Xinjun Liu

List of Publications by Year
in descending order

84 papers	1,987 citations	236925 25 h-index	289244 40 g-index
85 all docs	85 docs citations	85 times ranked	2021 citing authors

#	Article	IF	Citations
1	Forming-free colossal resistive switching effect in rare-earth-oxide Gd2O3 films for memristor applications. Journal of Applied Physics, 2009, 106, .	2.5	126
2	Diode-less bilayer oxide (WO_{<i>x</i>}â€“NbO_{<i>x</i>}) device for cross-point resistive memory applications. Nanotechnology, 2011, 22, 475702.	2.6	81
3	Threshold current reduction for the metalâ€“insulator transition in NbO_{2â^'<i>x</i>}-selector devices: the effect of ReRAM integration. Journal Physics D: Applied Physics, 2015, 48, 195105.	2.8	74
4	Co-Occurrence of Threshold Switching and Memory Switching in $hbox{Pt}/hbox{NbO}_{x}/hbox{Pt}$ Cells for Crosspoint Memory Applications. IEEE Electron Device Letters, 2012, 33, 236-238.	3.9	73
5	Threshold switching and electrical self-oscillation in niobium oxide films. Journal of Applied Physics, 2016, 120, .	2.5	67
6	All-ZnO-based transparent resistance random access memory device fully fabricated at room temperature. Journal Physics D: Applied Physics, 2011, 44, 255104.	2.8	65
7	Resistive switching characteristics and mechanism of thermally grown WOx thin films. Journal of Applied Physics, 2011, 110, .	2.5	65
8	Effects of the compliance current on the resistive switching behavior of TiO2 thin films. Applied Physics A: Materials Science and Processing, 2009, 97, 883-887.	2.3	58
9	Self-Selective Characteristics of Nanoscale $ hbox{VO}_{x}$ Devices for High-Density ReRAM Applications. IEEE Electron Device Letters, 2012, 33, 718-720.	3.9	57
10	Reduced Threshold Current in NbO₂ Selector by Engineering Device Structure. IEEE Electron Device Letters, 2014, 35, 1055-1057.	3.9	54
11	Engineering electrodeposited ZnO films and their memristive switching performance. Physical Chemistry Chemical Physics, 2013, 15, 10376.	2.8	52
12	Complementary Resistive Switching in Niobium Oxide-Based Resistive Memory Devices. IEEE Electron Device Letters, 2013, 34, 235-237.	3.9	50
13	The polarity origin of the bipolar resistance switching behaviors in metal/La0.7Ca0.3MnO3/Pt junctions. Applied Physics Letters, 2009, 95, .	3.3	46
14	Origin of Currentâ€Controlled Negative Differential Resistance Modes and the Emergence of Composite Characteristics with High Complexity. Advanced Functional Materials, 2019, 29, 1905060.	14.9	45
15	High-endurance megahertz electrical self-oscillation in Ti/NbO<i>x</i> bilayer structures. Applied Physics Letters, 2015, 106, .	3.3	44
16	Ultrathin (<10nm) Nb<inf>2</inf>O<inf>5</inf>/NbO<inf>2</inf> hybrid memory with both memory and selector characteristics for high density 3D vertically stackable RRAM applications. , 2012, , .		39
17	Current Localization and Redistribution as the Basis of Discontinuous Current Controlled Negative Differential Resistance in NbO<i>_x</i>. Advanced Functional Materials, 2019, 29, 1906731.	14.9	39
18	Effect of Electrode Roughness on Electroforming in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>HfO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></m Defect-Induced Moderation of Electric-Field Enhancement. Physical Review Applied, 2015, 4, .	3.8	38

