

H-S Philip Wong

List of Publications by Year in Descending Order

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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.

395
papers

26,159
citations

78
h-index

153
g-index

417
ext. papers

31,164
ext. citations

7.6
avg, IF

7.48
L-index

#	Paper	IF	Citations
395	Bandgap Extraction at 10 K to Enable Leakage Control in Carbon Nanotube MOSFETs. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	0
394	Laser-induced patterning for a diffraction grating using the phase change material of Ge ₂ Sb ₂ Te ₅ (GST) as a spatial light modulator in X-ray optics: a proof of concept. <i>Optical Materials Express</i> , 2022 , 12, 1408	2.6	
393	. <i>IEEE Electron Device Letters</i> , 2021 , 42, 1778-1781	4.4	2
392	Electro-Thermal Confinement Enables Improved Superlattice Phase Change Memory. <i>IEEE Electron Device Letters</i> , 2021 , 1-1	4.4	4
391	Intracellular detection and communication of a wireless chip in cell. <i>Scientific Reports</i> , 2021 , 11, 5967	4.9	4
390	Electrical tuning of phase-change antennas and metasurfaces. <i>Nature Nanotechnology</i> , 2021 , 16, 667-672	8.7	61
389	Ultrathin Three-Monolayer Tunneling Memory Selectors. <i>ACS Nano</i> , 2021 , 15, 8484-8491	16.7	3
388	SAPIENS: A 64-kb RRAM-Based Non-Volatile Associative Memory for One-Shot Learning and Inference at the Edge. <i>IEEE Transactions on Electron Devices</i> , 2021 , 1-7	2.9	7
387	Toward Low-Temperature Solid-Source Synthesis of Monolayer MoS. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 41866-41874	9.5	4
386	Application-driven synthesis and characterization of hexagonal boron nitride deposited on metals and carbon nanotubes. <i>2D Materials</i> , 2021 , 8, 045024	5.9	1
385	Ultralow-switching current density multilevel phase-change memory on a flexible substrate. <i>Science</i> , 2021 , 373, 1243-1247	33.3	20
384	RADAR: A Fast and Energy-Efficient Programming Technique for Multiple Bits-Per-Cell RRAM Arrays. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 4397-4403	2.9	3
383	Illusion of large on-chip memory by networked computing chips for neural network inference. <i>Nature Electronics</i> , 2021 , 4, 71-80	28.4	5
382	Layered Semiconducting 2D Materials for Future Transistor Applications. <i>Small Structures</i> , 2021 , 2, 2000103	10.3	43
381	Wafer-scale single-crystal hexagonal boron nitride monolayers on Cu(111). <i>Nature</i> , 2020 , 579, 219-223	50.4	209
380	Hyperdimensional computing nanosystem: in-memory computing using monolithic 3D integration of RRAM and CNFET 2020 , 195-219		1
379	A Density Metric for Semiconductor Technology [Point of View]. <i>Proceedings of the IEEE</i> , 2020 , 108, 478-483	4.3	12

