

R Stanley Williams

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.

385
papers

41,086
citations

91
h-index

197
g-index

396
ext. papers

46,484
ext. citations

6.3
avg, IF

7.43
L-index

#	Paper	IF	Citations
385	Physics-based compact modeling of electro-thermal memristors: Negative differential resistance, local activity, and non-local dynamical bifurcations. <i>Applied Physics Reviews</i> , 2022 , 9, 011308	17.3	7
384	Analog Solutions of Discrete Markov Chains via Memristor Crossbars. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 4910-4923	3.9	3
383	NbO ₂ -Mott Memristor: A Circuit- Theoretic Investigation. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 4979-4992	3.9	11
382	Improved Hopfield Network Optimization Using Manufacturable Three-Terminal Electronic Synapses. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 1-9	3.9	6
381	Decision trees within a molecular memristor. <i>Nature</i> , 2021 , 597, 51-56	50.4	19
380	Charge disproportionate molecular redox for discrete memristive and memcapacitive switching. <i>Nature Nanotechnology</i> , 2020 , 15, 380-389	28.7	37
379	In situ training of feed-forward and recurrent convolutional memristor networks. <i>Nature Machine Intelligence</i> , 2019 , 1, 434-442	22.5	93
378	Synaptic and neuromorphic functions: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 553-578	3.6	1
377	Electrochemical metallization ReRAMs (ECM) - Experiments and modelling: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 115-150	3.6	4
376	Phase-change memories (PCM) - Experiments and modelling: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 393-420	3.6	3
375	Summary of the Faraday Discussion on New memory paradigms: memristive phenomena and neuromorphic applications. <i>Faraday Discussions</i> , 2019 , 213, 579-587	3.6	10
374	Reinforcement learning with analogue memristor arrays. <i>Nature Electronics</i> , 2019 , 2, 115-124	28.4	166
373	PUMA 2019 ,		107
372	Dynamical nonlinear memory capacitance in biomimetic membranes. <i>Nature Communications</i> , 2019 , 10, 3239	17.4	26
371	A Family of Stateful Memristor Gates for Complete Cascading Logic. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2019 , 66, 4348-4355	3.9	39
370	Single-Cell Stateful Logic Using a Dual-Bit Memristor. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1800629	2.5	17
369	Long short-term memory networks in memristor crossbar arrays. <i>Nature Machine Intelligence</i> , 2019 , 1, 49-57	22.5	176

368	Fully memristive neural networks for pattern classification with unsupervised learning. <i>Nature Electronics</i> , 2018 , 1, 137-145	28.4	511
367	Memristor-Based Analog Computation and Neural Network Classification with a Dot Product Engine. <i>Advanced Materials</i> , 2018 , 30, 1705914	24	339
366	Large Memristor Crossbars for Analog Computing 2018 ,		6
365	Capacitive neural network with neuro-transistors. <i>Nature Communications</i> , 2018 , 9, 3208	17.4	132
364	Tutorial: Experimental Nonlinear Dynamical Circuit Analysis of a Ferromagnetic Inductor. <i>IEEE Circuits and Systems Magazine</i> , 2018 , 18, 28-34	3.2	3
363	Efficient and self-adaptive in-situ learning in multilayer memristor neural networks. <i>Nature Communications</i> , 2018 , 9, 2385	17.4	371
362	Analogue signal and image processing with large memristor crossbars. <i>Nature Electronics</i> , 2018 , 1, 52-59	28.4	550
361	Separation of current density and electric field domains caused by nonlinear electronic instabilities. <i>Nature Communications</i> , 2018 , 9, 2030	17.4	31
360	In-Memory Computing with Memristor Arrays 2018 ,		12
359	Anatomy of Ag/Hafnia-Based Selectors with 10 Nonlinearity. <i>Advanced Materials</i> , 2017 , 29, 1604457	24	245
358	Memristor Emulators: A Note on Modeling. <i>Studies in Computational Intelligence</i> , 2017 , 1-17	0.8	3
357	An efficient analog Hamming distance comparator realized with a unipolar memristor array: a showcase of physical computing. <i>Scientific Reports</i> , 2017 , 7, 40135	4.9	22
356	Oxygen migration during resistance switching and failure of hafnium oxide memristors. <i>Applied Physics Letters</i> , 2017 , 110, 103503	3.4	49
355	What's Next? [The end of Moore's law]. <i>Computing in Science and Engineering</i> , 2017 , 19, 7-13	1.5	86
354	Temperature and field-dependent transport measurements in continuously tunable tantalum oxide memristors expose the dominant state variable. <i>Applied Physics Letters</i> , 2017 , 110, 123501	3.4	31
353	Volatile HRS asymmetry and subloops in resistive switching oxides. <i>Nanoscale</i> , 2017 , 9, 14414-14422	7.7	8
352	Physical origins of current and temperature controlled negative differential resistances in NbO. <i>Nature Communications</i> , 2017 , 8, 658	17.4	94
351	Chaotic dynamics in nanoscale NbO Mott memristors for analogue computing. <i>Nature</i> , 2017 , 548, 318-321	10.4	296

