

Myoung-Jae Lee

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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.

87

papers

8,368

citations

39

h-index

88

g-index

88

ext. papers

9,027

ext. citations

7

avg, IF

5.21

L-index

#	Paper	IF	Citations
87	A fast, high-endurance and scalable non-volatile memory device made from asymmetric Ta ₂ O _{5-x} /TaO _{2-x} bilayer structures. <i>Nature Materials</i> , 2011 , 10, 625-30	27	1629
86	Reproducible resistance switching in polycrystalline NiO films. <i>Applied Physics Letters</i> , 2004 , 85, 5655-5657	3.4	832
85	Electrical observations of filamentary conduction for the resistive memory switching in NiO films. <i>Applied Physics Letters</i> , 2006 , 88, 202102	3.4	447
84	Two Series Oxide Resistors Applicable to High Speed and High Density Nonvolatile Memory. <i>Advanced Materials</i> , 2007 , 19, 3919-3923	24	376
83	Electrical manipulation of nanofilaments in transition-metal oxides for resistance-based memory. <i>Nano Letters</i> , 2009 , 9, 1476-81	11.5	354
82	Random Circuit Breaker Network Model for Unipolar Resistance Switching. <i>Advanced Materials</i> , 2008 , 20, 1154-1159	24	302
81	In situ observation of filamentary conducting channels in an asymmetric Ta ₂ O _{5-x} /TaO _{2-x} bilayer structure. <i>Nature Communications</i> , 2013 , 4, 2382	17.4	249
80	Deterministic Two-Dimensional Polymorphism Growth of Hexagonal n-Type SnS ₂ and Orthorhombic p-Type SnS Crystals. <i>Nano Letters</i> , 2015 , 15, 3703-8	11.5	231
79	Observation of electric-field induced Ni filament channels in polycrystalline NiOx film. <i>Applied Physics Letters</i> , 2007 , 91, 222103	3.4	211
78	A Low-Temperature-Grown Oxide Diode as a New Switch Element for High-Density, Nonvolatile Memories. <i>Advanced Materials</i> , 2007 , 19, 73-76	24	205
77	Low-Temperature-Grown Transition Metal Oxide Based Storage Materials and Oxide Transistors for High-Density Non-volatile Memory. <i>Advanced Functional Materials</i> , 2009 , 19, 1587-1593	15.6	189
76	Improvement of resistive memory switching in NiO using IrO ₂ . <i>Applied Physics Letters</i> , 2006 , 88, 232106	3.4	174
75	Effects of metal electrodes on the resistive memory switching property of NiO thin films. <i>Applied Physics Letters</i> , 2008 , 93, 042115	3.4	153
74	2-stack 1D-1R Cross-point Structure with Oxide Diodes as Switch Elements for High Density Resistance RAM Applications 2007 ,		150
73	Write Current Reduction in Transition Metal Oxide Based Resistance Change Memory. <i>Advanced Materials</i> , 2008 , 20, 924-928	24	148
72	Modeling for bipolar resistive memory switching in transition-metal oxides. <i>Physical Review B</i> , 2010 , 82,	3.3	144
71	Conductivity switching characteristics and reset currents in NiO films. <i>Applied Physics Letters</i> , 2005 , 86, 093509	3.4	140

