Kyung Min Kim

List of Publications by Year
in descending order

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76	6,810	94433 37	82547 72
papers	citations	h-index	g-index

78	78	78	5668
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Atomic structure of conducting nanofilaments in TiO2 resistive switching memory. Nature Nanotechnology, 2010, 5, 148-153.	31.5	1,866
2	Nanofilamentary resistive switching in binary oxide system; a review on the present status and outlook. Nanotechnology, 2011, 22, 254002.	2.6	530
3	Anode-interface localized filamentary mechanism in resistive switching of TiO2 thin films. Applied Physics Letters, 2007, 91, .	3.3	384
4	An artificial nociceptor based on a diffusive memristor. Nature Communications, 2018, 9, 417.	12.8	295
5	Memristors for Energyâ€Efficient New Computing Paradigms. Advanced Electronic Materials, 2016, 2, 1600090.	5.1	272
6	Localized switching mechanism in resistive switching of atomic-layer-deposited TiO2 thin films. Applied Physics Letters, 2007, 90, 242906.	3.3	208
7	Low-Power, Self-Rectifying, and Forming-Free Memristor with an Asymmetric Programing Voltage for a High-Density Crossbar Application. Nano Letters, 2016, 16, 6724-6732.	9.1	171
8	A detailed understanding of the electronic bipolar resistance switching behavior in Pt/TiO₂/Pt structure. Nanotechnology, 2011, 22, 254010.	2.6	162
9	Pt/Ta₂O₅/HfO_{2â^'}_x/Ti Resistive Switching Memory Competing with Multilevel NAND Flash. Advanced Materials, 2015, 27, 3811-3816.	21.0	152
10	The conical shape filament growth model in unipolar resistance switching of TiO2 thin film. Applied Physics Letters, 2009, 94, .	3.3	138
11	A Pt/TiO2/Ti Schottky-type selection diode for alleviating the sneak current in resistance switching memory arrays. Nanotechnology, 2010, 21, 195201.	2.6	129
12	Multi-level switching of triple-layered TaOx RRAM with excellent reliability for storage class memory. , 2012, , .		119
13	Electrically configurable electroforming and bipolar resistive switching in Pt/TiO₂/Pt structures. Nanotechnology, 2010, 21, 305203.	2.6	117
14	Nociceptive Memristor. Advanced Materials, 2018, 30, 1704320.	21.0	116
15	Selfâ€Limited Switching in Ta₂O₅/TaO_x Memristors Exhibiting Uniform Multilevel Changes in Resistance. Advanced Functional Materials, 2015, 25, 1527-1534.	14.9	111
16	Study on the resistive switching time of TiO2 thin films. Applied Physics Letters, 2006, 89, 012906.	3.3	103
17	Trilayer Tunnel Selectors for Memristor Memory Cells. Advanced Materials, 2016, 28, 356-362.	21.0	96
18	Voltage divider effect for the improvement of variability and endurance of TaOx memristor. Scientific Reports, 2016, 6, 20085.	3.3	93

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19	Collective Motion of Conducting Filaments in Pt/nâ€Type TiO₂/pâ€Type NiO/Pt Stacked Resistance Switching Memory. Advanced Functional Materials, 2011, 21, 1587-1592.	14.9	80
20	(In , Sn) 2 O 3 âˆ• Ti O 2 âˆ• Pt Schottky-type diode switch for the TiO2 resistive switching memory array. Applied Physics Letters, 2008, 92, .	3.3	77
21	Study on the electrical conduction mechanism of bipolar resistive switching TiO2 thin films using impedance spectroscopy. Applied Physics Letters, 2010, 96, .	3.3	76
22	Memristive tri-stable resistive switching at ruptured conducting filaments of a Pt/TiO₂/Pt cell. Nanotechnology, 2012, 23, 185202.	2.6	69
23	Titanium dioxide thin films for next-generation memory devices. Journal of Materials Research, 2013, 28, 313-325.	2.6	67
24	Influence of carrier injection on resistive switching of TiO2 thin films with Pt electrodes. Applied Physics Letters, 2006, 89, 162912.	3.3	66
25	Improved endurance of resistive switching TiO2 thin film by hourglass shaped MagnÃ©li filaments. Applied Physics Letters, 2011, 98, .	3.3	65
26	A Family of Stateful Memristor Gates for Complete Cascading Logic. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 4348-4355.	5.4	58
27	Combined Atomic Layer and Chemical Vapor Deposition, and Selective Growth of Ge₂Sb₂Te₅ Films on TiN/W Contact Plug. Chemistry of Materials, 2007, 19, 4387-4389.	6.7	55
28	Modeling for multilevel switching in oxide-based bipolar resistive memory. Nanotechnology, 2012, 23, 225702.	2.6	52
29	Thickness effect of ultra-thin Ta2O5 resistance switching layer in 28 nm-diameter memory cell. Scientific Reports, 2015, 5, 15965.	3.3	51
30	Filamentary Resistive Switching Localized at Cathode Interface in NiO Thin Films. Journal of the Electrochemical Society, 2009, 156, G213.	2.9	49
31	Role of Ru nano-dots embedded in TiO2 thin films for improving the resistive switching behavior. Applied Physics Letters, 2010, 97, .	3.3	49
32	Dual Conical Conducting Filament Model in Resistance Switching TiO2 Thin Films. Scientific Reports, 2015, 5, 7844.	3.3	46
33	Self-clocking fast and variation tolerant true random number generator based on a stochastic mott memristor. Nature Communications, 2021, 12, 2906.	12.8	46
34	Identification of the controlling parameter for the set-state resistance of a TiO2 resistive switching cell. Applied Physics Letters, 2010, 96, 112904.	3.3	43
35	A theoretical model for Schottky diodes for excluding the sneak current in cross bar array resistive memory. Nanotechnology, 2010, 21, 385202.	2.6	43
36	Spectroscopic investigation of the hole states in Ni-deficient NiO films. Journal of Materials Chemistry C, 2013, 1, 4334.	5.5	40