350	Memristors with diffusive dynamics as synaptic emulators for neuromorphic computing. <i>Nature Materials</i> , 2017 , 16, 101-108	27	1201
349	Spatially uniform resistance switching of low current, high endurance titanium-niobium-oxide memristors. <i>Nanoscale</i> , 2017 , 9, 1793-1798	7.7	18
348	Reflectometry-Ellipsometry Reveals Thickness, Growth Rate, and Phase Composition in Oxidation of Copper. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 22337-44	9.5	15
347	Dot-product engine for neuromorphic computing 2016 ,		303
346	Conduction Channel Formation and Dissolution Due to Oxygen Thermophoresis/Diffusion in Hafnium Oxide Memristors. <i>ACS Nano</i> , 2016 , 10, 11205-11210	16.7	75
345	Quantized conductance coincides with state instability and excess noise in tantalum oxide memristors. <i>Nature Communications</i> , 2016 , 7, 11142	17.4	69
344	Help Wanted: A Modern-Day Turing. <i>Computer</i> , 2016 , 49, 76-79	1.6	2
343	Thermally induced crystallization in NbO thin films. <i>Scientific Reports</i> , 2016 , 6, 34294	4.9	16
342	ISAAC: A Convolutional Neural Network Accelerator with In-Situ Analog Arithmetic in Crossbars 2016 ,		147
341	Direct Observation of Localized Radial Oxygen Migration in Functioning Tantalum Oxide Memristors. <i>Advanced Materials</i> , 2016 , 28, 2772-6	24	80
340	High-Speed and Low-Energy Nitride Memristors. <i>Advanced Functional Materials</i> , 2016 , 26, 5290-5296	15.6	177
339	Voltage divider effect for the improvement of variability and endurance of TaO(x) memristor. <i>Scientific Reports</i> , 2016 , 6, 20085	4.9	70
338	An accurate locally active memristor model for S-type negative differential resistance in NbOx. <i>Applied Physics Letters</i> , 2016 , 108, 023505	3.4	123
337	The phase transition in VO ₂ probed using x-ray, visible and infrared radiations. <i>Applied Physics Letters</i> , 2016 , 108, 073102	3.4	20
336	Trilayer Tunnel Selectors for Memristor Memory Cells. <i>Advanced Materials</i> , 2016 , 28, 356-62	24	83
335	History Erase Effect in a Non-Volatile Memristor. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016 , 63, 389-400	3.9	39
334	Low-Power, Self-Rectifying, and Forming-Free Memristor with an Asymmetric Programming Voltage for a High-Density Crossbar Application. <i>Nano Letters</i> , 2016 , 16, 6724-6732	11.5	131
333	Repeatable, accurate, and high speed multi-level programming of memristor 1T1R arrays for power efficient analog computing applications. <i>Nanotechnology</i> , 2016 , 27, 365202	3.4	84

