

Gun Hwan Kim

List of Publications by Year in descending order

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48
papers

3,559
citations

331670

21
h-index

197818

49
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50
all docs

50
docs citations

50
times ranked

3937
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomic structure of conducting nanofilaments in TiO ₂ resistive switching memory. Nature Nanotechnology, 2010, 5, 148-153.	31.5	1,866
2	A Review of Three-Dimensional Resistive Switching Crossbar Array Memories from the Integration and Materials Property Points of View. Advanced Functional Materials, 2014, 24, 5316-5339.	14.9	319
3	A detailed understanding of the electronic bipolar resistance switching behavior in Pt/TiO ₂ /Pt structure. Nanotechnology, 2011, 22, 254010.	2.6	162
4	32 × 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive Memory. Advanced Functional Materials, 2013, 23, 1440-1449.	14.9	152
5	Collective Motion of Conducting Filaments in Pt/n-Type TiO ₂ /p-Type NiO/Pt Stacked Resistance Switching Memory. Advanced Functional Materials, 2011, 21, 1587-1592.	14.9	80
6	(In, Sn) ₂ O ₃ ·TiO ₂ ·Pt Schottky-type diode switch for the TiO ₂ resistive switching memory array. Applied Physics Letters, 2008, 92, .	3.3	77
7	Study on the electrical conduction mechanism of bipolar resistive switching TiO ₂ thin films using impedance spectroscopy. Applied Physics Letters, 2010, 96, .	3.3	76
8	Improved endurance of resistive switching TiO ₂ thin film by hourglass shaped Mg@Ni filaments. Applied Physics Letters, 2011, 98, .	3.3	65
9	Self-rectifying resistive memory in passive crossbar arrays. Nature Communications, 2021, 12, 2968.	12.8	53
10	Filamentary Resistive Switching Localized at Cathode Interface in NiO Thin Films. Journal of the Electrochemical Society, 2009, 156, G213.	2.9	49
11	Role of Ru nano-dots embedded in TiO ₂ thin films for improving the resistive switching behavior. Applied Physics Letters, 2010, 97, .	3.3	49
12	Threshold switching in Si-As-Te thin film for the selector device of crossbar resistive memory. Applied Physics Letters, 2012, 100, .	3.3	44
13	Identification of the controlling parameter for the set-state resistance of a TiO ₂ resistive switching cell. Applied Physics Letters, 2010, 96, 112904.	3.3	43
14	A theoretical model for Schottky diodes for excluding the sneak current in cross bar array resistive memory. Nanotechnology, 2010, 21, 385202.	2.6	43
15	Double-Layer Stacked One Diode-One Resistive Switching Memory Crossbar Array with an Extremely High Rectification Ratio of 10 ⁹ . Advanced Electronic Materials, 2017, 3, 1700152.	5.1	42
16	Four-Bits-Per-Cell Operation in an HfO ₂ -Based Resistive Switching Device. Small, 2017, 13, 1701781.	10.0	37
17	Schottky diode with excellent performance for large integration density of crossbar resistive memory. Applied Physics Letters, 2012, 100, .	3.3	32
18	Scanning probe based observation of bipolar resistive switching NiO films. Applied Physics Letters, 2010, 97, .	3.3	26

