

# Cheol Seong Hwang

## 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.

611  
papers

27,155  
citations

77  
h-index

142  
g-index

634  
ext. papers

30,256  
ext. citations

5.9  
avg, IF

7.17  
L-index

#	Paper	IF	Citations
611	Reversible transition between the polar and antipolar phases and its implications for wake-up and fatigue in HfO-based ferroelectric thin film.. <i>Nature Communications</i> , <b>2022</b> , 13, 645	17.4	11
610	Review of Semiconductor Flash Memory Devices for Material and Process Issues.. <i>Advanced Materials</i> , <b>2022</b> , e2200659	24	5
609	Atomistic prediction on the composition- and configuration-dependent bandgap of Ga(As,Sb) using cluster expansion and ab initio thermodynamics. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2022</b> , 280, 115713	3.1	0
608	Reliable Domain-Specific Exclusive Logic Gates Using Reconfigurable Sequential Logic Based on Antiparallel Bipolar Memristors. <i>Advanced Intelligent Systems</i> , <b>2022</b> , 4, 2270021	6	0
607	Effect of local strain energy to predict accurate phase diagram of IIIV pseudobinary systems: case of Ga(As,Sb) and (In,Ga)As. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 045104	3	1
606	Influences of oxygen source and substrate temperature on the unusual growth mechanism of atomic layer deposited magnesium oxide using bis(cyclopentadienyl)magnesium precursor. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 15359-15374	7.1	0
605	Improved Properties of the Atomic Layer Deposited Ru Electrode for Dynamic Random-Access Memory Capacitor Using Discrete Feeding Method. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 23915-23927	9.5	0
604	A High-Speed True Random Number Generator Based on a CuxTe1-x Diffusive Memristor. <i>Advanced Intelligent Systems</i> , <b>2021</b> , 3, 2100062	6	1
603	Threshold Voltage Modulation in a Transistor with a Two-Dimensional Electron Gas Channel at the Interface between Al2O3 and Sub-5 nm ZnO Films. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 3247-3255	4	2
602	A High-Speed True Random Number Generator Based on a CuxTe1-x Diffusive Memristor. <i>Advanced Intelligent Systems</i> , <b>2021</b> , 3, 2170057	6	
601	Characterization of a 2D Electron Gas at the Interface of Atomic-Layer Deposited Al2O3/ZnO Thin Films for a Field-Effect Transistor. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2000876	6.4	2
600	Review of ferroelectric field-effect transistors for three-dimensional storage applications. <i>Nano Select</i> , <b>2021</b> , 2, 1187-1207	3.1	10
599	Atomistic prediction on the configuration- and temperature-dependent dielectric constant of Be0.25Mg0.75O superlattice as a high-dielectric layer. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 851-859	7.1	2
598	Atomic layer deposition of chalcogenides for next-generation phase change memory. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 3708-3725	7.1	11
597	Enhancement of electrical performance of atomic layer deposited SnO films via substrate surface engineering. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 12314-12321	7.1	0
596	Polarizing and depolarizing charge injection through a thin dielectric layer in a ferroelectric-dielectric bilayer. <i>Nanoscale</i> , <b>2021</b> , 13, 2556-2572	7.7	11
595	Comparison of high-k Y2O3/TiO2 bilayer and Y-doped TiO2 thin films on Ge substrate. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 185110	3	