332	Nanoimprint lithography enables memristor crossbars and hybrid circuits. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 121, 467-479	2.6	7
331	Low Variability Resistor-Memristor Circuit Masking the Actual Memristor States. <i>Advanced Electronic Materials</i> , 2015 , 1, 1500095	6.4	25
330	Nanoimprint lithography of plasmonic platforms for SERS applications. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 121, 443-449	2.6	12
329	In-operando synchronous time-multiplexed O K-edge x-ray absorption spectromicroscopy of functioning tantalum oxide memristors. <i>Journal of Applied Physics</i> , 2015 , 118, 034502	2.5	23
328	Low voltage two-state-variable memristor model of vacancy-drift resistive switches. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 119, 1-9	2.6	19
327	Conduction centers in a Ta ₂ O ₅ -Fermi glass. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 114, 287-289	2.6	5
326	Sequential electronic and structural transitions in VO ₂ observed using X-ray absorption spectromicroscopy. <i>Advanced Materials</i> , 2014 , 26, 7505-9	24	67
325	New materials for memristive switching 2014 ,		3
324	NbO ₂ -based low power and cost effective 1S1R switching for high density cross point ReRAM Application 2014 ,		4
323	Electrode-material dependent switching in TaO _x memristors. <i>Semiconductor Science and Technology</i> , 2014 , 29, 104003	1.8	17
322	Physics-based memristor models 2013 ,		21
321	Diamond nitrogen-vacancy centers created by scanning focused helium ion beam and annealing. <i>Applied Physics Letters</i> , 2013 , 103, 081906	3.4	34
320	Memristive Devices for Computing: Mechanisms, Applications and Challenges. <i>ECS Transactions</i> , 2013 , 58, 9-14	1	6
319	A scalable neuristor built with Mott memristors. <i>Nature Materials</i> , 2013 , 12, 114-7	27	614
318	Electrical performance and scalability of Pt dispersed SiO ₂ nanometallic resistance switch. <i>Nano Letters</i> , 2013 , 13, 3213-7	11.5	146
317	Memristor structures for high scalability: Non-linear and symmetric devices utilizing fabrication friendly materials and processes. <i>Microelectronic Engineering</i> , 2013 , 103, 66-69	2.5	19
316	State Dynamics and Modeling of Tantalum Oxide Memristors. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 2194-2202	2.9	120
315	Memristive devices in computing system. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , 2013 , 9, 1-20	1.7	38

314	Phase transitions enable computational universality in neuristor-based cellular automata. <i>Nanotechnology</i> , 2013 , 24, 384002	3-4	37
313	HOW WE FOUND THE MISSING MEMRISTOR 2013 , 483-489		12
312	AFTERMATH OF FINDING THE MEMRISTOR 2013 , 490-493		2
311	A physical model of switching dynamics in tantalum oxide memristive devices. <i>Applied Physics Letters</i> , 2013 , 102, 223502	3-4	59
310	A replacement of high-k process for CMOS transistor by atomic layer deposition. <i>Semiconductor Science and Technology</i> , 2013 , 28, 082003	1.8	4
309	Local temperature redistribution and structural transition during joule-heating-driven conductance switching in VO ₂ . <i>Advanced Materials</i> , 2013 , 25, 6128-32	24	139
308	Band offsets in transition-metal oxide heterostructures. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 295303		10
307	Characterization of electroforming-free titanium dioxide memristors. <i>Beilstein Journal of Nanotechnology</i> , 2013 , 4, 467-73	3	54
306	Nanoimprint lithography with 80 nm overlay precision. <i>Applied Physics A: Materials Science and Processing</i> , 2012 , 106, 767-772	2.6	17
305	AC sense technique for memristor crossbar. <i>Electronics Letters</i> , 2012 , 48, 757	1.1	23
304	Nitride memristors. <i>Applied Physics A: Materials Science and Processing</i> , 2012 , 109, 1-4	2.6	58
303	Engineering nonlinearity into memristors for passive crossbar applications. <i>Applied Physics Letters</i> , 2012 , 100, 113501	3-4	162
302	2012 ,		30
301	Melamine sensing in milk products by using surface enhanced Raman scattering. <i>Analytical Chemistry</i> , 2012 , 84, 9303-9	7.8	150
300	Continuous electrical tuning of the chemical composition of TaO(x)-based memristors. <i>ACS Nano</i> , 2012 , 6, 2312-8	16.7	100
299	Intermixing during Ripening in GeBi Incoherent Epitaxial Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 901-907	3.8	4
298	Sub-100 fJ and sub-nanosecond thermally driven threshold switching in niobium oxide crosspoint nanodevices. <i>Nanotechnology</i> , 2012 , 23, 215202	3-4	226
297	Electronic structure and transport measurements of amorphous transition-metal oxides: observation of Fermi glass behavior. <i>Applied Physics A: Materials Science and Processing</i> , 2012 , 107, 1-11	2.6	47