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19	Highly uniform and reliable resistance switching properties in bilayer WO_{<i>x</i>}/NbO_{<i>x</i>} RRAM devices. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1179-1183.	1.8	37
20	Low programming voltage resistive switching in reactive metal/polycrystalline Pr0.7Ca0.3MnO3 devices. Solid State Communications, 2010, 150, 2231-2235.	1.9	36
21	Anatomy of filamentary threshold switching in amorphous niobium oxide. Nanotechnology, 2018, 29, 375705.	2.6	36
22	Asymmetric bipolar resistive switching in solution-processed Pt/TiO₂/W devices. Journal Physics D: Applied Physics, 2010, 43, 495104.	2.8	35
23	Coexistence of filamentary and homogeneous resistive switching in graded WO<i>_x</i> thin films. Physica Status Solidi - Rapid Research Letters, 2011, 5, 89-91.	2.4	32
24	Ferroelectricity-induced resistive switching in Pb(Zr0.52Ti0.48)O3/Pr0.7Ca0.3MnO3/Nb-doped SrTiO3 epitaxial heterostructure. Applied Physics Letters, 2012, 100, .	3.3	29
25	Realization of Rectifying and Resistive Switching Behaviors of TiO2 Nanorod Arrays for Nonvolatile Memory. Electrochemical and Solid-State Letters, 2011, 14, H422.	2.2	28
26	Coupling dynamics of Nb/Nb₂O₅relaxation oscillators. Nanotechnology, 2017, 28, 125201.	2.6	28
27	Bulk Sn1â^'xMnxO2 magnetic semiconductors without room-temperature ferromagnetism. Solid State Communications, 2006, 138, 175-178.	1.9	25
28	Magnetic, electrical transport and electron spin resonance studies of Fe-doped manganite LaMn0.7Fe0.3O3+Î´. Journal of Magnetism and Magnetic Materials, 2007, 313, 354-360.	2.3	25
29	Temperature dependent frequency tuning of NbOx relaxation oscillators. Applied Physics Letters, 2017, 111, .	3.3	24
30	Highly asymmetric bipolar resistive switching in solution-processed Pt/TiO2/W devices for cross-point application. Current Applied Physics, 2011, 11, S102-S106.	2.4	23
31	Stable bipolar resistance switching behaviour induced by a soft breakdown process at the Al/La_{0.7}Ca_{0.3}MnO₃interface. Journal Physics D: Applied Physics, 2009, 42, 175408.	2.8	22
32	Effect of defect content on the unipolar resistive switching characteristics of ZnO thin film memory devices. Solid State Communications, 2012, 152, 1630-1634.	1.9	21
33	Self-assembly of an NbO2 interlayer and configurable resistive switching in Pt/Nb/HfO2/Pt structures. Applied Physics Letters, 2015, 107, .	3.3	21
34	Improved resistive switching properties in Pt/Pr0.7Ca0.3MnO3/Y2O3-stabilized ZrO2/W via-hole structures. Current Applied Physics, 2011, 11, e58-e61.	2.4	20
35	Parallel memristive filaments model applicable to bipolar and filamentary resistive switching. Applied Physics Letters, 2011, 99, .	3.3	20
36	Structural characteristics and resistive switching properties of thermally prepared TiO2 thin films. Journal of Alloys and Compounds, 2009, 486, 458-461.	5.5	19

