Mimicry of Excitatory and Inhibitory Artificial Neuron With Leaky Integrate-and-Fire Function by a Single MOSFET. IEEE Electron Device Letters, 2020, 41, 208-211.	2.2	60
69	Triboelectric nanogenerator with nanostructured metal surface using water-assisted oxidation. Nano Energy, 2016, 21, 258-264.	8.2	59
70	A Nonpiecewise Model for Long-Channel Junctionless Cylindrical Nanowire FETs. IEEE Electron Device Letters, 2012, 33, 155-157.	2.2	58
71	Siâ€“MoS₂ Vertical Heterojunction for a Photodetector with High Responsivity and Low Noise Equivalent Power. ACS Applied Materials & Interfaces, 2019, 11, 7626-7634.	4.0	58
72	An underlap field-effect transistor for electrical detection of influenza. Applied Physics Letters, 2010, 96, .	1.5	57

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73	CRP detection from serum for chip-based point-of-care testing system. Biosensors and Bioelectronics, 2013, 41, 322-327.	5.3	57
74	Selfâ€Powered Ion Concentration Sensor with Triboelectricity from Liquidâ€“Solid Contact Electrification. Advanced Electronic Materials, 2016, 2, 1600006.	2.6	57
75	Effects of the oxygen vacancy concentration in InGaZnO-based resistance random access memory. Applied Physics Letters, 2012, 101, .	1.5	55
76	A Highly Responsive Silicon Nanowire/Amplifier MOSFET Hybrid Biosensor. Scientific Reports, 2015, 5, 12286.	1.6	55
77	Functionalized porous Si nanowires for selective and simultaneous electrochemical detection of Cd(II) and Pb(II) ions. Electrochimica Acta, 2016, 211, 998-1005.	2.6	55
78	Spacer FinFET: nanoscale double-gate CMOS technology for the terabit era. Solid-State Electronics, 2002, 46, 1595-1601.	0.8	54
79	Disk-based triboelectric nanogenerator operated by rotational force converted from linear force by a gear system. Nano Energy, 2018, 50, 489-496.	8.2	54
80	Triboelectric Nanogenerator Based on the Internal Motion of Powder with a Package Structure Design. ACS Nano, 2016, 10, 1017-1024.	7.3	53
81	A prototype high sensitivity load cell using single walled carbon nanotube strain gauges. Sensors and Actuators A: Physical, 2012, 180, 120-126.	2.0	51
82	Surface Engineering of Triboelectric Nanogenerator with an Electrodeposited Gold Nanoflower Structure. Scientific Reports, 2015, 5, 13866.	1.6	51
83	Self-heated silicon nanowires for high performance hydrogen gas detection. Nanotechnology, 2015, 26, 095501.	1.3	51
84	Sublithographic vertical gold nanogap for label-free electrical detection of protein-ligand binding. Journal of Vacuum Science & Technology B, 2007, 25, 443.	1.3	50
85	Universal Potential Model in Tied and Separated Double-Gate MOSFETs With Consideration of Symmetric and Asymmetric Structure. IEEE Transactions on Electron Devices, 2008, 55, 1472-1479.	1.6	50
86	Highly durable and flexible memory based on resistance switching. Solid-State Electronics, 2010, 54, 392-396.	0.8	49
87	Piezoelectric nanogenerator with a nanoforest structure. Nano Energy, 2013, 2, 1142-1148.	8.2	49
88	Gold nanoparticle embedded silicon nanowire biosensor for applications of label-free DNA detection. Biosensors and Bioelectronics, 2010, 25, 2182-2185.	5.3	48
89	Electrical Biomolecule Detection Using Nanopatterned SiliconÂvia Block Copolymer Lithography. Small, 2014, 10, 337-343.	5.2	48
90	Hydrogen annealing effect on DC and low-frequency noise characteristics in CMOS FinFETs. IEEE Electron Device Letters, 2003, 24, 186-188.	2.2	47

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91	Analytical Threshold Voltage Model for Double-Gate MOSFETs With Localized Charges. IEEE Electron Device Letters, 2008, 29, 927-930.	2.2	47
92	Cointegration of single-transistor neurons and synapses by nanoscale CMOS fabrication for highly scalable neuromorphic hardware. Science Advances, 2021, 7, .	4.7	47
93	A pH sensor with a double-gate silicon nanowire field-effect transistor. Applied Physics Letters, 2013, 102, .	1.5	46
94	Surface engineering for enhancement of sensitivity in an underlap-FET biosensor by control of wettability. Biosensors and Bioelectronics, 2013, 41, 867-870.	5.3	46
95	Nanoscale ultrathin body PMOSFETs with raised selective germanium source/drain. IEEE Electron Device Letters, 2001, 22, 447-448.	2.2	44