594	Atomistic Understanding of the Ferroelectric Properties of a Wurtzite-Structure (AlN) <sub>n</sub> /(ScN) <sub>m</sub> Superlattice. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2021</b> , 15, 2100009	2.5	7
593	In-Memory Stateful Logic Computing Using Memristors: Gate, Calculation, and Application. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2021</b> , 15, 2100208	2.5	8
592	Area-Type Electronic Bipolar Switching Al/TiO/TiO/Al Memory with Linear Potentiation and Depression Characteristics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 39561-39572	9.5	2
591	Improved ferroelectricity in Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> by inserting an upper HfO <sub>x</sub> N <sub>y</sub> interfacial layer. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 122902	3.4	1
590	Time-varying data processing with nonvolatile memristor-based temporal kernel. <i>Nature Communications</i> , <b>2021</b> , 12, 5727	17.4	7
589	InterPhon: Ab initio interface phonon calculations within a 3D electronic structure framework. <i>Computer Physics Communications</i> , <b>2021</b> , 268, 108089	4.2	
588	eWB: Event-Based Weight Binarization Algorithm for Spiking Neural Networks. <i>IEEE Access</i> , <b>2021</b> , 9, 38097-38106	3.5	106
587	Investigating the Reasons for the Difficult Erase Operation of a Charge-Trap Flash Memory Device with Amorphous Oxide Semiconductor Thin-Film Channel Layers. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2021</b> , 15, 2000549	2.5	3
586	Trap Reduction through O <sub>3</sub> Post-Deposition Treatment of Y <sub>2</sub> O <sub>3</sub> Thin Films Grown by Atomic Layer Deposition on Ge Substrates. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2000819	6.4	2
585	Optimized Al-doped TiO <sub>2</sub> gate insulator for a metal-oxide-semiconductor capacitor on a Ge substrate. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 1572-1583	7.1	1
584	Origin of the Threshold Voltage Shift in a Transistor with a 2D Electron Gas Channel at the Al <sub>2</sub> O <sub>3</sub> /SrTiO <sub>3</sub> Interface. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1901286	6.4	4
583	Area-Type Electronic Bipolar Resistive Switching of Pt/Al <sub>2</sub> O <sub>3</sub> /Si <sub>3</sub> N <sub>3.0</sub> /Ti with Forming-Free, Self-Rectification, and Nonlinear Characteristics. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2020</b> , 14, 2000209	2.5	5
582	Atomic Layer Deposition of SnTe Thin Film Using Sn(N(CH <sub>3</sub> ) <sub>2</sub> ) <sub>4</sub> and Te(Si(CH <sub>3</sub> ) <sub>3</sub> ) <sub>2</sub> with Ammonia Coinjection. <i>Crystal Growth and Design</i> , <b>2020</b> , 20, 4649-4656	3.5	1
581	Resistive random access memory based on gallium oxide thin films for self-powered pressure sensor systems. <i>Ceramics International</i> , <b>2020</b> , 46, 21141-21148	5.1	3
580	Ferroelectric domain wall memory with embedded selector realized in LiNbO single crystals integrated on Si wafers. <i>Nature Materials</i> , <b>2020</b> , 19, 1188-1194	27	42
579	An ab initio approach on the asymmetric stacking of GaAs <111> nanowires grown by a vapor-solid method. <i>Nanoscale</i> , <b>2020</b> , 12, 17703-17714	7.7	3
578	Review of defect chemistry in fluorite-structure ferroelectrics for future electronic devices. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 10526-10550	7.1	50
577	A Combination of a Volatile-Memristor-Based True Random-Number Generator and a Nonlinear-Feedback Shift Register for High-Speed Encryption. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1901117	6.4	9

