Cheol Seong Hwang

List of Publications by Year
in descending order

621 papers	33,683 citations	4960 84 h-index	6130 159 g-index
634 all docs	634 docs citations	634 times ranked	20317 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	Multifunctional wearable devices for diagnosis and therapy of movement disorders. Nature Nanotechnology, 2014, 9, 397-404.	31.5	1,246
3	Resistive switching mechanism of TiO2 thin films grown by atomic-layer deposition. Journal of Applied Physics, 2005, 98, 033715.	2.5	1,041
4	Emerging memories: resistive switching mechanisms and current status. Reports on Progress in Physics, 2012, 75, 076502.	20.1	881
5	Ferroelectricity and Antiferroelectricity of Doped Thin HfO₂â€Based Films. Advanced Materials, 2015, 27, 1811-1831.	21.0	777
6	Resistive switching materials forÂinformation processing. Nature Reviews Materials, 2020, 5, 173-195.	48.7	668
7	Nanofilamentary resistive switching in binary oxide system; a review on the present status and outlook. Nanotechnology, 2011, 22, 254002.	2.6	530
8	Efficient CH₃NH₃PbI₃ Perovskite Solar Cells Employing Nanostructured pâ€Type NiO Electrode Formed by a Pulsed Laser Deposition. Advanced Materials, 2015, 27, 4013-4019.	21.0	485
9	Evolution of phases and ferroelectric properties of thin Hf0.5Zr0.5O2 films according to the thickness and annealing temperature. Applied Physics Letters, 2013, 102, .	3.3	480
10	A Resistive Memory in Semiconducting BiFeO₃ Thinâ€Film Capacitors. Advanced Materials, 2011, 23, 1277-1281.	21.0	388
11	Anode-interface localized filamentary mechanism in resistive switching of TiO2 thin films. Applied Physics Letters, 2007, 91, .	3.3	384
12	Review and perspective on ferroelectric HfO2-based thin films for memory applications. MRS Communications, 2018, 8, 795-808.	1.8	360
13	A Review of Threeâ€Dimensional Resistive Switching Crossâ€Bar Array Memories from the Integration and Materials Property Points of View. Advanced Functional Materials, 2014, 24, 5316-5339.	14.9	319
14	Identification of a determining parameter for resistive switching of TiO2 thin films. Applied Physics Letters, 2005, 86, 262907.	3.3	317
15	High dielectric constant TiO2 thin films on a Ru electrode grown at 250â€‰Â°C by atomic-layer deposition. Applied Physics Letters, 2004, 85, 4112-4114.	3.3	305
16	An artificial nociceptor based on a diffusive memristor. Nature Communications, 2018, 9, 417.	12.8	295
17	Thin Hf_{<i>x</i>}Zr_{1â€<i>x</i>}O₂ Films: A New Leadâ€Free System for Electrostatic Supercapacitors with Large Energy Storage Density and Robust Thermal Stability. Advanced Energy Materials, 2014, 4, 1400610.	19.5	286
18	Deposition of extremely thin (Ba,Sr)TiO3 thin films for ultraâ€largeâ€scale integrated dynamic random access memory application. Applied Physics Letters, 1995, 67, 2819-2821.	3.3	283