378	Heterogeneous 3D Nano-systems: The N3XT Approach?. <i>The Frontiers Collection</i> , 2020 , 127-151	0.3	3
377	Self-assembly for electronics. <i>MRS Bulletin</i> , 2020 , 45, 807-814	3.2	6
376	. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3102-3108	2.9	3
375	Molybdenum oxide on carbon nanotube: Doping stability and correlation with work function. <i>Journal of Applied Physics</i> , 2020 , 128, 045111	2.5	3
374	Two-Fold Reduction of Switching Current Density in Phase Change Memory Using BiTe ₃ Thermoelectric Interfacial Layer. <i>IEEE Electron Device Letters</i> , 2020 , 41, 1657-1660	4.4	10
373	. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 4904-4910	2.9	1
372	How 2D semiconductors could extend Moore's law. <i>Nature</i> , 2019 , 567, 169-170	50.4	120
371	Gate Quantum Capacitance Effects in Nanoscale Transistors. <i>Nano Letters</i> , 2019 , 19, 7130-7137	11.5	4
370	Graphene and two-dimensional materials for silicon technology. <i>Nature</i> , 2019 , 573, 507-518	50.4	445
369	Low-Temperature Side Contact to Carbon Nanotube Transistors: Resistance Distributions Down to 10 nm Contact Length. <i>Nano Letters</i> , 2019 , 19, 1083-1089	11.5	21
368	Intrinsic limits of leakage current in self-heating-triggered threshold switches. <i>Applied Physics Letters</i> , 2019 , 114, 183501	3.4	5
367	Low-voltage high-performance flexible digital and analog circuits based on ultrahigh-purity semiconducting carbon nanotubes. <i>Nature Communications</i> , 2019 , 10, 2161	17.4	80
366	Understanding the switching mechanism of interfacial phase change memory. <i>Journal of Applied Physics</i> , 2019 , 125, 184501	2.5	21
365	. <i>IEEE Electron Device Letters</i> , 2019 , 40, 647-650	4.4	6
364	Engineering thermal and electrical interface properties of phase change memory with monolayer MoS ₂ . <i>Applied Physics Letters</i> , 2019 , 114, 082103	3.4	26
363	Scanning microwave imaging of optically patterned Ge ₂ Sb ₂ Te ₅ . <i>Applied Physics Letters</i> , 2019 , 114, 093106	4.4	3
362	Ternary content-addressable memory with MoS ₂ transistors for massively parallel data search. <i>Nature Electronics</i> , 2019 , 2, 108-114	28.4	48
361	In-Situ Grown Graphene Enabled Copper Interconnects With Improved Electromigration Reliability. <i>IEEE Electron Device Letters</i> , 2019 , 40, 815-817	4.4	13

360	Beyond-Silicon Devices: Considerations for Circuits and Architectures 2019 , 1-19		
359	Localized Triggering of the Insulator-Metal Transition in VO Using a Single Carbon Nanotube. <i>ACS Nano</i> , 2019 , 13, 11070-11077	16.7	11
358	Fast Spiking of a Mott VO-Carbon Nanotube Composite Device. <i>Nano Letters</i> , 2019 , 19, 6751-6755	11.5	30
357	Optoelectronic resistive random access memory for neuromorphic vision sensors. <i>Nature Nanotechnology</i> , 2019 , 14, 776-782	28.7	370
356	Demonstration of 40-nm Channel Length Top-Gate p-MOSFET of WS ₂ Channel Directly Grown on SiO ₂ /Si Substrates Using Area-Selective CVD Technology. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 5381-5386	2.9	3
355	Neuro-inspired computing with emerging memories: where device physics meets learning algorithms 2019 ,		2
354	Vertical Sidewall MoS ₂ Growth and Transistors 2019 ,		2
353	Monolithic 3-D Integration. <i>IEEE Micro</i> , 2019 , 39, 16-27	1.8	9
352	. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 5139-5146	2.9	12
351	Next-Generation Ultrahigh-Density 3-D Vertical Resistive Switching Memory (VRSM) Part II: Design Guidelines for Device, Array, and Architecture. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 5147-5154	2.9	13
350	The N3XT Approach to Energy-Efficient Abundant-Data Computing. <i>Proceedings of the IEEE</i> , 2019 , 107, 19-48	14.3	43
349	Spatial Separation of Carrier Spin by the Valley Hall Effect in Monolayer WSe Transistors. <i>Nano Letters</i> , 2019 , 19, 770-774	11.5	18
348	Resistive RAM With Multiple Bits Per Cell: Array-Level Demonstration of 3 Bits Per Cell. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 641-646	2.9	27
347	Device and materials requirements for neuromorphic computing. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 113001	3	64
346	Recommended Methods to Study Resistive Switching Devices. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800143	6.4	297
345	Carbon nanomaterials for non-volatile memories. <i>Nature Reviews Materials</i> , 2018 , 3,	73.3	64
344	Scaling the CBRAM Switching Layer Diameter to 30 nm Improves Cycling Endurance. <i>IEEE Electron Device Letters</i> , 2018 , 39, 23-26	4.4	20
343	Unipolar n-Type Black Phosphorus Transistors with Low Work Function Contacts. <i>Nano Letters</i> , 2018 , 18, 2822-2827	11.5	35