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37	Memristive switching behavior in Pr_{0.7}Ca_{0.3}MnO₃ by incorporating an oxygenâ€deficient layer. Physica Status Solidi - Rapid Research Letters, 2011, 5, 409-411.	2.4	19
38	Magnetic and electronic properties of charge ordered Nd0.8Na0.2MnO3. Journal of Magnetism and Magnetic Materials, 2004, 284, 133-139.	2.3	18
39	The effect of Fe doping on structural, magnetic and electrical transport properties of CaMn1â[^]'xFexO3Â(x=0â€"0.35). Solid State Communications, 2007, 142, 525-530.	1.9	18
40	Improvement of Resistive Switching Uniformity by Introducing a Thin NbOx Interface Layer. ECS Solid State Letters, 2012, 1, Q35-Q38.	1.4	18
41	NbO₂ Memristive Neurons for Burstâ€Based Perceptron. Advanced Intelligent Systems, 2020, 2, 2000066.	6.1	18
42	Bipolar resistance switching in the Pt/WOx/W nonvolatile memory devices. Current Applied Physics, 2011, 11, e62-e65.	2.4	17
43	The unification of filament and interfacial resistive switching mechanisms for titanium dioxide based memory devices. Journal of Applied Physics, 2011, 109, 104504.	2.5	16
44	Improvement of resistive switching property in a noncrystalline and low-resistance La0.7Ca0.3MnO3thin film by using an Agâ€"Al alloy electrode. Journal Physics D: Applied Physics, 2008, 41, 215409.	2.8	15
45	Bipolar resistive switching properties of microcrystalline TiO2 thin films deposited by pulsed laser deposition. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 157, 36-39.	3.5	15
46	Improved resistive switching properties in stacked structures. Solid State Communications, 2010, 150, 137-141.	1.9	15
47	Interfacial resistive switching properties in Ti/La_{0.7}Ca_{0.3}MnO₃/Pt sandwich structures. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1204-1209.	1.8	15
48	The use of electron Rutherford backscattering to characterize novel electronic materials as illustrated by a case study of sputter-deposited NbO x films. Nuclear Instruments & Methods in Physics Research B, 2014, 340, 58-62.	1.4	15
49	Magnetic, electrical transport and electron spin resonance studies of charge-ordered Nd0.75Na0.25MnO3. Physica B: Condensed Matter, 2004, 348, 146-150.	2.7	14
50	Magnetic properties of the charge ordered Nd0.75Na0.25MnO3. Solid State Communications, 2004, 130, 563-566.	1.9	14
51	Photoassisted Electric Field Modulation of Multiple Nonvolatile Resistance States in Highly Strained Epitaxial BiFeO₃ Heterostructures. Advanced Electronic Materials, 2018, 4, 1800171.	5.1	14
52	Filament-Type Resistive Switching in Homogeneous Bi-Layer Pr[sub 0.7]Ca[sub 0.3]MnO[sub 3] Thin Film Memory Devices. Electrochemical and Solid-State Letters, 2011, 14, H9.	2.2	12
53	Unipolar resistance switching and abnormal reset behaviors in Pt/CuO/Pt and Cu/CuO/Pt structures. Solid-State Electronics, 2012, 73, 11-14.	1.4	12
54	Schottky-Barrier-Induced Asymmetry in the Negative-Differential-Resistance Response of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Nb</mml:mi><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mi>Nb</mml:mi><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mi>x</mml:mi></mml:msub></mml:math> / <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Pt</mml:mi></mml:math> Cross-Point Devices. Physical Review Applied, 20	3.8	12