296	Thermophoresis/diffusion as a plausible mechanism for unipolar resistive switching in metal/oxide/metal memristors. <i>Applied Physics A: Materials Science and Processing</i> , 2012 , 107, 509-518	2.6	135
295	Combined helium ion beam and nanoimprint lithography attains 4 nm half-pitch dense patterns. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012 , 30, 06F304	1.3	66
294	Measuring the switching dynamics and energy efficiency of tantalum oxide memristors. <i>Nanotechnology</i> , 2011 , 22, 505402	3.4	85
293	Sub-nanosecond switching of a tantalum oxide memristor. <i>Nanotechnology</i> , 2011 , 22, 485203	3.4	506
292	Molecular dynamics simulations of oxide memory resistors (memristors). <i>Nanotechnology</i> , 2011 , 22, 254014	3.4	33
291	Dopant Control by Atomic Layer Deposition in Oxide Films for Memristive Switches. <i>Chemistry of Materials</i> , 2011 , 23, 123-125	9.6	56
290	Two- and Three-Terminal Resistive Switches: Nanometer-Scale Memristors and Memistors. <i>Advanced Functional Materials</i> , 2011 , 21, 2660-2665	15.6	64
289	The switching location of a bipolar memristor: chemical, thermal and structural mapping. <i>Nanotechnology</i> , 2011 , 22, 254015	3.4	82
288	Metal/TiO ₂ interfaces for memristive switches. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 785-789	2.6	128
287	Intrinsic constraints on thermally-assisted memristive switching. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 851-855	2.6	24
286	Feedback write scheme for memristive switching devices. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 973-982	2.6	63
285	Molecular dynamics simulations of oxide memristors: thermal effects. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 891-895	2.6	12
284	Characterization of quantum conducting channels in metal/molecule/metal devices using pressure-modulated conductance microscopy. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 943-948	2.6	5
283	An ionic bottle for high-speed, long-retention memristive devices. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 102, 1033-1036	2.6	6
282	Optical properties of sub-wavelength dielectric gratings and their application for surface-enhanced Raman scattering. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 105, 261-266	2.6	9
281	Coexistence of memristance and negative differential resistance in a nanoscale metal-oxide-metal system. <i>Advanced Materials</i> , 2011 , 23, 1730-3	24	91
280	Anatomy of a nanoscale conduction channel reveals the mechanism of a high-performance memristor. <i>Advanced Materials</i> , 2011 , 23, 5633-40	24	338
279	Spectromicroscopy of tantalum oxide memristors. <i>Applied Physics Letters</i> , 2011 , 98, 242114	3.4	77