342	Effect of thermal insulation on the electrical characteristics of NbOx threshold switches. <i>Applied Physics Letters</i> , 2018 , 112, 073102	3.4	17
341	2018 ,		55
340	Photoelectrochemical Water Oxidation by GaAs Nanowire Arrays Protected with Atomic Layer Deposited NiO x Electrocatalysts. <i>Journal of Electronic Materials</i> , 2018 , 47, 932-937	1.9	6
339	Coming Up N3XT, After 2D Scaling of Si CMOS 2018 ,		2
338	Electronic synapses made of layered two-dimensional materials. <i>Nature Electronics</i> , 2018 , 1, 458-465	28.4	316
337	Energy-Efficient Phase Change Memory Programming by Nanosecond Pulses 2018 ,		2
336	Internalization of subcellular-scale microfabricated chips by healthy and cancer cells. <i>PLoS ONE</i> , 2018 , 13, e0194712	3.7	5
335	In-memory computing with resistive switching devices. <i>Nature Electronics</i> , 2018 , 1, 333-343	28.4	703
334	First Principles Study of Memory Selectors using Heterojunctions of 2D Layered Materials 2018 ,		2
333	Artificial optic-neural synapse for colored and color-mixed pattern recognition. <i>Nature Communications</i> , 2018 , 9, 5106	17.4	243
332	Hyperdimensional Computing Exploiting Carbon Nanotube FETs, Resistive RAM, and Their Monolithic 3D Integration. <i>IEEE Journal of Solid-State Circuits</i> , 2018 , 53, 3183-3196	5.5	27
331	. <i>IEEE Nanotechnology Magazine</i> , 2018 , 17, 1259-1269	2.6	52
330	Selector Requirements for Tera-Bit Ultra-High-Density 3D Vertical RRAM 2018 ,		8
329	Transient dynamics of NbOx threshold switches explained by Poole-Frenkel based thermal feedback mechanism. <i>Applied Physics Letters</i> , 2018 , 112, 193503	3.4	17
328	Face classification using electronic synapses. <i>Nature Communications</i> , 2017 , 8, 15199	17.4	502
327	Hysteresis-Free Carbon Nanotube Field-Effect Transistors. <i>ACS Nano</i> , 2017 , 11, 4785-4791	16.7	42
326	Synaptic Devices Based on Phase-Change Memory 2017 , 19-51		5
325	Resistive RAM-Centric Computing: Design and Modeling Methodology. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2017 , 64, 2263-2273	3.9	45

