

Jin-Woo Han

List of Publications by Year in descending order

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103
papers

2,942
citations

201674

27
h-index

182427

51
g-index

103
all docs

103
docs citations

103
times ranked

3241
citing authors

#	ARTICLE	IF	CITATIONS
1	Carbon Nanotube Based Humidity Sensor on Cellulose Paper. Journal of Physical Chemistry C, 2012, 116, 22094-22097.	3.1	259
2	Vacuum nanoelectronics: Back to the future?â€”Gate insulated nanoscale vacuum channel transistor. Applied Physics Letters, 2012, 100, .	3.3	195
3	Double-Gate Nanowire Field Effect Transistor for a Biosensor. Nano Letters, 2010, 10, 2934-2938.	9.1	162
4	Nanoscale Vacuum Channel Transistor. Nano Letters, 2017, 17, 2146-2151.	9.1	139
5	Analytical Modeling of a Nanogap-Embedded FET for Application as a Biosensor. IEEE Transactions on Electron Devices, 2010, 57, 3477-3484.	3.0	115
6	A carbon nanotube based ammonia sensor on cellulose paper. RSC Advances, 2014, 4, 549-553.	3.6	113
7	All-printed triboelectric nanogenerator. Nano Energy, 2018, 44, 82-88.	16.0	97
8	Nanoscale vacuum channel transistors fabricated on silicon carbide wafers. Nature Electronics, 2019, 2, 405-411.	26.0	73
9	A carbon nanotube based ammonia sensor on cotton textile. Applied Physics Letters, 2013, 102, .	3.3	72
10	Cofabrication of Vacuum Field Emission Transistor (VFET) and MOSFET. IEEE Nanotechnology Magazine, 2014, 13, 464-468.	2.0	71
11	Carbon nanotube ink for writing on cellulose paper. Materials Research Bulletin, 2014, 50, 249-253.	5.2	69
12	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.	4.7	62
13	Multiple-Gate CMOS Thin-Film Transistor With Polysilicon Nanowire. IEEE Electron Device Letters, 2008, 29, 102-105.	3.9	60
14	Leaky Integrate-and-Fire Biristor Neuron. IEEE Electron Device Letters, 2018, 39, 1457-1460.	3.9	55
15	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.	3.0	50
16	Triboelectric nanogenerator for Mars environment. Nano Energy, 2017, 39, 238-244.	16.0	49
17	Wearable UV Sensor Based on Carbon Nanotube-Coated Cotton Thread. ACS Applied Materials & Interfaces, 2018, 10, 40198-40202.	8.0	49
18	Analytical Threshold Voltage Model for Double-Gate MOSFETs With Localized Charges. IEEE Electron Device Letters, 2008, 29, 927-930.	3.9	47

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19	Hysteretic behavior of contact force response in triboelectric nanogenerator. Nano Energy, 2017, 32, 408-413.	16.0	47
20	Biristor—Bistable Resistor Based on a Silicon Nanowire. IEEE Electron Device Letters, 2010, 31, 797-799.	3.9	44
21	Foldable and Disposable Memory on Paper. Scientific Reports, 2016, 6, 38389.	3.3	43
22	All 3D printed energy harvester for autonomous and sustainable resource utilization. Nano Energy, 2018, 52, 271-278.	16.0	40
23	Silicon Nanowire All-Around Gate MOSFETs Built on a Bulk Substrate by All Plasma-Etching Routes. IEEE Electron Device Letters, 2011, 32, 452-454.	3.9	39
24	Single-Event Transient in FinFETs and Nanosheet FETs. IEEE Electron Device Letters, 2018, 39, 1840-1843.	3.9	38
25	All 3D-Printed Flexible ZnO UV Photodetector on an Ultraflat Substrate. ACS Sensors, 2020, 5, 1028-1032.	7.8	34
26	All-Printed In-Plane Supercapacitors by Sequential Additive Manufacturing Process. ACS Applied Energy Materials, 2020, 3, 4965-4973.	5.1	32
27	Carbon Nanotube Coated Paper Sensor for Damage Diagnosis. ACS Nano, 2014, 8, 12092-12097.	14.6	28
28	Damage immune field effect transistors with vacuum gate dielectric. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 011014.	1.2	27
29	Bistable resistor (biristor) - gateless silicon nanowire memory. , 2010, , .		26
30	Single Walled Carbon Nanotube Based Air Pocket Encapsulated Ultraviolet Sensor. ACS Sensors, 2017, 2, 1679-1683.	7.8	26
31	Body Thickness Dependence of Impact Ionization in a Multiple-Gate FinFET. IEEE Electron Device Letters, 2007, 28, 625-627.	3.9	24
32	Nanoelectronics and nanosensors for space exploration. MRS Bulletin, 2015, 40, 822-828.	3.5	24
33	Design guidelines for nanoscale vacuum field emission transistors. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	1.2	24
34	A Bulk FinFET Unified-RAM (URAM) Cell for Multifunctioning NVM and Capacitorless 1T-DRAM. IEEE Electron Device Letters, 2008, 29, 632-634.	3.9	23
35	Designed Workfunction Engineering of Double-Stacked Metal Nanocrystals for Nonvolatile Memory Application. IEEE Transactions on Electron Devices, 2009, 56, 377-382.	3.0	23
36	Polysilicon Channel TFT With Separated Double-Gate for Unified RAM (URAM)—Unified Function for Nonvolatile SONOS Flash and High-Speed Capacitorless 1T-DRAM. IEEE Transactions on Electron Devices, 2010, 57, 601-607.	3.0	23