278	Molecular dynamics simulations of oxide memristors: Crystal field effects. <i>Applied Physics Letters</i> , 2011 , 99, 053108	3.4	12
277	Localized temperature and chemical reaction control in nanoscale space by nanowire array. <i>Nano Letters</i> , 2011 , 11, 4818-25	11.5	52
276	Hot-spot engineering in polygonal nanofinger assemblies for surface enhanced Raman spectroscopy. <i>Nano Letters</i> , 2011 , 11, 2538-42	11.5	165
275	Current-controlled negative differential resistance due to Joule heating in TiO ₂ . <i>Applied Physics Letters</i> , 2011 , 99, 202104	3.4	70
274	Study of molecular trapping inside gold nanofinger arrays on surface-enhanced Raman substrates. <i>Journal of the American Chemical Society</i> , 2011 , 133, 8234-9	16.4	92
273	Lognormal switching times for titanium dioxide bipolar memristors: origin and resolution. <i>Nanotechnology</i> , 2011 , 22, 095702	3.4	61
272	Impact of geometry on the performance of memristive nanodevices. <i>Nanotechnology</i> , 2011 , 22, 254026	3.4	22
271	Observation of two resistance switching modes in TiO ₂ memristive devices electroformed at low current. <i>Nanotechnology</i> , 2011 , 22, 254007	3.4	62
270	Memristive switches enable stateful logic operations via material implication. <i>Nature</i> , 2010 , 464, 873-6	50.4	1405
269	Radiation Hardness of TiO_2 Memristive Junctions. <i>IEEE Transactions on Nuclear Science</i> , 2010 , 57, 1640-1643	1.7	58
268	High integrity metal/organic device interfaces via low temperature buffer layer assisted metal atom nucleation. <i>Applied Physics Letters</i> , 2010 , 96, 173109	3.4	16
267	Top-down fabricated silicon nanowire sensors for real-time chemical detection. <i>Nanotechnology</i> , 2010 , 21, 015501	3.4	136
266	Hybrid CMOS/memristor circuits 2010 ,		39
265	A memristor-based nonvolatile latch circuit. <i>Nanotechnology</i> , 2010 , 21, 235203	3.4	56
264	Cones fabricated by 3D nanoimprint lithography for highly sensitive surface enhanced Raman spectroscopy. <i>Nanotechnology</i> , 2010 , 21, 255502	3.4	74
263	High switching endurance in TaO _x memristive devices. <i>Applied Physics Letters</i> , 2010 , 97, 232102	3.4	467
262	Gold nanofingers for molecule trapping and detection. <i>Journal of the American Chemical Society</i> , 2010 , 132, 12820-2	16.4	162
261	Self-aligned memristor cross-point arrays fabricated with one nanoimprint lithography step. <i>Nano Letters</i> , 2010 , 10, 2909-14	11.5	85

260	A smooth optical superlens. <i>Applied Physics Letters</i> , 2010 , 96, 043102	3.4	70
259	Rational engineering of highly sensitive SERS substrate based on nanocone structures 2010 ,		7
258	Corrigendum on PThe mechanism of electroforming of metal oxide memristive switchesP <i>Nanotechnology</i> , 2010 , 21, 339803-339803	3.4	5
257	Direct identification of the conducting channels in a functioning memristive device. <i>Advanced Materials</i> , 2010 , 22, 3573-7	2.4	278
256	Ionic/electronic hybrid materials integrated in a synaptic transistor with signal processing and learning functions. <i>Advanced Materials</i> , 2010 , 22, 2448-53	2.4	225
255	Origin of inverse tunneling magnetoresistance in a symmetric junction revealed by delaminating the buried electronic interface. <i>Applied Physics Letters</i> , 2009 , 95, 233117	3.4	4
254	Electrical transport and thermometry of electroformed titanium dioxide memristive switches. <i>Journal of Applied Physics</i> , 2009 , 106, 124504	2.5	81
253	A hybrid nanomemristor/transistor logic circuit capable of self-programming. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 1699-703	11.5	213
252	Structural and chemical characterization of TiO ₂ memristive devices by spatially-resolved NEXAFS. <i>Nanotechnology</i> , 2009 , 20, 485701	3.4	52
251	Sub-15nm nanoimprint molds and pattern transfer. <i>Journal of Vacuum Science & Technology B</i> , 2009 , 27, 2837		40
250	Defect-tolerant demultiplexer circuits based on threshold logic and coding. <i>Nanotechnology</i> , 2009 , 20, 135201	3.4	1
249	On the integration of memristors with CMOS using nanoimprint lithography 2009 ,		8
248	Metal-coated Si nanograss as highly sensitive SERS sensors 2009 ,		3
247	Four-dimensional address topology for circuits with stacked multilayer crossbar arrays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 20155-8	11.5	118
246	A Family of Electronically Reconfigurable Nanodevices. <i>Advanced Materials</i> , 2009 , 21, 3754-3758	2.4	195
245	Exponential ionic drift: fast switching and low volatility of thin-film memristors. <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 94, 515-519	2.6	369
244	Ensembles of indium phosphide nanowires: physical properties and functional devices integrated on non-single crystal platforms. <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 95, 1005-1013	2.6	13
243	Geometrical dependence of optical negative index meta-materials at 1.55 μm . <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 95, 1119-1122	2.6	5