324	Universal Selective Dispersion of Semiconducting Carbon Nanotubes from Commercial Sources Using a Supramolecular Polymer. <i>ACS Nano</i> , 2017 , 11, 5660-5669	16.7	34
323	. <i>IEEE Electron Device Letters</i> , 2017 , 38, 863-866	4.4	3
322	Statistical study of RRAM MLC SET variability induced by filament morphology 2017 ,		1
321	The End of Moore's Law: A New Beginning for Information Technology. <i>Computing in Science and Engineering</i> , 2017 , 19, 41-50	1.5	264
320	Real-Time Observation of the Electrode-Size-Dependent Evolution Dynamics of the Conducting Filaments in a SiO Layer. <i>ACS Nano</i> , 2017 , 11, 4097-4104	16.7	55
319	Phase-Change Memory Towards a Storage-Class Memory. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 4374-4385	2.9	191
318	3D nanosystems enable embedded abundant-data computing 2017 ,		5
317	A simple technique to design microfluidic devices for system integration. <i>Analytical Methods</i> , 2017 , 9, 6349-6356	3.2	1
316	AC stress and electronic effects on SET switching of HfO ₂ RRAM. <i>Applied Physics Letters</i> , 2017 , 111, 093502	3.4	1
315	Dual-Layer Dielectric Stack for Thermally-Isolated Low-Power Phase-Change Memory 2017 ,		5
314	Three-dimensional integration of nanotechnologies for computing and data storage on a single chip. <i>Nature</i> , 2017 , 547, 74-78	50.4	373
313	Resistive random access memory (RRAM) technology: From material, device, selector, 3D integration to bottom-up fabrication. <i>Journal of Electroceramics</i> , 2017 , 39, 21-38	1.5	57
312	Carbon Nanotubes for Monolithic 3D ICs 2017 , 315-333		2
311	Device and Circuit Interaction Analysis of Stochastic Behaviors in Cross-Point RRAM Arrays. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 4928-4936	2.9	11
310	Dual-Layer Dielectric Stack for Thermally Isolated Low-Energy Phase-Change Memory. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 4496-4502	2.9	22
309	Challenges and opportunities toward online training acceleration using RRAM-based hardware neural network 2017 ,		19
308	Micrometer-Scale Magnetic-Resonance-Coupled Radio-Frequency Identification and Transceivers for Wireless Sensors in Cells. <i>Physical Review Applied</i> , 2017 , 8,	4.3	14
307	Distinctive in-Plane Cleavage Behaviors of Two-Dimensional Layered Materials. <i>ACS Nano</i> , 2016 , 10, 8980-8987	16.7	60

306	Introduction to Nanoionic Elements for Information Technology 2016 , 1-30		9
305	High Current Density and Low Thermal Conductivity of Atomically Thin Semimetallic WTe ₂ . <i>ACS Nano</i> , 2016 , 10, 7507-14	16.7	78
304	Engineering a Large Scale Indium Nanodot Array for Refractive Index Sensing. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 31871-31877	9.5	7
303	Neuromorphic architectures with electronic synapses 2016 ,		22
302	Disturbance characteristics of half-selected cells in a cross-point resistive switching memory array. <i>Nanotechnology</i> , 2016 , 27, 215204	3.4	5
301	Hysteresis in Carbon Nanotube Transistors: Measurement and Analysis of Trap Density, Energy Level, and Spatial Distribution. <i>ACS Nano</i> , 2016 , 10, 4599-608	16.7	48
300	Time-Based Sensor Interface Circuits in CMOS and Carbon Nanotube Technologies. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016 , 63, 577-586	3.9	16
299	Removable and Recyclable Conjugated Polymers for Highly Selective and High-Yield Dispersion and Release of Low-Cost Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2016 , 138, 802-5	16.4	123
298	Statistical Study on the Schottky Barrier Reduction of Tunneling Contacts to CVD Synthesized MoS ₂ . <i>Nano Letters</i> , 2016 , 16, 276-81	11.5	118
297	2016 ,		18
296	Hyperdimensional computing with 3D VRRAM in-memory kernels: Device-architecture co-design for energy-efficient, error-resilient language recognition 2016 ,		63
295	Microsecond transient thermal behavior of HfO _x -based resistive random access memory using a micro thermal stage (MTS) 2016 ,		8
294	High-Performance p-Type Black Phosphorus Transistor with Scandium Contact. <i>ACS Nano</i> , 2016 , 10, 4672-7	16.7	96
293	A Compact Model for MetalOxide Resistive Random Access Memory With Experiment Verification. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 1884-1892	2.9	96
292	2016 ,		35
291	MoS ₂ transistors with 1-nanometer gate lengths. <i>Science</i> , 2016 , 354, 99-102	33.3	812
290	Picosecond Electric-Field-Induced Threshold Switching in Phase-Change Materials. <i>Physical Review Letters</i> , 2016 , 117, 067601	7.4	47
289	Memory leads the way to better computing. <i>Nature Nanotechnology</i> , 2015 , 10, 191-4	28.7	497