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37	System On Microheater for On-Chip Annealing of Defects Generated by Hot-Carrier Injection, Bias Temperature Instability, and Ionizing Radiation. IEEE Electron Device Letters, 2016, 37, 1543-1546.	3.9	22
38	Electrically-generated memristor based on inkjet printed silver nanoparticles. Nanoscale Advances, 2019, 1, 2990-2998.	4.6	22
39	Physically Unclonable Function by an All-Printed Carbon Nanotube Network. ACS Applied Electronic Materials, 2019, 1, 1162-1168.	4.3	22
40	Enhancement of Program Speed in Dopant-Segregated Schottky-Barrier (DSSB) FinFET SONOS for <emphasistype="smcaps">NAND</emphasistype>-Type Flash Memory. IEEE Electron Device Letters, 2009, 30, 78-81.	3.9	21
41	On–Demand Printing of Wearable Thermotherapy Pad. Advanced Healthcare Materials, 2020, 9, e1901575.	7.6	21
42	Gate-Induced Drain-Leakage (GIDL) Programming Method for Soft-Programming-Free Operation in Unified RAM (URAM). IEEE Electron Device Letters, 2009, 30, 189-191.	3.9	20
43	Carboxylated Single-Walled Carbon Nanotube Sensors with Varying pH for the Detection of Ammonia and Carbon Dioxide Using an Artificial Neural Network. ACS Applied Nano Materials, 2019, 2, 6445-6451.	5.0	20
44	Nanoscale Complementary Vacuum Field Emission Transistor. ACS Applied Nano Materials, 2020, 3, 11481-11488.	5.0	20
45	Sustainable electronics for nano-spacecraft in deep space missions. , 2016, , .		19
46	Trigger and Self-Latch Mechanisms of n-p-n Bistable Resistor. IEEE Electron Device Letters, 2014, 35, 387-389.	3.9	18
47	Partially Depleted SONOS FinFET for Unified RAM (URAM)–Unified Function for High-Speed 1T DRAM and Nonvolatile Memory. IEEE Electron Device Letters, 2008, 29, 781-783.	3.9	17
48	Total Ionizing Dose Effect on Ring Oscillator Frequency in 28-nm FD-SOI Technology. IEEE Electron Device Letters, 2018, 39, 1728-1731.	3.9	17
49	Caution: Abnormal Variability Due to Terrestrial Cosmic Rays in Scaled-Down FinFETs. IEEE Transactions on Electron Devices, 2019, 66, 1887-1891.	3.0	17
50	Monolithically Integrated Microheater for On-Chip Annealing of Oxide Defects. IEEE Electron Device Letters, 2017, 38, 831-834.	3.9	16
51	Electron Emission Devices for Energy–Efficient Systems. Advanced Intelligent Systems, 2019, 1, 1900039.	6.1	16
52	Parasitic BJT Read Method for High-Performance Capacitorless 1T-DRAM Mode in Unified RAM. IEEE Electron Device Letters, 2009, 30, 1108-1110.	3.9	15
53	Analysis and Evaluation of a BJT-Based 1T-DRAM. IEEE Electron Device Letters, 2010, 31, 393-395.	3.9	15
54	Fin-Width Dependence of BJT-Based 1T-DRAM Implemented on FinFET. IEEE Electron Device Letters, 2010, 31, 909-911.	3.9	15