242	Silver-coated Si nanograss as highly sensitive surface-enhanced Raman spectroscopy substrates. <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 96, 793-797	2.6	29
241	Coupled ionic and electronic transport model of thin-film semiconductor memristive behavior. <i>Small</i> , 2009 , 5, 1058-63	11	236
240	Hybrid nanoimprint-soft lithography with sub-15 nm resolution. <i>Nano Letters</i> , 2009 , 9, 2306-10	11.5	140
239	Fractal structure formation from Ag nanoparticle films on insulating substrates. <i>Langmuir</i> , 2009 , 25, 7222-5	11.5	17
238	Analog memory capacitor based on field-configurable ion-doped polymers. <i>Applied Physics Letters</i> , 2009 , 95, 213503	3.4	31
237	Optical magnetic plasma in artificial flowers. <i>Optics Express</i> , 2009 , 17, 10800-5	3.3	1
236	Memristor-CMOS hybrid integrated circuits for reconfigurable logic. <i>Nano Letters</i> , 2009 , 9, 3640-5	11.5	507
235	The mechanism of electroforming of metal oxide memristive switches. <i>Nanotechnology</i> , 2009 , 20, 215203-4	3.4	591
234	Study of SERS chemical enhancement factors using buffer layer assisted growth of metal nanoparticles on self-assembled monolayers. <i>Journal of the American Chemical Society</i> , 2009 , 131, 6310-16	16.4	56
233	Switching dynamics in titanium dioxide memristive devices. <i>Journal of Applied Physics</i> , 2009 , 106, 074508-5	11.5	506
232	Writing to and reading from a nano-scale crossbar memory based on memristors. <i>Nanotechnology</i> , 2009 , 20, 425204	3.4	183
231	Force modulation of tunnel gaps in metal oxide memristive nanoswitches. <i>Applied Physics Letters</i> , 2009 , 95, 113503	3.4	36
230	Ultrasoother silver thin films deposited with a germanium nucleation layer. <i>Nano Letters</i> , 2009 , 9, 178-82	11.5	222
229	The missing memristor found. <i>Nature</i> , 2008 , 453, 80-3	50.4	7042
228	Memristive switching mechanism for metal/oxide/metal nanodevices. <i>Nature Nanotechnology</i> , 2008 , 3, 429-33	28.7	2239
227	Nanoelectronic and Nanophotonic Interconnect. <i>Proceedings of the IEEE</i> , 2008 , 96, 230-247	14.3	162
226	Oxide and carbide formation at titanium/organic monolayer interfaces. <i>Journal of the American Chemical Society</i> , 2008 , 130, 4041-7	16.4	30
225	Quantum conductance oscillations in metal/molecule/metal switches at room temperature. <i>Physical Review Letters</i> , 2008 , 101, 016802	7.4	16