70	Thermoelectric materials by using two-dimensional materials with negative correlation between electrical and thermal conductivity. <i>Nature Communications</i> , 2016 , 7, 12011	17.4	136
69	Interlayer orientation-dependent light absorption and emission in monolayer semiconductor stacks. <i>Nature Communications</i> , 2015 , 6, 7372	17.4	124
68	High-Current-Density CuO x/InZnOx Thin-Film Diodes for Cross-Point Memory Applications. <i>Advanced Materials</i> , 2008 , 20, 3066-3069	24	108
67	A plasma-treated chalcogenide switch device for stackable scalable 3D nanoscale memory. <i>Nature Communications</i> , 2013 , 4, 2629	17.4	107
66	Rotation-misfit-free heteroepitaxial stacking and stitching growth of hexagonal transition-metal dichalcogenide monolayers by nucleation kinetics controls. <i>Advanced Materials</i> , 2015 , 27, 3803-10	24	100
65	Oxide double-layer nanocrossbar for ultrahigh-density bipolar resistive memory. <i>Advanced Materials</i> , 2011 , 23, 4063-7	24	100
64	Different resistance switching behaviors of NiO thin films deposited on Pt and SrRuO3 electrodes. <i>Applied Physics Letters</i> , 2009 , 95, 022109	3.4	100
63	Electrode dependence of resistance switching in polycrystalline NiO films. <i>Applied Physics Letters</i> , 2005 , 87, 263507	3.4	91
62	Multi-level switching of triple-layered TaOx RRAM with excellent reliability for storage class memory 2012 ,		90
61	Resistance-switching Characteristics of polycrystalline Nb/sub 2/O/sub 5/ for nonvolatile memory application. <i>IEEE Electron Device Letters</i> , 2005 , 26, 292-294	4.4	90
60	Resistance switching of the nonstoichiometric zirconium oxide for nonvolatile memory applications. <i>IEEE Electron Device Letters</i> , 2005 , 26, 719-721	4.4	86
59	Scaling theory for unipolar resistance switching. <i>Physical Review Letters</i> , 2010 , 105, 205701	7.4	67
58	Random and localized resistive switching observation in Pt/NiO/Pt. <i>Physica Status Solidi - Rapid Research Letters</i> , 2007 , 1, 280-282	2.5	65
57	Electromigration effect of Ni electrodes on the resistive switching characteristics of NiO thin films. <i>Applied Physics Letters</i> , 2007 , 91, 082104	3.4	65
56	Resistive switching transition induced by a voltage pulse in a Pt/NiO/Pt structure. <i>Applied Physics Letters</i> , 2010 , 97, 052106	3.4	61
55	Highly Uniform Switching of Tantalum Embedded Amorphous Oxide Using Self-Compliance Bipolar Resistive Switching. <i>IEEE Electron Device Letters</i> , 2011 , 32, 399-401	4.4	60
54	Decrease in switching voltage fluctuation of Pt/NiOx/Pt structure by process control. <i>Applied Physics Letters</i> , 2007 , 91, 022112	3.4	60
53	Modeling for multilevel switching in oxide-based bipolar resistive memory. <i>Nanotechnology</i> , 2012 , 23, 225702	3.4	50

52	High-performance nanowire oxide photo-thin film transistor. <i>Advanced Materials</i> , 2013 , 25, 5549-54	24	46
51	A skin-like two-dimensionally pixelized full-color quantum dot photodetector. <i>Science Advances</i> , 2019 , 5, eaax8801	14.3	46
50	Highly-scalable threshold switching select device based on chalcogenide glasses for 3D nanoscaled memory arrays 2012 ,		43
49	Comparative structural and electrical analysis of NiO and Ti doped NiO as materials for resistance random access memory. <i>Journal of Applied Physics</i> , 2008 , 103, 013706	2.5	42
48	Large 1/f noise of unipolar resistance switching and its percolating nature. <i>Applied Physics Letters</i> , 2009 , 95, 122112	3.4	39
47	High-performance and scalable metal-chalcogenide semiconductors and devices via chalco-gel routes. <i>Science Advances</i> , 2018 , 4, eaap9104	14.3	38
46	Interface-modified random circuit breaker network model applicable to both bipolar and unipolar resistance switching. <i>Applied Physics Letters</i> , 2011 , 98, 033502	3.4	37
45	Anomalous effect due to oxygen vacancy accumulation below the electrode in bipolar resistance switching Pt/Nb:SrTiO ₃ cells. <i>APL Materials</i> , 2014 , 2, 066103	5.7	35
44	Stackable All-Oxide-Based Nonvolatile Memory With Al_2O_3 Antifuse and $\text{p-CuO}/\text{n-InZnO}$ Diode. <i>IEEE Electron Device Letters</i> , 2009 , 30, 550-552	4.4	34
43	Study of Transport and Dielectric of Resistive Memory States in NiO Thin Film. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L1301-L1303	1.4	33
42	Conversion from unipolar to bipolar resistance switching by inserting Ta ₂ O ₅ layer in Pt/TaO _x /Pt cells. <i>Applied Physics Letters</i> , 2011 , 98, 183507	3.4	31
41	Interpretation of nanoscale conducting paths and their control in nickel oxide (NiO) thin films. <i>Applied Physics Letters</i> , 2008 , 92, 202112	3.4	31
40	Fractal Dimension of Conducting Paths in Nickel Oxide (NiO) Thin Films During Resistance Switching. <i>IEEE Nanotechnology Magazine</i> , 2010 , 9, 131-133	2.6	27
39	A simple device unit consisting of all NiO storage and switch elements for multilevel terabit nonvolatile random access memory. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 4475-9	9.5	26
38	Giant and Stable Conductivity Switching Behaviors in ZrO ₂ Films Deposited by Pulsed Laser Depositions. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L345-L347	1.4	24
37	Reduction in high reset currents in unipolar resistance switching Pt/SrTiO _x /Pt capacitors using acceptor doping. <i>Applied Physics Letters</i> , 2010 , 97, 093505	3.4	20
36	Vapor Transport Synthesis of Two-Dimensional SnS ₂ Nanocrystals Using a SnS ₂ Precursor Obtained from the Sulfurization of SnO ₂ . <i>Crystal Growth and Design</i> , 2016 , 16, 3884-3889	3.5	19
35	Improved Resistive Switching Reliability in Graded NiO Multilayer for Resistive Nonvolatile Memory Devices. <i>IEEE Electron Device Letters</i> , 2010 , 31, 725-727	4.4	19