#	ARTICLE	IF	CITATIONS
19	Understanding structure-property relationship of resistive switching oxide thin films using a conical filament model. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	26
20	Direct evidence on Ta-Metal Phases Igniting Resistive Switching in TaOx Thin Film. <i>Scientific Reports</i> , 2015, 5, 14053.	3.3	25
21	An analysis of non-lattice oxygen concentration effect on electrical endurance characteristic in resistive switching MnOx thin film. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	23
22	Surface redox induced bipolar switching of transition metal oxide films examined by scanning probe microscopy. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 102, 827-834.	2.3	21
23	Tristate Memory Using Ferroelectric-Insulator-Semiconductor Heterojunctions for 50% Increased Data Storage. <i>Advanced Functional Materials</i> , 2011, 21, 4305-4313.	14.9	19
24	Polarization reversal behavior in the Pt/Pb(Zr,Ti)O ₃ /Pt and Pt/Al ₂ O ₃ /Pb(Zr,Ti)O ₃ /Pt capacitors for different reversal directions. <i>Applied Physics Letters</i> , 2010, 96, 212902.	3.3	17
25	The reason for the increased threshold switching voltage of SiO ₂ doped Ge ₂ Sb ₂ Te ₅ thin films for phase change random access memory. <i>Applied Physics Letters</i> , 2009, 95, 112110.	3.3	16
26	Highly Linear and Symmetric Weight Modification in HfO ₂ -Based Memristive Devices for High-Precision Weight Entries. <i>Advanced Electronic Materials</i> , 2020, 6, 2000434.	5.1	16
27	Effect of residual impurities on polarization switching kinetics in atomic-layer-deposited ferroelectric Hf _{0.5} Zr _{0.5} O ₂ thin films. <i>Acta Materialia</i> , 2022, 222, 117405.	7.9	15
28	Bias polarity dependent local electrical conduction in resistive switching TiO ₂ thin films. <i>Physica Status Solidi - Rapid Research Letters</i> , 2010, 4, 112-114.	2.4	14
29	Improvement of thermoelectric properties of Bi ₂ Te ₃ and Sb ₂ Te ₃ films grown on graphene substrate. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017, 11, 1700029.	2.4	14
30	Fully Erase-free Multi-Bit Operation in HfO ₂ -Based Resistive Switching Device. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 8234-8241.	8.0	13
31	Optimized Method for Low-Energy and Highly Reliable Multibit Operation in a HfO ₂ -Based Resistive Switching Device. <i>Advanced Electronic Materials</i> , 2018, 4, 1800261.	5.1	12
32	Growth behavior of Bi ₂ Te ₃ and Sb ₂ Te ₃ thin films on graphene substrate grown by plasma-enhanced chemical vapor deposition. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017, 11, 1600369.	2.4	11
33	Atomic layer deposition of a ruthenium thin film using a precursor with enhanced reactivity. <i>Journal of Materials Chemistry C</i> , 2021, 9, 3820-3825.	5.5	11
34	Resistive Switching in TiO_2 Thin Films Using the Semiconducting In-Ga-Zn-O Electrode. <i>IEEE Electron Device Letters</i> , 2012, 33, 582-584.	3.9	10
35	Post-Annealing Effect on Resistive Switching Performance of a Ta/Mn ₂ O ₃ /Pt/Ti Stacked Device. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018, 12, 1800031.	2.4	10
36	Optimization of Chemical Structure of Schottky-Type Selection Diode for Crossbar Resistive Memory. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 5338-5345.	8.0	9

#	ARTICLE	IF	CITATIONS
37	Unipolar resistive switching characteristics of pnictogen oxide films: Case study of Sb ₂ O ₅ . Journal of Applied Physics, 2012, 112, 104105.	2.5	8
38	Positive effects of a Schottky-type diode on unidirectional resistive switching devices. Applied Physics Letters, 2019, 115, .	3.3	8
39	An analysis of imprinted hysteresis loops for a ferroelectric Pb(Zr,Ti)O ₃ thin film capacitor using the switching transient current measurements. Journal of Applied Physics, 2009, 105, 044106.	2.5	7
40	Polarization switching and discharging behaviors in serially connected ferroelectric Pt/Pb(Zr,Ti)O ₃ /Pt and paraelectric capacitors. Journal of Applied Physics, 2011, 109, 114113.	2.5	6
41	Role of an Interfacial Layer in Ta ₂ O ₅ -Based Resistive Switching Devices for Improved Endurance and Reliable Multibit Operation. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900646.	2.4	5
42	Material and Structural Engineering of Ovonic Threshold Switch for Highly Reliable Performance. Advanced Electronic Materials, 2022, 8, .	5.1	5
43	Dot-Product Operation in Crossbar Array Using a Self-Rectifying Resistive Device. Advanced Materials Interfaces, 2022, 9, .	3.7	5
44	Concurrent presence of unipolar and bipolar resistive switching phenomena in pnictogen oxide Sb ₂ O ₅ films. Journal of Applied Physics, 2012, 112, .	2.5	4
45	Ti-doped alumina based reliable resistive switching in sub- $\frac{1}{4}$ A regime. Applied Physics Letters, 2020, 116, .	3.3	3
46	Resistive Memory: 32 × 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive Memory (Adv. Funct. Mater. 11/2013). Advanced Functional Materials, 2013, 23, 1350-1350.	14.9	2
47	Strategic allocation of two-dimensional van der Waals semiconductor as an oxygen reservoir for boosting resistive switching reliability. Applied Surface Science, 2022, 577, 151936.	6.1	2
48	Next-Generation Memory: Double-Layer-Stacked One Diode-One Resistive Switching Memory Crossbar Array with an Extremely High Rectification Ratio of 10^9 (Adv. Electron. Mater. 7/2017). Advanced Electronic Materials, 2017, 3, .	5.1	1