288	Vertical and Lateral Copper Transport through Graphene Layers. <i>ACS Nano</i> , 2015 , 9, 8361-7	16.7	27
287	. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 2197-2204	2.9	28
286	Metal oxide-resistive memory using graphene-edge electrodes. <i>Nature Communications</i> , 2015 , 6, 8407	17.4	95
285	Compact modeling and design optimization of carbon nanotube field-effect transistors for the sub-10-nm technology nodes 2015 ,		1
284	Layout optimization and template pattern verification for directed self-assembly (DSA) 2015 ,		1
283	. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 3160-3167	2.9	14
282	Energy-Efficient Phase-Change Memory with Graphene as a Thermal Barrier. <i>Nano Letters</i> , 2015 , 15, 6809-14	11.4	98
281	RRAM based synaptic devices for neuromorphic visual systems 2015 ,		3
280	Efficient metallic carbon nanotube removal for highly-scaled technologies 2015 ,		19
279	Memory Devices: In Situ Tuning of Switching Window in a Gate-Controlled Bilayer Graphene-Electrode Resistive Memory Device (Adv. Mater. 47/2015). <i>Advanced Materials</i> , 2015 , 27, 7766-7766	24	1
278	In Situ Tuning of Switching Window in a Gate-Controlled Bilayer Graphene-Electrode Resistive Memory Device. <i>Advanced Materials</i> , 2015 , 27, 7767-74	24	40
277	. <i>Journal of Microelectromechanical Systems</i> , 2015 , 24, 592-598	2.5	7
276	Large-area assembly of densely aligned single-walled carbon nanotubes using solution shearing and their application to field-effect transistors. <i>Advanced Materials</i> , 2015 , 27, 2656-62	24	104
275	Rapid Co-Optimization of Processing and Circuit Design to Overcome Carbon Nanotube Variations. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2015 , 34, 1082-1095	2.5	31
274	Cu diffusion barrier: Graphene benchmarked to TaN for ultimate interconnect scaling 2015 ,		13
273	Energy-Efficient Abundant-Data Computing: The N3XT 1,000x. <i>Computer</i> , 2015 , 48, 24-33	1.6	112
272	A general design strategy for block copolymer directed self-assembly patterning of integrated circuits contact holes using an alphabet approach. <i>Nano Letters</i> , 2015 , 15, 805-12	11.5	35
271	3-D Cross-Point Array Operation on $\text{AlO}_x/\text{HfO}_x$ -Based Vertical Resistive Switching Memory. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 1377-1381	2.9	21

270	Sensor-to-Digital Interface Built Entirely With Carbon Nanotube FETs. <i>IEEE Journal of Solid-State Circuits</i> , 2014 , 49, 190-201	5.5	64
269	Cross plane thermal conductance of graphene-metal interfaces 2014 ,		5
268	Carbon nanotubes for high-performance logic. <i>MRS Bulletin</i> , 2014 , 39, 719-726	3.2	10
267	Design guidelines for 3D RRAM cross-point architecture 2014 ,		14
266	Multi-level control of conductive nano-filament evolution in HfO ₂ ReRAM by pulse-train operations. <i>Nanoscale</i> , 2014 , 6, 5698-702	7.7	113
265	. <i>IEEE Electron Device Letters</i> , 2014 , 35, 912-914	4.4	33
264	Ultrafast characterization of phase-change material crystallization properties in the melt-quenched amorphous phase. <i>Nano Letters</i> , 2014 , 14, 3419-26	11.5	82
263	Continuous wireless pressure monitoring and mapping with ultra-small passive sensors for health monitoring and critical care. <i>Nature Communications</i> , 2014 , 5, 5028	17.4	320
262	Carbon nanotube circuit integration up to sub-20 nm channel lengths. <i>ACS Nano</i> , 2014 , 8, 3434-43	16.7	61
261	Ultra-low-energy three-dimensional oxide-based electronic synapses for implementation of robust high-accuracy neuromorphic computation systems. <i>ACS Nano</i> , 2014 , 8, 6998-7004	16.7	148
260	Cost-effective, transfer-free, flexible resistive random access memory using laser-scribed reduced graphene oxide patterning technology. <i>Nano Letters</i> , 2014 , 14, 3214-9	11.5	93
259	Monolithic three-dimensional integration of carbon nanotube FETs with silicon CMOS 2014 ,		16
258	VLSI-compatible carbon nanotube doping technique with low work-function metal oxides. <i>Nano Letters</i> , 2014 , 14, 1884-90	11.5	57
257	Brain-like associative learning using a nanoscale non-volatile phase change synaptic device array. <i>Frontiers in Neuroscience</i> , 2014 , 8, 205	5.1	147
256	Phase Change Memory 2014 , 78-109		2
255	3D RRAM: Design and optimization 2014 ,		3
254	Statistical assessment methodology for the design and optimization of cross-point RRAM arrays 2014 ,		8
253	Ultrathin (~2nm) HfO _x as the fundamental resistive switching element: Thickness scaling limit, stack engineering and 3D integration 2014 ,		8