34	Time-dependent current-voltage curves during the forming process in unipolar resistance switching. <i>Applied Physics Letters</i> , 2011 , 98, 053503	3.4	18
33	Multilevel resistance in ZnO nanowire memristors enabled by hydrogen annealing treatment. <i>AIP Advances</i> , 2016 , 6, 125010	1.5	17
32	Three-Dimensional Integration Approach to High-Density Memory Devices. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 3820-3828	2.9	16
31	Effects of a Load Resistor on Conducting Filament Characteristics and Unipolar Resistive Switching Behaviors in a Pt/NiO/Pt Structure. <i>IEEE Electron Device Letters</i> , 2012 , 33, 881-883	4.4	15
30	The role of contact resistance in GeTe and Ge ₂ Sb ₂ Te ₅ nanowire phase change memory reset switching current. <i>Applied Physics Letters</i> , 2015 , 106, 193106	3.4	13
29	Reliable Multivalued Conductance States in TaO Memristors through Oxygen Plasma-Assisted Electrode Deposition with in Situ-Biased Conductance State Transmission Electron Microscopy Analysis. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 29757-29765	9.5	13
28	Interface sulfur passivation using H ₂ S annealing for atomic-layer-deposited Al ₂ O ₃ films on an ultrathin-body In _{0.53} Ga _{0.47} As-on-insulator. <i>Applied Surface Science</i> , 2014 , 315, 178-183	6.7	13
27	Theoretical studies on distribution of resistances in multilevel bipolar oxide resistive memory by Monte Carlo method. <i>Applied Physics Letters</i> , 2013 , 103, 113504	3.4	13
26	Defect-induced degradation of rectification properties of aged Pt _{1-x} In _x Zn _{1-y} O _y Schottky diodes. <i>Applied Physics Letters</i> , 2008 , 92, 233507	3.4	13
25	Role of Hydrogen in Active Layer of Oxide-Semiconductor-Based Thin Film Transistors. <i>Crystals</i> , 2019 , 9, 75	2.3	12
24	Optical and photoelectric properties of Mn-doped ZnS thin film on a flexible indium-tin-oxide/polyethylene terephthalate substrate prepared by pulsed laser deposition. <i>Optical Materials Express</i> , 2016 , 6, 2336	2.6	12
23	Properties of Nickel Oxide Films by DC Reactive Sputtering. <i>Integrated Ferroelectrics</i> , 2004 , 68, 19-25	0.8	12
22	Impact of transient currents caused by alternating drain stress in oxide semiconductors. <i>Scientific Reports</i> , 2017 , 7, 9782	4.9	11
21	Analysis of the hump phenomenon and needle defect states formed by driving stress in the oxide semiconductor. <i>Scientific Reports</i> , 2019 , 9, 11977	4.9	10
20	Electron-blocking by the potential barrier originated from the asymmetrical local density of state in the oxide semiconductor. <i>Scientific Reports</i> , 2017 , 7, 17963	4.9	9
19	Effects of growth temperature on surface morphology of InP grown on patterned Si(0 0 1) substrates. <i>Journal of Crystal Growth</i> , 2015 , 416, 113-117	1.6	9
18	Synthesis of Bi ₂ Te ₃ Single Crystals with Lateral Size up to Tens of Micrometers by Vapor Transport and Its Potential for Thermoelectric Applications. <i>Crystal Growth and Design</i> , 2019 , 19, 2024-2029	3.5	8
17	Drain-Induced Barrier Lowering in Oxide Semiconductor Thin-Film Transistors With Asymmetrical Local Density of States. <i>IEEE Journal of the Electron Devices Society</i> , 2018 , 6, 830-834	2.3	8