576	Cation-Regulated Transformation for Continuous Two-Dimensional Tin Monosulfide. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 2313-2320	9.6	12
575	Investigation of the electronic structure of amorphous SnO film using x-ray absorption spectroscopy. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 052102	3.4	0
574	Electroforming-Free, Flexible, and Reliable Resistive Random-Access Memory Based on an Ultrathin TaO Film. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 10681-10688	9.5	9
573	Resistive switching materials for information processing. <i>Nature Reviews Materials</i> , <b>2020</b> , 5, 173-195	73.3	318
572	Modulated filamentary conduction of Ag/TiO <sub>2</sub> core-shell nanowires to impart extremely sustained resistance switching behavior in a flexible composite. <i>Applied Materials Today</i> , <b>2020</b> , 19, 100569	6.6	7
571	Atomic Layer Deposition of GeSe Thin Films for Endurable Ovonic Threshold Selectors with a Low Threshold Voltage. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 23110-23118	9.5	13
570	Atomic layer deposition of Ru thin films using (2,4-dimethyloxopentadienyl)(ethylcyclopentadienyl)Ru and the effect of ammonia treatment during the deposition. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 6993-7004	7.1	8
569	A Comparative Study on the Ferroelectric Performances in Atomic Layer Deposited HfZrO Thin Films Using Tetrakis(ethylmethylamino) and Tetrakis(dimethylamino) Precursors. <i>Nanoscale Research Letters</i> , <b>2020</b> , 15, 72	5	18
568	Novel Applications of Antiferroelectrics and Relaxor Ferroelectrics: A Material Point of View. <i>Topics in Applied Physics</i> , <b>2020</b> , 343-357	0.5	
567	A Stateful Logic Family Based on a New Logic Primitive Circuit Composed of Two Antiparallel Bipolar Memristors. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 1900082	6	19
566	Kernel Application of the Stacked Crossbar Array Composed of Self-Rectifying Resistive Switching Memory for Convolutional Neural Networks. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 1900116	6	8
565	Bipolar resistive switching property of Si <sub>3</sub> N <sub>4</sub> thin films depending on N deficiency. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 1755-1761	7.1	3
564	Field-Induced Ferroelectric Hf <sub>1-x</sub> Zr <sub>x</sub> O <sub>2</sub> Thin Films for High-k Dynamic Random Access Memory. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000631	6.4	10
563	Substrate Surface Modification for Enlarging Two-Dimensional SnS Grains at Low Temperatures. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 9026-9033	9.6	3
562	Study of ferroelectric characteristics of Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> thin films grown on sputtered or atomic-layer-deposited TiN bottom electrodes. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 022902	3.4	12
561	Impact of the Atomic Layer-Deposited Ru Electrode Surface Morphology on Resistive Switching Properties of TaO-Based Memory Structures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 55331-55341	9.5	4
560	Substrate-Dependent Growth Behavior of Atomic-Layer-Deposited Zinc Oxide and Zinc Tin Oxide Thin Films for Thin-Film Transistor Applications. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 26780-26792	3.8	3
559	Highly sensitive flexible NO <sub>2</sub> sensor composed of vertically aligned 2D SnS <sub>2</sub> operating at room temperature. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 11874-11881	7.1	21

558	Comparative Study on the Gate-Induced Electrical Instability of p-Type SnO Thin-Film Transistors with SiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> Gate Dielectrics. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2020</b> , 14, 2000304	3.5	1
557	Radical-Enhanced Atomic Layer Deposition of a Tungsten Oxide Film with the Tunable Oxygen Vacancy Concentration. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 18156-18164	3.8	10
556	Complementary Resistive Switching and Synaptic-Like Memory Behavior in an Epitaxial SrFeO Thin Film through Oriented Oxygen-Vacancy Channels. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 41740-41748	8.5	11
555	A new sensing mechanism of Si FET-based gas sensor using pre-bias. <i>Sensors and Actuators B: Chemical</i> , <b>2020</b> , 302, 127147	8.5	3
554	X-ray spectroscopy study on the electronic structure of Sn-added p-type SnO films. <i>Journal of Physics Condensed Matter</i> , <b>2020</b> , 32, 065502	1.8	5
553	Initial oxidation and surface stability diagram of Ge(100) as a function of the temperature and oxygen partial pressure through ab initio thermodynamics. <i>Physica Scripta</i> , <b>2020</b> , 95, 025701	2.6	
552	Atomic engineering of metastable BeO <sub>6</sub> octahedra in a rocksalt framework. <i>Applied Surface Science</i> , <b>2020</b> , 501, 144280	6.7	4
551	Atomic layer deposition of Ta-doped SnO <sub>2</sub> films with enhanced dopant distribution for thermally stable capacitor electrode applications. <i>Applied Surface Science</i> , <b>2019</b> , 497, 143804	6.7	5
550	Substrate Effects on the Growth Behavior of Atomic-Layer-Deposited Ru Thin Films Using RuO <sub>4</sub> Precursor and N <sub>2</sub> /H <sub>2</sub> Mixed Gas. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 22539-22549	3.8	5
549	Understanding ferroelectric phase formation in doped HfO thin films based on classical nucleation theory. <i>Nanoscale</i> , <b>2019</b> , 11, 19477-19487	7.7	29
548	Developing Precursor Chemistry for Atomic Layer Deposition of High-Density, Conformal GeTe Films for Phase-Change Memory. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 8663-8672	9.6	9
547	Electroforming-Free Bipolar Resistive Switching in GeSe Thin Films with a Ti-Containing Electrode. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 38910-38920	9.5	5
546	Effect of the Annealing Temperature of the Seed Layer on the Following Main Layer in Atomic-Layer-Deposited SrTiO <sub>3</sub> Thin Films. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1800557	2.5	0
545	Novel Selector-Induced Current-Limiting Effect through Asymmetry Control for High-Density One-Selector/One-Resistor Crossbar Arrays. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800806	6.4	7
544	Reduction of the Hysteresis Voltage in Atomic-Layer-Deposited p-Type SnO Thin-Film Transistors by Adopting an Al <sub>2</sub> O <sub>3</sub> Interfacial Layer. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900371	6.4	11
543	Ferroelectric memories <b>2019</b> , 393-441		5
542	Modeling of Negative Capacitance in Ferroelectric Thin Films. <i>Advanced Materials</i> , <b>2019</b> , 31, e1805266	24	55
541	Stochastic Learning with Back Propagation <b>2019</b> ,		1