224	Evolution of thermodynamic potentials in closed and open nanocrystalline systems: Ge-Si:Si(001) islands. <i>Physical Review Letters</i> , 2008 , 100, 226101	7.4	41
223	Sub-10 nm nanoimprint lithography by wafer bowing. <i>Nano Letters</i> , 2008 , 8, 3865-9	11.5	70
222	An organic/Si nanowire hybrid field configurable transistor. <i>Nano Letters</i> , 2008 , 8, 876-80	11.5	32
221	Two-Stage Atomic Layer Deposition of Aluminum Oxide on Alkanethiolate Self-Assembled Monolayers Using n-Propanol and Water as Oxygen Sources. <i>Chemistry of Materials</i> , 2008 , 20, 5356-5360 ^{9.6}	9.6	11
220	Metallic nanocrystals near ultrasmooth metallic films for surface-enhanced Raman scattering application. <i>Nanotechnology</i> , 2008 , 19, 415702	3.4	8
219	Experimental demonstration of a defect-tolerant nanocrossbar demultiplexer. <i>Nanotechnology</i> , 2008 , 19, 165203	3.4	8
218	A 14-ps full width at half maximum high-speed photoconductor fabricated with intersecting InP nanowires on an amorphous surface. <i>Applied Physics A: Materials Science and Processing</i> , 2008 , 91, 1-5	2.6	40
217	Defect Tolerance Based on Coding and Series Replication in Transistor-Logic Demultiplexer Circuits. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2007 , 54, 2410-2421	3.9	7
216	. <i>IEEE Nanotechnology Magazine</i> , 2007 , 6, 280-290	2.6	11
215	Thermodynamics of coherently-strained GexSi1-x nanocrystals on Si(001): alloy composition and island formation. <i>Nano Letters</i> , 2007 , 7, 223-6	11.5	68
214	Plasma-induced formation of Ag nanodots for ultra-high-enhancement surface-enhanced Raman scattering substrates. <i>Langmuir</i> , 2007 , 23, 5135-8	4	25
213	Internal Structure of a Molecular Junction Device: Chemical Reduction of PtO2 by Ti Evaporation onto an Interceding Organic Monolayer. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 16-20	3.8	30
212	In-situ infrared spectroscopy of buried organic monolayers: influence of the substrate on titanium reactivity with a Langmuir-Blodgett film. <i>Langmuir</i> , 2007 , 23, 7620-5	4	9
211	Selective surface functionalization of silicon nanowires via nanoscale joule heating. <i>Nano Letters</i> , 2007 , 7, 3106-11	11.5	105
210	Towards the silicon nanowire-based sensor for intracellular biochemical detection. <i>Biosensors and Bioelectronics</i> , 2007 , 22, 2065-70	11.8	88
209	Atomic layer deposition of aluminum oxide on hydrophobic and hydrophilic surfaces. <i>Journal of Crystal Growth</i> , 2007 , 299, 218-222	1.6	44
208	Optical metamaterials at near and mid-IR range fabricated by nanoimprint lithography. <i>Applied Physics A: Materials Science and Processing</i> , 2007 , 87, 143-150	2.6	68
207	Ultra-smooth metal surfaces generated by pressure-induced surface deformation of thin metal films. <i>Applied Physics A: Materials Science and Processing</i> , 2007 , 87, 187-192	2.6	28

206	Switching between positive and negative permeability by photoconductive coupling for modulation of electromagnetic radiation. <i>Applied Physics A: Materials Science and Processing</i> , 2007 , 87, 209-216	2.6	13
205	Nano/CMOS architectures using a field-programmable nanowire interconnect. <i>Nanotechnology</i> , 2007 , 18, 035204	3.4	233
204	Computing with a trillion crummy components. <i>Communications of the ACM</i> , 2007 , 50, 35-39	2.5	8
203	Nanoscale Joule Heating Along Silicon Nanowire and Its Nanoscale Heater Application 2007 , 1101		
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31	Hot wall experiment in Microtor II. <i>Journal of Nuclear Materials</i> , 1984 , 121, 271-276	3.3	
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17	Determination of substitutional dopant and hole concentrations in Zn-diffused single-crystal InP. <i>Applied Physics Letters</i> , 1980 , 36, 760-762	3.4	23
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13	X-ray absorption fine structure above the Ti L edge. <i>Physical Review B</i> , 1979 , 19, 1762-1768	3.3	39
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1	Physical Compact Model for Three-Terminal SONOS Synaptic Circuit Element. <i>Advanced Intelligent Systems</i> , 2200070	6	1