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55	Fully Depleted Polysilicon TFTs for Capacitorless 1T-DRAM. IEEE Electron Device Letters, 2009, 30, 742-744.	3.9	14
56	High-Performance Polycrystalline Silicon TFT on the Structure of a Dopant-Segregated Schottky-Barrier Source/Drain. IEEE Electron Device Letters, 2010, 31, 228-230.	3.9	14
57	Reduction of Variability in Junctionless and Inversion-Mode FinFETs by Stringer Gate Structure. IEEE Transactions on Electron Devices, 2018, 65, 470-475.	3.0	14
58	Parasitic S/D resistance effects on hot-carrier reliability in body-tied FinFETs. IEEE Electron Device Letters, 2006, 27, 514-516.	3.9	13
59	FinFACT™ Fin Flip-Flop Actuated Channel Transistor. IEEE Electron Device Letters, 2010, 31, 764-766.	3.9	13
60	Gate-to-Source/Drain Nonoverlap Device for Soft-Program Immune Unified RAM (URAM). IEEE Electron Device Letters, 2009, 30, 544-546.	3.9	12
61	A nanoscale vacuum field emission gated diode with an umbrella cathode. Nanoscale Advances, 2021, 3, 1725-1729.	4.6	12
62	High Injection Efficiency and Low-Voltage Programming in a Dopant-Segregated Schottky Barrier (DSSB) FinFET SONOS for nor-type Flash Memory. IEEE Electron Device Letters, 2009, 30, 265-268.	3.9	11
63	Soft Error in Saddle Fin Based DRAM. IEEE Electron Device Letters, 2019, 40, 494-497.	3.9	11
64	Stringer Gate FinFET on Bulk Substrate. IEEE Transactions on Electron Devices, 2016, 63, 3432-3438.	3.0	10
65	A Built-In Temperature Sensor in an Integrated Microheater. IEEE Sensors Journal, 2016, 16, 5543-5547.	4.7	9
66	Reliability Issues in Multi-Gate FinFETs. , 2006, , .		8
67	High Aspect Ratio Silicon Nanowire for Stiction Immune Gate-All-Around MOSFETs. IEEE Electron Device Letters, 2009, 30, 864-866.	3.9	8
68	Dopant-Segregated Schottky Source/Drain FinFET With a NiSi FUSI Gate and Reduced Leakage Current. IEEE Transactions on Electron Devices, 2010, 57, 2902-2906.	3.0	8
69	A Single Input Multiple Output (SIMO) Variation-Tolerant Nanosensor. ACS Sensors, 2018, 3, 1782-1788.	7.8	8
70	The Impact of a Single Displacement Defect on Tunneling Field-Effect Transistors. IEEE Transactions on Electron Devices, 2020, 67, 4765-4769.	3.0	8
71	Printable Gel Polymer Electrolytes for Solid-State Printed Supercapacitors. Materials, 2021, 14, 316.	2.9	8
72	Machine Learning Approach for Prediction of Point Defect Effect in FinFET. IEEE Transactions on Device and Materials Reliability, 2021, 21, 252-257.	2.0	8