252	Capacity optimization of emerging memory systems: A shannon-inspired approach to device characterization 2014 ,		3
251	Robust design and experimental demonstrations of carbon nanotube digital circuits 2014 ,		3
250	System Level Benchmarking with Yield-Enhanced Standard Cell Library for Carbon Nanotube VLSI Circuits. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , 2014 , 10, 1-19	1.7	7
249	DSA-aware detailed routing for via layer optimization 2014 ,		6
248	GaAs buffer layer technique for vertical nanowire growth on Si substrate. <i>Applied Physics Letters</i> , 2014 , 104, 083113	3-4	1
247	Ultrafast terahertz-induced response of GeSbTe phase-change materials. <i>Applied Physics Letters</i> , 2014 , 104, 251907	3-4	27
246	Improved multi-level control of RRAM using pulse-train programming 2014 ,		4
245	Characterization and Modeling of the Conduction and Switching Mechanisms of HfOx Based RRAM. <i>Materials Research Society Symposia Proceedings</i> , 2014 , 1631, 1		5
244	Atomically thin graphene plane electrode for 3D RRAM 2014 ,		9
243	Monolithic 3D integration of logic and memory: Carbon nanotube FETs, resistive RAM, and silicon FETs 2014 ,		68
242	High-performance carbon nanotube field-effect transistors 2014 ,		32
241	Atomic layer deposition of high-k dielectrics on single-walled carbon nanotubes: a Raman study. <i>Nanotechnology</i> , 2013 , 24, 245703	3-4	18
240	Combinational Logic Design Using Six-Terminal NEM Relays. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2013 , 32, 653-666	2.5	19
239	Carbon nanotube computer. <i>Nature</i> , 2013 , 501, 526-30	50-4	745
238	Synaptic electronics: materials, devices and applications. <i>Nanotechnology</i> , 2013 , 24, 382001	3-4	789
237	Carbon nanotube circuits: Opportunities and challenges 2013 ,		1
236	Phonon and electron transport through Ge ₂ Sb ₂ Te ₅ films and interfaces bounded by metals. <i>Applied Physics Letters</i> , 2013 , 102, 191911	3-4	54
235	Block copolymer directed self-assembly (DSA) aware contact layer optimization for 10 nm 1D standard cell library 2013 ,		27