96	Biristorâ€”Bistable Resistor Based on a Silicon Nanowire. IEEE Electron Device Letters, 2010, 31, 797-799.	2.2	44
97	Foldable and Disposable Memory on Paper. Scientific Reports, 2016, 6, 38389.	1.6	43
98	A study of negative-bias temperature instability of SOI and body-tied FinFETs. IEEE Electron Device Letters, 2005, 26, 326-328.	2.2	42
99	A 9-bit 80 MS/s Successive Approximation Register Analog-to-Digital Converter With a Capacitor Reduction Technique. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 502-506.	2.2	42
100	Thermofluorescent Conjugated Polymer Sensors for Nanoâ€•and Microscale Temperature Monitoring. Macromolecular Chemistry and Physics, 2011, 212, 1211-1220.	1.1	40
101	Silicon Nanowire All-Around Gate MOSFETs Built on a Bulk Substrate by All Plasma-Etching Routes. IEEE Electron Device Letters, 2011, 32, 452-454.	2.2	39
102	Analytical Threshold Voltage Model of Junctionless Double-Gate MOSFETs With Localized Charges. IEEE Transactions on Electron Devices, 2013, 60, 2951-2955.	1.6	39
103	Multiplex electrical detection of avian influenza and human immunodeficiency virus with an underlap-embedded silicon nanowire field-effect transistor. Biosensors and Bioelectronics, 2014, 55, 162-167.	5.3	39
104	Artificial Olfactory Neuron for an Inâ€Sensor Neuromorphic Nose. Advanced Science, 2022, 9, e2106017.	5.6	39
105	FinFET-a quasi-planar double-gate MOSFET. , 0, , .		38
106	Bioinspired Photoresponsive Single Transistor Neuron for a Neuromorphic Visual System. Nano Letters, 2020, 20, 8781-8788.	4.5	38
107	A Oneâ€Step Route to a Perfectly Ordered Waferâ€Scale Microbowl Array for Sizeâ€Dependent Superhydrophobicity. Small, 2008, 4, 211-216.	5.2	37
108	Flammable carbon nanotube transistors on a nitrocellulose paper substrate for transient electronics. Nano Research, 2017, 10, 87-96.	5.8	37

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109	Electrowetting on a Polymer Microlens Array. Langmuir, 2010, 26, 12443-12447.	1.6	36
110	Physically Transient Memory on a Rapidly Dissoluble Paper for Security Application. Scientific Reports, 2016, 6, 38324.	1.6	36
111	Self-sustainable wind speed sensor system with omni-directional wind based triboelectric generator. Nano Energy, 2019, 55, 115-122.	8.2	35
112	Microfabrication and characterization of spray-coated single-wall carbon nanotube film strain gauges. Nanotechnology, 2011, 22, 455301.	1.3	34
113	Nano-electromechanical Switch Based on a Physical Unclonable Function for Highly Robust and Stable Performance in Harsh Environments. ACS Nano, 2017, 11, 12547-12552.	7.3	34
114	A Recoverable Synapse Device Using a Threeâ€Dimensional Silicon Transistor. Advanced Functional Materials, 2018, 28, 1804844.	7.8	34
115	All 3D-Printed Flexible ZnO UV Photodetector on an Ultraflat Substrate. ACS Sensors, 2020, 5, 1028-1032.	4.0	34
116	Allâ€Solidâ€State Ion Synaptic Transistor for Waferâ€Scale Integration with Electrolyte of a Nanoscale Thickness. Advanced Functional Materials, 2021, 31, 2010971.	7.8	34
117	Patterning sub-30-nm MOSFET gate with i-line lithography. IEEE Transactions on Electron Devices, 2001, 48, 1004-1006.	1.6	33
118	A conventional route to scalable morphology-controlled regular structures and their superhydrophobic/hydrophilic properties for biochips application. Lab on A Chip, 2009, 9, 2140.	3.1	33
119	Analytical Modeling and Thermodynamic Analysis of Robust Superhydrophobic Surfaces with Inverse-Trapezoidal Microstructures. Langmuir, 2010, 26, 17389-17397.	1.6	33
120	Performance-enhanced triboelectric nanogenerator using the glass transition of polystyrene. Nano Energy, 2016, 27, 306-312.	8.2	33
121	Multilayer Graphene with a Rippled Structure as a Spacer for Improving Plasmonic Coupling. Advanced Functional Materials, 2016, 26, 5093-5101.	7.8	33
122	Self-Curable Gate-All-Around MOSFETs Using Electrical Annealing to Repair Degradation Induced From Hot-Carrier Injection. IEEE Transactions on Electron Devices, 2016, 63, 910-915.	1.6	33