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37	Electronic bipolar resistance switching in an anti-serially connected Pt/TiO2/Pt structure for improved reliability. Nanotechnology, 2012, 23, 035201.	2.6	37
38	Fourâ€Bitsâ€Perâ€Cell Operation in an HfO₂â€Based Resistive Switching Device. Small, 2017, 13, 1701781.	10.0	37
39	A Stateful Logic Family Based on a New Logic Primitive Circuit Composed of Two Antiparallel Bipolar Memristors. Advanced Intelligent Systems, 2020, 2, 1900082.	6.1	36
40	High-Performance Phase-Pure SnS Photocathodes for Photoelectrochemical Water Splitting Obtained via Molecular Ink-Derived Seed-Assisted Growth of Nanoplates. ACS Applied Materials & Interfaces, 2020, 12, 15155-15166.	8.0	36
41	Low Variability Resistorâ€“Memristor Circuit Masking the Actual Memristor States. Advanced Electronic Materials, 2015, 1, 1500095.	5.1	34
42	Fully Functional Logicâ€Inâ€Memory Operations Based on a Reconfigurable Finiteâ€State Machine Using a Single Memristor. Advanced Electronic Materials, 2018, 4, 1800189.	5.1	33
43	Defect-Engineered Electroforming-Free Analog HfO_x Memristor and Its Application to the Neural Network. ACS Applied Materials & Interfaces, 2019, 11, 47063-47072.	8.0	33
44	Influence of the Interconnection Line Resistance and Performance of a Resistive Cross Bar Array Memory. Journal of the Electrochemical Society, 2010, 157, G211.	2.9	27
45	Switching Power Reduction in Phase Change Memory Cell Using CVD Ge[sub 2]Sb[sub 2]Te[sub 5] and Ultrathin TiO[sub 2] Films. Journal of the Electrochemical Society, 2009, 156, H59.	2.9	26
46	Scanning probe based observation of bipolar resistive switching NiO films. Applied Physics Letters, 2010, 97, .	3.3	26
47	Understanding structure-property relationship of resistive switching oxide thin films using a conical filament model. Applied Physics Letters, 2010, 97, .	3.3	26
48	Memristive Stateful Logic for Edge Boolean Computers. Advanced Intelligent Systems, 2021, 3, 2000278.	6.1	25
49	Stateful Inâ€Memory Logic System and Its Practical Implementation in a TaO_xâ€Based Bipolarâ€Type Memristive Crossbar Array. Advanced Intelligent Systems, 2020, 2, 1900156.	6.1	24
50	Singleâ€Cell Stateful Logic Using a Dualâ€Bit Memristor. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800629.	2.4	23
51	A study of the transition between the non-polar and bipolar resistance switching mechanisms in the TiN/TiO₂/Al memory. Nanoscale, 2016, 8, 16455-16466.	5.6	22
52	Surface redox induced bipolar switching of transition metal oxide films examined by scanning probe microscopy. Applied Physics A: Materials Science and Processing, 2011, 102, 827-834.	2.3	21
53	Enhancement of coercivity in sintered Nd-Fe-B magnets by grain-boundary diffusion of electrodeposited Cu-Nd Alloys. Metals and Materials International, 2016, 22, 340-344.	3.4	21
54	Synaptic transistors with human brain-like fJ energy consumption via double oxide semiconductor engineering for neuromorphic electronics. Journal of Materials Chemistry C, 2021, 9, 10243-10253.	5.5	21