540	Matrix Mapping on Crossbar Memory Arrays with Resistive Interconnects and Its Use in In-Memory Compression of Biosignals. <i>Micromachines</i> , <b>2019</b> , 10,	3.3	6
539	Effect of Electrode Material on the Crystallization of GeTe Grown by Atomic Layer Deposition for Phase Change Random Access Memory. <i>Micromachines</i> , <b>2019</b> , 10,	3.3	4
538	Role of the Short-Range Order in Amorphous Oxide on MoS <sub>2</sub> /a-SiO <sub>2</sub> and MoS <sub>2</sub> /a-HfO <sub>2</sub> Interfaces. <i>Physica Status Solidi (B): Basic Research</i> , <b>2019</b> , 256, 1900002	1.3	2
537	Broad Phase Transition of Fluorite-Structured Ferroelectrics for Large Electrocaloric Effect. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1900177	2.5	7
536	Orientation-dependent structural and electronic properties of Ge/a-GeO <sub>2</sub> interfaces: first-principles study. <i>Journal Physics D: Applied Physics</i> , <b>2019</b> , 52, 155101	3	1
535	Tunneling Properties of the Charge Carriers through Sub-2-nm-Thick Oxide in Ge/a-GeO <sub>2</sub> /Ge Structures Using the First-Principles Scattering-State Method. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	1
534	Transient Negative Capacitance Effect in Atomic-Layer-Deposited Al <sub>2</sub> O <sub>3</sub> /Hf <sub>0.3</sub> Zr <sub>0.7</sub> O <sub>2</sub> Bilayer Thin Film. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1808228	15.6	31
533	Impact of Zr Content in Atomic Layer Deposited Hf <sub>1-x</sub> Zr <sub>x</sub> O <sub>2</sub> Thin Films <b>2019</b> , 75-101		3
532	Impact of Electrodes on the Ferroelectric Properties <b>2019</b> , 341-364		2
531	Effect of Surface/Interface Energy and Stress on the Ferroelectric Properties <b>2019</b> , 145-172		4
530	Pyroelectric and Electrocaloric Effects and Their Applications <b>2019</b> , 217-244		2
529	Negative Capacitance in HfO <sub>2</sub> - and ZrO <sub>2</sub> -Based Ferroelectrics <b>2019</b> , 473-493		3
528	Artificial Neural Network for Response Inference of a Nonvolatile Resistance-Switch Array. <i>Micromachines</i> , <b>2019</b> , 10,	3.3	1
527	High-Performance Thin-Film Transistors of Quaternary Indium-Zinc-Tin Oxide Films Grown by Atomic Layer Deposition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 14892-14901	9.5	25
526	Markov Chain Hebbian Learning Algorithm With Ternary Synaptic Units. <i>IEEE Access</i> , <b>2019</b> , 7, 10208-10223	3.5	3
525	Time-Efficient Stateful Dual-Bit-Memristor Logic. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1900033	2.5	10
524	Equilibrium crystal shape of GaAs and InAs considering surface vibration and new (111)B reconstruction: ab-initio thermodynamics. <i>Scientific Reports</i> , <b>2019</b> , 9, 1127	4.9	9
523	A first-principles study of the structural and electronic properties of the epitaxial Ge(1 1 1)/La <sub>2</sub> O <sub>3</sub> (0 0 1) heterostructure. <i>Journal Physics D: Applied Physics</i> , <b>2019</b> , 52, 365101	3	1