123	Bioinspired Polydopamineâ€Based Resistiveâ€Switching Memory on Cotton Fabric for Wearable Neuromorphic Device Applications. Advanced Materials Technologies, 2019, 4, 1900151.	3.0	33
124	Investigation of Physically Unclonable Functions Using Flash Memory for Integrated Circuit Authentication. IEEE Nanotechnology Magazine, 2015, 14, 384-389.	1.1	32
125	All-Printed In-Plane Supercapacitors by Sequential Additive Manufacturing Process. ACS Applied Energy Materials, 2020, 3, 4965-4973.	2.5	32
126	Floating Oscillator-Embedded Triboelectric Generator for Versatile Mechanical Energy Harvesting. Scientific Reports, 2015, 5, 16409.	1.6	31

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127	Investigation of Self-Heating Effects in Gate-All-Around MOSFETs With Vertically Stacked Multiple Silicon Nanowire Channels. IEEE Transactions on Electron Devices, 2017, 64, 4393-4399.	1.6	31
128	A flutter-driven triboelectric nanogenerator for harvesting energy of gentle breezes with a rear-fixed fluttering film. Nano Energy, 2022, 98, 107197.	8.2	31
129	Ultra-thin body SOI MOSFET for deep-sub-tenth micron era. , 0, , .		30
130	A biomolecular detection method based on charge pumping in a nanogap embedded field-effect-transistor biosensor. Applied Physics Letters, 2009, 94, .	1.5	30
131	Superhydrophobic Cylindrical Nanoshell Array. Langmuir, 2010, 26, 7661-7664.	1.6	30
132	Bioâ€Inspired Complementary Photoconductor by Porphyrinâ€Coated Silicon Nanowires. Advanced Materials, 2011, 23, 3979-3983.	11.1	29
133	A Bandgap-Engineered Silicon-Germanium Biristor for Low-Voltage Operation. IEEE Transactions on Electron Devices, 2014, 61, 2-7.	1.6	29
134	Logic circuits composed of flexible carbon nanotube thin-film transistor and ultra-thin polymer gate dielectric. Scientific Reports, 2016, 6, 26121.	1.6	29
135	Accumulation mode field-effect transistors for improved sensitivity in nanowire-based biosensors. Applied Physics Letters, 2012, 100, .	1.5	28
136	A Superamphiphobic Sponge with Mechanical Durability and a Self-Cleaning Effect. Scientific Reports, 2016, 6, 29993.	1.6	28
137	Joule-Heated and Suspended Silicon Nanowire Based Sensor for Low-Power and Stable Hydrogen Detection. ACS Applied Materials & Interfaces, 2019, 11, 42349-42357.	4.0	28
138	Nanoscale FET-Based Transduction toward Sensitive Extended-Gate Biosensors. ACS Sensors, 2019, 4, 1724-1729.	4.0	28
139	Damage immune field effect transistors with vacuum gate dielectric. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 011014.	0.6	27
140	Low-Temperature Fabrication of Robust, Transparent, and Flexible Thin-Film Transistors with a Nanolaminated Insulator. ACS Applied Materials & Interfaces, 2018, 10, 15829-15840.	4.0	27
141	Self-powered wearable touchpad composed of all commercial fabrics utilizing a crossline array of triboelectric generators. Nano Energy, 2019, 65, 103994.	8.2	27
142	Morphology-controlled SWCNT/polymeric microsphere arrays by a wet chemical self-assembly technique and their application for sensors. Nanotechnology, 2006, 17, 2988-2993.	1.3	26
143	Bistable resistor (biristor) - gateless silicon nanowire memory. , 2010, , .		26
144	Multidirection and Multiamplitude Triboelectric Nanogenerator Composed of Porous Conductive Polymer with Prolonged Time of Current Generation. Advanced Energy Materials, 2018, 8, 1800654.	10.2	26

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145	A Comparative Study on Hot-Carrier Injection in 5-Story Vertically Integrated Inversion-Mode and Junctionless-Mode Gate-All-Around MOSFETs. IEEE Electron Device Letters, 2018, 39, 4-7.	2.2	26
146	Selfâ€Powered Artificial Mechanoreceptor Based on Triboelectrification for a Neuromorphic Tactile System. Advanced Science, 2022, 9, e2105076.	5.6	26
147	Electrochemical behavior of needle-like and forest-like single-walled carbon nanotube electrodes. Journal of Electroanalytical Chemistry, 2006, 594, 27-34.	1.9	25
148	Substrate surface roughness-dependent 3-D complex nanoarchitectures of gold particles from directed electrodeposition. Journal of Materials Chemistry, 2009, 19, 478-483.	6.7	25
149	A nanoforest structure for practical surface-enhanced Raman scattering substrates. Nanotechnology, 2012, 23, 095301.	1.3	25