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73	Work function consideration in vacuum field emission transistor design. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2017, 35, 062203.	1.2	7
74	Carbon Nanotube Based $\hat{\Gamma}^3$ Ray Detector. ACS Sensors, 2019, 4, 1097-1102.	7.8	7
75	Body effects in tri-gate bulk FinFETs for DTMOS. , 2006, , .		6
76	Quasi 3-D Velocity Saturation Model for Multiple-Gate MOSFETs. IEEE Transactions on Electron Devices, 2007, 54, 1165-1170.	3.0	6
77	An Optically Assisted Program Method for Capacitorless 1T-DRAM. IEEE Transactions on Electron Devices, 2010, 57, 1714-1718.	3.0	6
78	Fin Width $(W_{m\text{ fin}})$ Dependence of Programming Characteristics on a Dopant-Segregated Schottky-Barrier (DSSB) FinFET SONOS Device for a NOR-Type Flash Memory Device. IEEE Electron Device Letters, 2010, 31, 71-73.	3.9	6
79	One Time Programmable Antifuse Memory Based on Bulk Junctionless Transistor. IEEE Electron Device Letters, 2018, 39, 1156-1158.	3.9	6
80	A Novel Stateful Logic Device and Circuit for In $\hat{\Gamma}$ Memory Parity Programming in Crossbar Memory. Advanced Electronic Materials, 2020, 6, 2000672.	5.1	6
81	Carbon Nanotube-Based Flexible UV Sensor on Various Substrates. IEEE Sensors Journal, 2020, 20, 8429-8436.	4.7	6
82	pH Modeling to Predict SWCNT $\hat{\Gamma}$ COOH Gas Sensor Response to Multiple Target Gases. Journal of Physical Chemistry C, 2021, 125, 9356-9363.	3.1	6
83	Refinement of Unified Random Access Memory. IEEE Transactions on Electron Devices, 2009, 56, 601-608.	3.0	5
84	Complementary Vacuum Field Emission Transistor. IEEE Transactions on Electron Devices, 2021, 68, 5244-5249.	3.0	5
85	P-Channel Nonvolatile Flash Memory With a Dopant-Segregated Schottky-Barrier Source/Drain. IEEE Transactions on Electron Devices, 2010, 57, 1737-1742.	3.0	4
86	Liquid gate dielectric field effect transistor for a radiation nose. Sensors and Actuators A: Physical, 2012, 182, 1-5.	4.1	4
87	Surround Gate Transistor With Epitaxially Grown Si Pillar and Simulation Study on Soft Error and Rowhammer Tolerance for DRAM. IEEE Transactions on Electron Devices, 2021, 68, 529-534.	3.0	4
88	Single Event Hard Error due to Terrestrial Radiation. , 2021, , .		4
89	Improvement of the Sensing Window on a Capacitorless 1T-DRAM of a FinFET-Based Unified RAM. IEEE Transactions on Electron Devices, 2009, 56, 3228-3231.	3.0	3
90	A Bendable-Channel FinFET for Logic Application. IEEE Electron Device Letters, 2010, 31, 624-626.	3.9	3

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91	Exchangeable self-curable liquid gate dielectric embedded field effect transistor. Applied Physics Letters, 2010, 97, .	3.3	3
92	Surface Potential-Controlled Oscillation in FET-Based Biosensors. Sensors, 2021, 21, 1939.	3.8	3
93	Total ionizing dose effects on nanosheet and nanowire field effect transistors. Microelectronics Reliability, 2021, 121, 114145.	1.7	3
94	Study of Layout Dependent Radiation Hardness of FinFET SRAM using Full Domain 3D TCAD Simulation. , 2019, , .		3
95	Rapid prototyping of microwave metasurfaces by ink-jet printing on polyester (PET) transparencies. Flexible and Printed Electronics, 2020, 5, 045003.	2.7	3
96	Energy-Band-Engineered Unified-RAM (URAM) Cell on Buried $\text{Si}_{1-y}\text{C}_y$ Substrate for Multifunctioning Flash Memory and 1T-DRAM. IEEE Transactions on Electron Devices, 2009, 56, 641-647.	3.0	2
97	Printing of a Passivation Layer for the Protection of Printed Supercapacitors. ACS Applied Electronic Materials, 2020, 2, 3643-3649.	4.3	2
98	In-Memory Hamming Error-Correcting Code in Memristor Crossbar. IEEE Transactions on Electron Devices, 2022, 69, 3700-3707.	3.0	2
99	Note: Two-dimensional resistivity mapping method for characterization of thin films and nanomaterials. Review of Scientific Instruments, 2011, 82, 086117.	1.3	1
100	Transformable Junctionless Transistor (T-JLT). IEEE Transactions on Electron Devices, 2020, 67, 2639-2644.	3.0	1
101	Effect of 150 MeV protons on carbon nanotubes for fabrication of a radiation detector. Nanotechnology, 2021, 32, 355501.	2.6	1
102	Characterization of current injection mechanism in Schottky-barrier metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2009, 95, .	3.3	0
103	Array of chemiresistors for single input multiple output (SIMO) variation-tolerant all printed gas sensor. Sensors and Actuators B: Chemical, 2019, 299, 126971.	7.8	0