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55	Thicknessâ€dependent electroforming behavior of ultraâ€thin Ta₂O₅ resistance switching layer. Physica Status Solidi - Rapid Research Letters, 2015, 9, 362-365.	2.4	19
56	â€œIt Is More Expressive for Meâ€: A Translingual Approach to Meaningful Literacy Instruction Through Sijo Poetry. TESOL Quarterly, 2020, 54, 281-309.	2.9	19
57	Academic socialization of doctoral students through feedback networks: a qualitative understanding of the graduate feedback landscape. Teaching in Higher Education, 2018, 23, 963-980.	2.6	18
58	Phase change memory cell using Ge2Sb2Te5 and softly broken-down TiO2 films for multilevel operation. Applied Physics Letters, 2010, 97, 132107.	3.3	17
59	Timeâ€Efficient Stateful Dualâ€Bitâ€Memristor Logic. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900033.	2.4	17
60	Bias polarity dependent local electrical conduction in resistive switching TiO₂ thin films. Physica Status Solidi - Rapid Research Letters, 2010, 4, 112-114.	2.4	14
61	Designed Memristor Circuit for Selfâ€Limited Analog Switching and its Application to a Memristive Neural Network. Advanced Electronic Materials, 2019, 5, 1800740.	5.1	14
62	Ternary Logic with Stateful Neural Networks Using a Bilayered TaO_Xâ€Based Memristor Exhibiting Ternary States. Advanced Science, 2022, 9, e2104107.	11.2	13
63	Demonstration of Neuromodulationâ€inspired Stashing System for Energyâ€efficient Learning of Spiking Neural Network using a Selfâ€Rectifying Memristor Array. Advanced Functional Materials, 2022, 32, .	14.9	12
64	Resistive Switching in $hbox{TiO}_{2}$ Thin Films Using the Semiconducting In-Ga-Zn-O Electrode. IEEE Electron Device Letters, 2012, 33, 582-584.	3.9	10
65	A Universal Error Correction Method for Memristive Stateful Logic Devices for Practical Nearâ€Memory Computing. Advanced Intelligent Systems, 2020, 2, 2000081.	6.1	10
66	Methods of Set Switching for Improving the Uniformity of Filament Formation in the TiO[sub 2] Thin Film. Electrochemical and Solid-State Letters, 2010, 13, G51.	2.2	8
67	A poetic inquiry into learning English as an additional language: Korean learnersâ€™ perceptions through sijo, Korean poetry. Language Awareness, 2018, 27, 295-311.	1.3	7
68	Electrically Benign Dry-Etching Method for Rutile TiO[sub 2] Thin-Film Capacitors with Ru Electrodes. Electrochemical and Solid-State Letters, 2010, 13, G1.	2.2	6
69	Chemical synthesis of Nd₂Fe₁₄B/Feâ€“Co nanocomposite with high magnetic energy product. RSC Advances, 2021, 11, 32376-32382.	3.6	5
70	Parallel Operation of Selfâ€Limited Analog Programming for Fast Arrayâ€Level Weight Programming and Update. Advanced Intelligent Systems, 2020, 2, 2000014.	6.1	3
71	Multimode Synaptic Operation of a HfAlO_x-Based Memristor as a Metaplastic Device for Neuromorphic Applications. ACS Applied Electronic Materials, 0, , .	4.3	3
72	Evolutionary Learning of Binary Neural Network Using a TaO _x Memristor via Stochastic Stateful Logic. Advanced Intelligent Systems, 0, , 2200058.	6.1	3

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73	Electrically Benign Ru Wet Etching Method for Fabricating Ruâˆ•TiO[sub 2]âˆ•Ru Capacitor. Journal of the Electrochemical Society, 2011, 158, G47.	2.9	2
74	Situating emotionality within socialization in study abroad contexts: The Student's perspective. System, 2022, 106, 102758.	3.4	2
75	Publisher's Note: Electrically Benign Dry-Etching Method for Rutile TiO[sub 2] Thin-Film Capacitors with Ru Electrodes [Electrochem. Solid-State Lett., 13, G1 (2010)]. Electrochemical and Solid-State Letters, 2010, 13, S1.	2.2	0
76	Neuromorphic Computing: Designed Memristor Circuit for Selfâ€Limited Analog Switching and its Application to a Memristive Neural Network (Adv. Electron. Mater. 6/2019). Advanced Electronic Materials, 2019, 5, 1970032.	5.1	0