150	Hybrid Porphyrinâ€“Silicon Nanowire Field-Effect Transistor by Opto-Electrical Excitation. ACS Nano, 2012, 6, 7885-7892.	7.3	25
151	Ferromagnetic nanoparticle-embedded hybrid nanogenerator for harvesting omnidirectional vibration energy. Nanoscale, 2018, 10, 12276-12283.	2.8	25
152	Body Thickness Dependence of Impact Ionization in a Multiple-Gate FinFET. IEEE Electron Device Letters, 2007, 28, 625-627.	2.2	24
153	Investigation of Size Dependence on Sensitivity for Nanowire FET Biosensors. IEEE Nanotechnology Magazine, 2011, 10, 1405-1411.	1.1	24
154	Vacuum gate dielectric gate-all-around nanowire for hot carrier injection and bias temperature instability free transistor. Applied Physics Letters, 2014, 104, .	1.5	24
155	A Unified-RAM (URAM) Cell for Multi-Functioning Capacitorless DRAM and NVM. , 2007, , .		23
156	A Bulk FinFET Unified-RAM (URAM) Cell for Multifunctioning NVM and Capacitorless 1T-DRAM. IEEE Electron Device Letters, 2008, 29, 632-634.	2.2	23
157	Designed Workfunction Engineering of Double-Stacked Metal Nanocrystals for Nonvolatile Memory Application. IEEE Transactions on Electron Devices, 2009, 56, 377-382.	1.6	23
158	Polysilicon Channel TFT With Separated Double-Gate for Unified RAM (URAM)â€”Unified Function for Nonvolatile SONOS Flash and High-Speed Capacitorless 1T-DRAM. IEEE Transactions on Electron Devices, 2010, 57, 601-607.	1.6	23
159	High-performance thin-film transistors produced from highly separated solution-processed carbon nanotubes. Applied Physics Letters, 2014, 104, .	1.5	23
160	Low-Frequency Noise Characteristics in SONOS Flash Memory With Vertically Stacked Nanowire FETs. IEEE Electron Device Letters, 2017, 38, 40-43.	2.2	23
161	A self-powered character recognition device based on a triboelectric nanogenerator. Nano Energy, 2020, 70, 104534.	8.2	23
162	Reliability study of CMOS FinFETs. , 0, , .		22

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163	Single nanowire on graphene (SNOG) as an efficient, reproducible, and stable SERS-active platform. Nanoscale, 2016, 8, 8878-8886.	2.8	22
164	Local Electro-Thermal Annealing for Repair of Total Ionizing Dose-Induced Damage in Gate-All-Around MOSFETs. IEEE Electron Device Letters, 2016, 37, 843-846.	2.2	22
165	Electro-Thermal Annealing Method for Recovery of Cyclic Bending Stress in Flexible a-IGZO TFTs. IEEE Transactions on Electron Devices, 2017, 64, 3189-3192.	1.6	22
166	Physically Unclonable Function by an All-Printed Carbon Nanotube Network. ACS Applied Electronic Materials, 2019, 1, 1162-1168.	2.0	22
167	A Single Transistor Neuron With Independently Accessed Double-Gate for Excitatory-Inhibitory Function and Tunable Firing Threshold Voltage. IEEE Electron Device Letters, 2020, 41, 1157-1160.	2.2	22
168	Enhancement of Program Speed in Dopant-Segregated Schottky-Barrier (DSSB) FinFET SONOS for <emphasis emphasistype="smcaps">NAND</emphasis>-Type Flash Memory. IEEE Electron Device Letters, 2009, 30, 78-81.	2.2	21
169	Latch-up based bidirectional npn selector for bipolar resistance-change memory. Applied Physics Letters, 2013, 103, .	1.5	21
170	A Novel Technique for Curing Hot-Carrier-Induced Damage by Utilizing the Forward Current of the PN-Junction in a MOSFET. IEEE Electron Device Letters, 2017, 38, 1012-1014.	2.2	21
171	Onâ€Demand Printing of Wearable Thermotherapy Pad. Advanced Healthcare Materials, 2020, 9, e1901575.	3.9	21
172	Curing of Aged Gate Dielectric by the Self-Heating Effect in MOSFETs. IEEE Transactions on Electron Devices, 2020, 67, 777-788.	1.6	21
173	Gate-Induced Drain-Leakage (GIDL) Programming Method for Soft-Programming-Free Operation in Unified RAM (URAM). IEEE Electron Device Letters, 2009, 30, 189-191.	2.2	20
174	Nanowire Mechanical Switch with a Builtâ€In Diode. Small, 2010, 6, 1197-1200.	5.2	20
175	Demonstration of a Curable Nanowire FinFET Using Punchthrough Current to Repair Hot-Carrier Damage. IEEE Electron Device Letters, 2018, 39, 180-183.	2.2	20
176	Low-frequency noise characteristics in p-channel FinFETs. IEEE Electron Device Letters, 2002, 23, 722-724.	2.2	19
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