522	Scaling the Equivalent Oxide Thickness by Employing a TiO <sub>2</sub> Thin Film on a ZrO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> -Based Dielectric for Further Scaling of Dynamic Random Access Memory. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1900282	2.5	5
521	Memristor crossbar array for binarized neural networks. <i>AIP Advances</i> , <b>2019</b> , 9, 045131	1.5	11
520	Leakage Current Control of SrTiO <sub>3</sub> Thin Films through Al Doping at the Interface between Dielectric and Electrode Layers via Atomic Layer Deposition. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1900373	2.5	3
519	Electrically-generated memristor based on inkjet printed silver nanoparticles. <i>Nanoscale Advances</i> , <b>2019</b> , 1, 2990-2998	5.1	13
518	Atomic Layer Deposition of Nanocrystalline-As-Deposited (GeTe) <sub>x</sub> (Sb <sub>2</sub> Te <sub>3</sub> ) <sub>1-x</sub> Films for Endurable Phase Change Memory. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 8752-8763	9.6	8
517	A First-Principles Study on the Oxygen Adsorption and Interface Characteristics with a-GeO <sub>2</sub> of Ge[001] Nanowire. <i>Journal of the Korean Physical Society</i> , <b>2019</b> , 75, 283-287	0.6	
516	Fluorite-structure antiferroelectrics. <i>Reports on Progress in Physics</i> , <b>2019</b> , 82, 124502	14.4	33
515	A comprehensive study on the mechanism of ferroelectric phase formation in hafnia-zirconia nanolaminates and superlattices. <i>Applied Physics Reviews</i> , <b>2019</b> , 6, 041403	17.3	41
514	Theoretical understanding of the catalyst-free growth mechanism of GaAs B nanowires. <i>Applied Surface Science</i> , <b>2019</b> , 497, 143740	6.7	3
513	Ferroelectric switching in bilayer 3R MoS via interlayer shear mode driven by nonlinear phononics. <i>Scientific Reports</i> , <b>2019</b> , 9, 14919	4.9	7
512	What Will Come After V-NAND Vertical Resistive Switching Memory?. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800914	6.4	38
511	Optical control of the layer degree of freedom through Wannier-Stark states in polar 3R MoS. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 315502	1.8	3
510	Synthesis of Large Area Two-Dimensional MoS <sub>2</sub> Films by Sulfurization of Atomic Layer Deposited MoO <sub>3</sub> Thin Film for Nanoelectronic Applications. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 7521-7531	5.6	19
509	Defect-Engineered Electroforming-Free Analog HfO Memristor and Its Application to the Neural Network. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 47063-47072	9.5	18
508	Temperature controlled Ru and RuO growth via O radical-enhanced atomic layer deposition with Ru(EtCp). <i>Journal of Chemical Physics</i> , <b>2019</b> , 151, 204701	3.9	8
507	Single-Cell Stateful Logic Using a Dual-Bit Memristor. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1800629	2.5	17
506	Nucleation-Limited Ferroelectric Orthorhombic Phase Formation in Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Thin Films. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800436	6.4	36
505	Thermodynamic and Kinetic Origins of Ferroelectricity in Fluorite Structure Oxides. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800522	6.4	71