234	Synergetic carbon nanotube growth. <i>Carbon</i> , 2013 , 62, 61-68	10.4	4
233	. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 1834-1843	2.9	45
232	HfOx-based vertical resistive switching random access memory suitable for bit-cost-effective three-dimensional cross-point architecture. <i>ACS Nano</i> , 2013 , 7, 2320-5	16.7	265
231	Monitoring oxygen movement by Raman spectroscopy of resistive random access memory with a graphene-inserted electrode. <i>Nano Letters</i> , 2013 , 13, 651-7	11.5	106
230	Experimental study of plane electrode thickness scaling for 3D vertical resistive random access memory. <i>Nanotechnology</i> , 2013 , 24, 465201	3.4	19
229	2013 ,		6
228	Impact of III ^V and Ge Devices on Circuit Performance. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2013 , 21, 1189-1200	2.6	
227	Nanometer-Scale HfO_x RRAM. <i>IEEE Electron Device Letters</i> , 2013 , 34, 1005-1007	4.4	46
226	Design and optimization methodology for 3D RRAM arrays 2013 ,		30
225	Monolithic three-dimensional integration of carbon nanotube FET complementary logic circuits 2013 ,		16
224	Experimental demonstration of array-level learning with phase change synaptic devices 2013 ,		29
223	A low energy oxide-based electronic synaptic device for neuromorphic visual systems with tolerance to device variation. <i>Advanced Materials</i> , 2013 , 25, 1774-9	24	380
222	. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2012 , 31, 453-471	2.5	85
221	. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 1155-1163	2.9	72
220	. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 1183-1188	2.9	156
219	Optical Absorption Enhancement: Optical Absorption Enhancement in Freestanding GaAs Thin Film Nanopyramid Arrays (Adv. Energy Mater. 10/2012). <i>Advanced Energy Materials</i> , 2012 , 2, 1150-1150	21.8	4
218	Low-Energy Robust Neuromorphic Computation Using Synaptic Devices. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 3489-3494	2.9	71
217	Scaling behavior of PCM cells in off-state conduction 2012 ,		3

216	Recent progress of resistive switching random access memory (RRAM) 2012,		8
215	2012,		88
214	A SPICE Compact Model of Metal Oxide Resistive Switching Memory With Variations. <i>IEEE Electron Device Letters</i> , 2012 , 33, 1405-1407	4.4	155
213	MetalOxide RRAM. <i>Proceedings of the IEEE</i> , 2012 , 100, 1951-1970	14.3	1699
212	Selective synthesis and device applications of semiconducting single-walled carbon nanotubes using isopropyl alcohol as feedstock. <i>ACS Nano</i> , 2012 , 6, 7454-62	16.7	93
211	Metal Oxide Resistive Switching Memory. <i>Springer Series in Materials Science</i> , 2012 , 303-335	0.9	16
210	Nano-Electro-Mechanical relays for FPGA routing: Experimental demonstration and a design technique 2012,		24
209	Graphene Interconnect Lifetime: A Reliability Analysis. <i>IEEE Electron Device Letters</i> , 2012 , 33, 1604-1606	4.4	25
208	Graphene interconnect lifetime under high current stress 2012,		2
207	Nanoscale phase change memory materials. <i>Nanoscale</i> , 2012 , 4, 4382-92	7.7	54
206	Variability in carbon nanotube transistors: improving device-to-device consistency. <i>ACS Nano</i> , 2012 , 6, 1109-15	16.7	104
205	2012,		8
204	Increasing the semiconducting fraction in ensembles of single-walled carbon nanotubes. <i>Carbon</i> , 2012 , 50, 5093-5098	10.4	10
203	A Monte Carlo study of the low resistance state retention of HfOx based resistive switching memory. <i>Applied Physics Letters</i> , 2012 , 100, 043507	3.4	47
202	Effect of annealing ambient and temperature on the electrical characteristics of atomic layer deposition Al ₂ O ₃ /In _{0.53} Ga _{0.47} As metal-oxide-semiconductor capacitors and MOSFETs. <i>Journal of Applied Physics</i> , 2012 , 111, 044105	2.5	35
201	2012,		123
200	On the Switching Parameter Variation of Metal-Oxide RRAMPart I: Physical Modeling and Simulation Methodology. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 1172-1182	2.9	245
199	Nanoelectronic programmable synapses based on phase change materials for brain-inspired computing. <i>Nano Letters</i> , 2012 , 12, 2179-86	11.5	836

198	Flexible control of block copolymer directed self-assembly using small, topographical templates: potential lithography solution for integrated circuit contact hole patterning. <i>Advanced Materials</i> , 2012 , 24, 3107-14, 3082	24	89
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