16	A Hybrid Gate Dielectrics of Ion Gel with Ultra-Thin Passivation Layer for High-Performance Transistors Based on Two-Dimensional Semiconductor Channels. <i>Scientific Reports</i> , 2017 , 7, 14194	4.9	7
15	Multilevel Programmable Oxide Diode for Cross-Point Memory by Electrical-Pulse-Induced Resistance Change. <i>IEEE Electron Device Letters</i> , 2009 , 30, 1036-1038	4.4	7
14	The Dielectric Properties of Pb _{0.65} Ba _{0.35} ZrO ₃ Thin Films Applicable to Microwave Tunable Devices. <i>Integrated Ferroelectrics</i> , 2004 , 66, 205-211	0.8	7
13	Schottky barrier contrasts in single and bi-layer graphene contacts for MoS ₂ field-effect transistors. <i>Applied Physics Letters</i> , 2015 , 107, 233106	3.4	6
12	Measurement of Exciton and Trion Energies in Multistacked hBN/WS Coupled Quantum Wells for Resonant Tunneling Diodes. <i>ACS Nano</i> , 2020 , 14, 16114-16121	16.7	6
11	High-Speed and Low-Temperature Atmospheric Photo-Annealing of Large-Area Solution-Processed IGZO Thin-Film Transistors by Using Programmable Pulsed Operation of Xenon Flash Lamp. <i>Journal of the Korean Physical Society</i> , 2019 , 74, 1052-1058	0.6	4
10	Fabrication of one-diode-one-resistor memory cell structure of Pt/CuO/Pt/TiN/Pt/CuO/InZnOx/Pt and the effect of TiN layer on the improved resistance switching characteristics. <i>Thin Solid Films</i> , 2012 , 520, 2272-2277	2.2	4
9	Interpretation of set and reset switching in nickel oxide thin films. <i>Applied Physics Letters</i> , 2014 , 104, 222902	3.4	4
8	Investigation for Resistive Switching by Controlling Overflow Current in Resistance Change Nonvolatile Memory. <i>IEEE Nanotechnology Magazine</i> , 2012 , 11, 1122-1125	2.6	4
7	Improved Distribution of Resistance Switching Through Localized Ti-Doped NiO Layer With InZnOx/CuOx Oxide Diode. <i>IEEE Journal of the Electron Devices Society</i> , 2018 , 6, 905-909	2.3	4
6	Photo-thermoelectric properties of SnS nanocrystals with orthorhombic layered structure. <i>Applied Physics Letters</i> , 2017 , 111, 013104	3.4	3
5	Emerging Oxide Resistance Change Memories 2014 , 195-218		3
4	Non-equilibrium chiral domain wall dynamics excited by transverse magnetic field pulses. <i>Journal of Physics Condensed Matter</i> , 2021 , 33, 015803	1.8	2
3	Comparative Study of SnSe ₂ Exfoliation and the Photothermal Current from the Products. <i>Crystal Growth and Design</i> , 2021 , 21, 6648-6654	3.5	1
2	Photocurrent response in few-layered ReS ₂ devices with short and open circuits. <i>Journal of the Korean Physical Society</i> , 2022 , 80, 53-58	0.6	0
1	Bi-Layered Reram: Multi-Level Switching, Reliability and its Mechanism for Storage Class Memory and Reconfiguration Logic53-54		