504	Fabrication of a Cu-Cone-Shaped Cation Source Inserted Conductive Bridge Random Access Memory and Its Improved Switching Reliability. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1806278	15.6	33
503	Mitigating wakeup effect and improving endurance of ferroelectric HfO <sub>2</sub> -ZrO <sub>2</sub> thin films by careful La-doping. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 034101	2.5	64
502	2D Electron Gas at the Interface of Atomic-Layer-Deposited Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> on SrTiO <sub>3</sub> Single Crystal Substrate. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800527	6.4	13
501	A True Random Number Generator Using Threshold-Switching-Based Memristors in an Efficient Circuit Design. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800543	6.4	13
500	Controlling the Electrical Characteristics of ZrO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> /ZrO <sub>2</sub> Capacitors by Adopting a Ru Top Electrode Grown via Atomic Layer Deposition. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2019</b> , 13, 1800454	2.5	13
499	Quantitative Analysis of the Incorporation Behaviors of Sr and Ti Atoms During the Atomic Layer Deposition of SrTiO Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 8836-8844	9.5	15
498	InGaZnO oxide semiconductor based charge trap device for NAND flash memory. <i>Nanotechnology</i> , <b>2018</b> , 29, 155203	3.4	16
497	Nonvolatile Memory Materials for Neuromorphic Intelligent Machines. <i>Advanced Materials</i> , <b>2018</b> , 30, e1704729	24	121
496	Chemical interactions in the atomic layer deposition of GeSbSeTe films and their ovonic threshold switching behavior. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 5025-5032	7.1	22
495	An artificial nociceptor based on a diffusive memristor. <i>Nature Communications</i> , <b>2018</b> , 9, 417	17.4	183
494	Improved Ferroelectric Switching Endurance of La-Doped HfZrO Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 2701-2708	9.5	134
493	Highly Flexible Resistive Switching Memory Based on the Electronic Switching Mechanism in the Al/TiO/Al/Polyimide Structure. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 1828-1835	9.5	44
492	Composition, Microstructure, and Electrical Performance of Sputtered SnO Thin Films for p-Type Oxide Semiconductor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 3810-3821	9.5	13
491	Nociceptive Memristor. <i>Advanced Materials</i> , <b>2018</b> , 30, 1704320	24	69
490	Demonstrating the Ultrathin Metal-Insulator-Metal Diode Using TiN/ZrO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> /ZrO <sub>2</sub> Stack by Employing RuO <sub>2</sub> Top Electrode. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 660-666	2.9	12
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128	Properties of lanthanum oxide thin films deposited by cyclic chemical vapor deposition using tris(isopropyl-cyclopentadienyl)lanthanum precursor. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 024111	2.5	44
127	First-principles study of point defects in rutile TiO <sub>2</sub> . <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	189