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55	Multiform Resistance Switching Effects in the Al/La[sub 0.7]Ca[sub 0.3]MnO[sub 3]/Pt Structure. Electrochemical and Solid-State Letters, 2009, 12, H281.	2.2	11
56	Resistance-switching properties of La0.67Ca0.33MnO3 thin films with Agâ€"Al alloy top electrodes. Applied Physics A: Materials Science and Processing, 2009, 97, 85-90.	2.3	11
57	Spiking dynamic behaviors of NbO2 memristive neurons: A model study. Journal of Applied Physics, 2020, 127, .	2.5	11
58	Resistive Switching Mechanism of a Pr0.7Ca0.3MnO3-based Memory Device and Assessment of Its Suitability for Nano-scale Applications. Journal of the Korean Physical Society, 2011, 59, 497-500.	0.7	11
59	Temperature dependence of threshold switching in NbO<inf>x</inf> thin films. , 2014, , .		10
60	Competition between the charge ordered and ferromagnetic states in (La,Nd)0.75Na0.25MnO3 manganites. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 325, 430-434.	2.1	9
61	Collective dynamics of capacitively coupled oscillators based on NbO2 memristors. Journal of Applied Physics, 2019, 126, 125112.	2.5	9
62	Improved Resistive Switching Properties of Solution Processed TiO[sub 2] Thin Films. Electrochemical and Solid-State Letters, 2010, 13, H443.	2.2	8
63	Ferroelectric Polarization Effect on Al-Nb Codoped Pb(Zr0.52Ti0.48)O3/Pr0.7Ca0.3MnO3 Heterostructure Resistive Memory. Electrochemical and Solid-State Letters, 2011, 14, H225.	2.2	8
64	Improved Resistive Switching Properties of Solution-Processed TiO_xFilm by Incorporating Atomic Layer Deposited TiO₂layer. Japanese Journal of Applied Physics, 2011, 50, 046504.	1.5	7
65	Reversible resistance switching properties in Ti-doped polycrystalline Ta2O5 thin films. Applied Physics A: Materials Science and Processing, 2012, 108, 177-183.	2.3	6
66	Reversible change in magnetic moment and specific heat of La_{0.9}Ca_{0.1}MnO₃at different resistance states. Journal Physics D: Applied Physics, 2008, 41, 115001.	2.8	5
67	Thermally-assisted Ti/Pr<inf>0.7</inf>Ca<inf>0.3</inf>MnO<inf>3</inf> ReRAM with excellent switching speed and retention characteristics. , 2011, , .		5
68	Structural properties and resistive switching behaviour in MgxZn1â^'xO alloy films grown by pulsed laser deposition. Journal Physics D: Applied Physics, 2011, 44, 015302.	2.8	5
69	Characterization of Resistive Switching States in W/Pr$_{0.7}$Ca$_{0.3}$MnO$_{3}$ for a Submicron ($phi 250$ nm) Via-Hole Structure. Japanese Journal of Applied Physics, 2011, 50, 105802.	1.5	5
70	Understanding composite negative differential resistance in niobium oxide memristors. Journal Physics D: Applied Physics, 0, , .	2.8	5
71	Resistive switching behavior in HfO<inf>2</inf> with Nb as an oxygen exchange layer. , 2014, , .		4
72	Finite element modeling of resistive switching in Nb<inf>2</inf>O<inf>5</inf>-based memory device. , 2014, , .		4

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73	Charge ordering characteristics in Y0.5Ca0.5MnO3 manganite. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 370, 512-516.	2.1	3
74	The in-plane magnetic anisotropy of RF-sputtered FeNiN thin films. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 350-356.	1.8	3
75	Effect of Microstructure on Dielectric Breakdown in Amorphous HfO2 Films. Microscopy and Microanalysis, 2014, 20, 1984-1985.	0.4	3
76	Characterization of Resistive Switching States in W/Pr0.7Ca0.3MnO3for a Submicron (Ï†250 nm) Via-Hole Structure. Japanese Journal of Applied Physics, 2011, 50, 105802.	1.5	3
77	Van der Pol oscillator based on NbO2 volatile memristor: A simulation analysis. Journal of Applied Physics, 2022, 131, 054501.	2.5	3
78	Electric-field-induced resistance behavior inÂAg/Pr1â^'x Ca x MnO3/Pt (x=0,0.3,1.0) heterostructures. Applied Physics A: Materials Science and Processing, 2009, 96, 643-653.	2.3	2
79	Low-Power and Controllable Memory Window in Pt/Pr_{0.7}Ca_{0.3}MnO₃/Yttria-Stabilized Zirconia/W Resistive Random-Access Memory Devices. Journal of Nanoscience and Nanotechnology, 2012, 12, 3252-3255.	0.9	2
80	Magnetic, electrical transport and electron spin resonance studies of ferromagnetic insulating manganites Nd0.85Na0.15MnO3. Journal of Magnetism and Magnetic Materials, 2006, 305, 352-356.	2.3	1
81	Fabrication and Resistance-Switching Behaviors of NiO Thin Films by Thermal Oxidation of Evaporated Ni Films. Advanced Materials Research, 0, 66, 131-134.	0.3	1
82	Modulation of magnetoresistance and field sensitivity of Coâ€"ZnO nanocomposite film by microstructure controlling. Journal Physics D: Applied Physics, 2021, 54, 365003.	2.8	1
83	The Effect of Oxygen Annealing on the Resistance Switching Properties of the La_{0.7}Ca_{0.3}MnO₃ Films. Advanced Materials Research, 2009, 66, 127-130.	0.3	0
84	Improving the Oxygen Permeability of Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-Î´} Membranes by Laser Ablation. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2010, 25, 221-224.	1.3	0