126	Direct growth of single-walled carbon nanotubes on conducting ZnO films and its field emission properties. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 113116	3.4	29
125	Fabrication of suspended single-walled carbon nanotubes via a direct lithographic route. <i>Journal of Materials Chemistry</i> , <b>2006</b> , 16, 174-178		8
124	Study of the negative resistance phenomenon in transition metal oxide films from a statistical mechanics point of view. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 113724	2.5	36
123	Resistive Switching in Pt/Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> /Ru Stacked Structures. <i>Electrochemical and Solid-State Letters</i> , <b>2006</b> , 9, G343		102
122	Study on the resistive switching time of TiO <sub>2</sub> thin films. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 012906	3.4	93
121	BORON DIFFUSION PROPERTIES AND ELECTRICAL CHARACTERISTICS OF p+ Poly-Si <sub>0.73</sub> Ge <sub>0.27</sub> /AlN <sub>x</sub> /Al <sub>2</sub> O <sub>3</sub> /AlN <sub>x</sub> /n-Si (100) USING IN-SITU ALD. <i>Integrated Ferroelectrics</i> , <b>2005</b> , 74, 79-85	0.8	
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119	Resistive switching mechanism of TiO <sub>2</sub> thin films grown by atomic-layer deposition. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 033715	2.5	938
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114	Reasons for obtaining an optical dielectric constant from the Poole-Frenkel conduction behavior of atomic-layer-deposited HfO <sub>2</sub> films. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 072903	3.4	54
113	Chemically conformal deposition of SrTiO <sub>3</sub> thin films by Atomic Layer Deposition using conventional metal organic precursors and remote-plasma activated H <sub>2</sub> O. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 158-161	2.5	12
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109	Improvements in Growth Behavior of CVD Ru Films on Film Substrates for Memory Capacitor Integration. <i>Journal of the Electrochemical Society</i> , <b>2005</b> , 152, C15	3.9	42

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106	Dielectric constant dispersion of yttrium-doped (Ba,Sr)TiO <sub>3</sub> films in the high-frequency (10kHz-7GHz) domain. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 232903	3.4	7
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104	Identification of a determining parameter for resistive switching of TiO <sub>2</sub> thin films. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 262907	3.4	296
103	Tunneling-assisted Poole-Frenkel conduction mechanism in HfO <sub>2</sub> thin films. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 113701	2.5	72
102	Structurally and Electrically Uniform Deposition of High-k TiO <sub>2</sub> Thin Films on a Ru Electrode in Three-Dimensional Contact Holes Using Atomic Layer Deposition. <i>Electrochemical and Solid-State Letters</i> , <b>2005</b> , 8, F59		34
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98	Investigation of Ru/TiN Bottom Electrodes Prepared by Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , <b>2004</b> , 43, 6635-6639	1.4	6
97	Comparison between atomic-layer-deposited HfO <sub>2</sub> films using O <sub>3</sub> or H <sub>2</sub> O oxidant and Hf[N(CH <sub>3</sub> ) <sub>2</sub> ] <sub>4</sub> precursor. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 5953-5955	3.4	72
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94	Fabrication of a metal-oxide-semiconductor-type capacitive microtip array using SiO <sub>2</sub> or HfO <sub>2</sub> gate insulators. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 5412-5414	3.4	1
93	Film-thickness-dependent Curie-Weiss behavior of (Ba,Sr)TiO <sub>3</sub> thin-film capacitors having Pt electrodes. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 5313-5315	3.4	23
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91	Voltage-induced degradation in self-aligned polycrystalline silicon gate n-type field-effect transistors with HfO <sub>2</sub> gate dielectrics. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 5965-5967	3.4	11

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87	Changes in structures and electrical conduction mechanisms of chemical vapor deposited Ta <sub>2</sub> O <sub>5</sub> thin films by annealing under O <sub>3</sub> atmosphere with ultraviolet light radiation. <i>Journal of Materials Research</i> , <b>2004</b> , 19, 1516-1523	2.5	6
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82	High dielectric constant TiO <sub>2</sub> thin films on a Ru electrode grown at 250 °C by atomic-layer deposition. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 4112-4114	3.4	280
81	Post-Annealing Effects on Fixed Charge and Slow/Fast Interface States of TiN/Al <sub>2</sub> O <sub>3</sub> /p-Si Metal Oxide Semiconductor Capacitor. <i>Japanese Journal of Applied Physics</i> , <b>2003</b> , 42, 1222-1226	1.4	47
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20	Interface potential barrier height and leakage current behavior of Pt/(Ba, Sr)TiO <sub>3</sub> /Pt capacitors fabricated by sputtering process. <i>Integrated Ferroelectrics</i> , <b>1996</b> , 13, 157-177	0.8	26
19	Characterization of MOCVD Pt electrode for ferroelectric thin films. <i>Integrated Ferroelectrics</i> , <b>1996</b> , 13, 79-86	0.8	3

18	Effects of oxidants on the deposition and dielectric properties of the SrTiO <sub>3</sub> thin films prepared by liquid source metal-organic chemical vapor deposition (MOCVD). <i>Integrated Ferroelectrics</i> , <b>1996</b> , 12, 199-213	9.8	12
17	Deposition of Pb(Zr,Ti)O <sub>3</sub> Thin Films by Metal-Organic Chemical Vapor Deposition Using Ediketonate Precursors at Low Temperatures. <i>Journal of the American Ceramic Society</i> , <b>1995</b> , 78, 329-336	3.8	10
16	Pb-Diffusion Barrier Layers for PbTiO <sub>3</sub> Thin Films Deposited on Si Substrates by Metal Organic Chemical Vapor Deposition. <i>Journal of the American Ceramic Society</i> , <b>1995</b> , 78, 337-341	3.8	7
15	Deposition and Electrical Characterization of Very Thin SrTiO <sub>3</sub> Films for Ultra Large Scale Integrated Dynamic Random Access Memory Application. <i>Japanese Journal of Applied Physics</i> , <b>1995</b> , 34, 5178-5183	1.4	77
14	Deposition of extremely thin (Ba,Sr)TiO <sub>3</sub> thin films for ultra-large-scale integrated dynamic random access memory application. <i>Applied Physics Letters</i> , <b>1995</b> , 67, 2819-2821	3.4	261
13	Deposition and characterization of ZrO <sub>2</sub> thin films on silicon substrate by MOCVD. <i>Journal of Materials Research</i> , <b>1993</b> , 8, 1361-1367	2.5	48
12	Deposition and characterization of Pb TiO <sub>3</sub> thin films on silicon wafers using metalorganic sources. <i>Journal of Electronic Materials</i> , <b>1993</b> , 22, 707-716	1.9	10
11	Negative Capacitance from the Inhomogenous Stray Field in a Ferroelectric Dielectric Structure. <i>Advanced Functional Materials</i> , 2200389	15.6	3
10	In-Depth Analysis of One Selector One Resistor Crossbar Array for Its Writing and Reading Operations for Hardware Neural Network with Finite Wire Resistance. <i>Advanced Intelligent Systems</i> , 2100174	6	4
9	Poster: Memristive Systems	523-587	
8	Nanosession: Atomic Layer Deposition	419-428	
7	Enhanced Ferroelectric Properties in Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Films Using a Hf <sub>0.61</sub> N <sub>0.72</sub> Interfacial Layer. <i>Advanced Electronic Materials</i> , 2100042	6.4	8
6	Multi-Level Control of Conductive Filament Evolution and Enhanced Resistance Controllability of the Cu-Cone Structure Embedded Conductive Bridge Random Access Memory. <i>Advanced Electronic Materials</i> , 2100209	6.4	2
5	Training Method for Accurate Off-Chip Training of One-Selector-One-Resistor Crossbar Array with Nonlinearity and Wire Resistance. <i>Advanced Intelligent Systems</i> , 2100256	6	1
4	Reliable Domain-Specific Exclusive Logic Gates Using Reconfigurable Sequential Logic Based on Antiparallel Bipolar Memristors. <i>Advanced Intelligent Systems</i> , 2100267	6	3
3	The fundamentals and applications of ferroelectric HfO <sub>2</sub> . <i>Nature Reviews Materials</i> ,	73-3	22
2	Demonstration of Neuromodulation-inspired Stashing System for Energy-efficient Learning of Spiking Neural Network using a Self-Rectifying Memristor Array. <i>Advanced Functional Materials</i> , 2200337	15.6	2
1	The Contrasting Impacts of the Al <sub>2</sub> O <sub>3</sub> and Y <sub>2</sub> O <sub>3</sub> Insertion Layers on the Crystallization of ZrO <sub>2</sub> Films for Dynamic Random Access Memory Capacitors. <i>Advanced Electronic Materials</i> , 2200099	6.4	1