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19	Alâ€Doped TiO₂ Films with Ultralow Leakage Currents for Next Generation DRAM Capacitors. Advanced Materials, 2008, 20, 1429-1435.	21.0	281
20	Memristors for Energyâ€Efficient New Computing Paradigms. Advanced Electronic Materials, 2016, 2, 1600090.	5.1	272
21	The effects of crystallographic orientation and strain of thin Hf0.5Zr0.5O2 film on its ferroelectricity. Applied Physics Letters, 2014, 104, .	3.3	268
22	Effect of high-pressure oxygen annealing on negative bias illumination stress-induced instability of InGaZnO thin film transistors. Applied Physics Letters, 2011, 98, .	3.3	257
23	Surface and grain boundary energy as the key enabler of ferroelectricity in nanoscale hafnia-zirconia: a comparison of model and experiment. Nanoscale, 2017, 9, 9973-9986.	5.6	249
24	First-principles study on doping and phase stability of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>HfO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2008, 78, .	3.2	226
25	Localized switching mechanism in resistive switching of atomic-layer-deposited TiO2 thin films. Applied Physics Letters, 2007, 90, 242906.	3.3	208
26	Origin of Subthreshold Swing Improvement in Amorphous Indium Gallium Zinc Oxide Transistors. Electrochemical and Solid-State Letters, 2008, 11, H157.	2.2	208
27	Improved Ferroelectric Switching Endurance of La-Doped Hf_{0.5}Zr_{0.5}O₂ Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 2701-2708.	8.0	207
28	First-principles study of point defects in rutileTiO2â^'x. Physical Review B, 2006, 73, .	3.2	205
29	Bioresorbable Electronic Stent Integrated with Therapeutic Nanoparticles for Endovascular Diseases. ACS Nano, 2015, 9, 5937-5946.	14.6	203
30	Highly Uniform, Electroformingâ€Free, and Selfâ€Rectifying Resistive Memory in the Pt/Ta₂O₅/HfO_{2â€x}/TiN Structure. Advanced Functional Materials, 2014, 24, 5086-5095.	14.9	197
31	A study on the wake-up effect of ferroelectric Hf_{0.5}Zr_{0.5}O₂films by pulse-switching measurement. Nanoscale, 2016, 8, 1383-1389.	5.6	195
32	Capacitors with an Equivalent Oxide Thickness of <0.5 nm for Nanoscale Electronic Semiconductor Memory. Advanced Functional Materials, 2010, 20, 2989-3003.	14.9	189
33	Temporary formation of highly conducting domain walls for non-destructive read-out of ferroelectric domain-wall resistance switching memories. Nature Materials, 2018, 17, 49-56.	27.5	188
34	Grain size engineering for ferroelectric Hf0.5Zr0.5O2 films by an insertion of Al2O3 interlayer. Applied Physics Letters, 2014, 105, .	3.3	187
35	Nonvolatile Memory Materials for Neuromorphic Intelligent Machines. Advanced Materials, 2018, 30, e1704729.	21.0	187
36	Toward a multifunctional monolithic device based on pyroelectricity and the electrocaloric effect of thin antiferroelectric Hf x Zr 1â^'x O 2 films. Nano Energy, 2015, 12, 131-140.	16.0	174

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37	Effect of Zr Content on the Wake-Up Effect in Hf_{1â€“<i>x</i>}Zr_{<i>x</i>}O₂ Films. ACS Applied Materials & Interfaces, 2016, 8, 15466-15475.	8.0	172
38	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
39	Highly Improved Uniformity in the Resistive Switching Parameters of TiO₂ Thin Films by Inserting Ru Nanodots. Advanced Materials, 2013, 25, 1987-1992.	21.0	170
40	A comparative study on the electrical conduction mechanisms of (Ba0.5Sr0.5)TiO3 thin films on Pt and IrO2 electrodes. Journal of Applied Physics, 1998, 83, 3703-3713.	2.5	168
41	Ferroelectricity in undoped-HfO₂ thin films induced by deposition temperature control during atomic layer deposition. Journal of Materials Chemistry C, 2016, 4, 6864-6872.	5.5	168
42	A detailed understanding of the electronic bipolar resistance switching behavior in Pt/TiO₂/Pt structure. Nanotechnology, 2011, 22, 254010.	2.6	162
43	The fundamentals and applications of ferroelectric HfO2. Nature Reviews Materials, 2022, 7, 653-669.	48.7	162
44	Understanding the formation of the metastable ferroelectric phase in hafniaâ€“zirconia solid solution thin films. Nanoscale, 2018, 10, 716-725.	5.6	159
45	Novel high-Îº dielectrics for next-generation electronic devices screened by automated ab initio calculations. NPG Asia Materials, 2015, 7, e190-e190.	7.9	158
46	32 Ã— 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
47	Prospective of Semiconductor Memory Devices: from Memory System to Materials. Advanced Electronic Materials, 2015, 1, 1400056.	5.1	152
48	Pt/Ta₂O₅/HfO_{2âˆ’}<i>_x</i>/Ti Resistive Switching Memory Competing with Multilevel NAND Flash. Advanced Materials, 2015, 27, 3811-3816.	21.0	152
49	Low Temperature (<100Â°C) Deposition of Aluminum Oxide Thin Films by ALD with O[sub 3] as Oxidant. Journal of the Electrochemical Society, 2006, 153, F69.	2.9	144
50	Effect of forming gas annealing on the ferroelectric properties of Hf0.5Zr0.5O2 thin films with and without Pt electrodes. Applied Physics Letters, 2013, 102, .	3.3	141
51	The conical shape filament growth model in unipolar resistance switching of TiO2 thin film. Applied Physics Letters, 2009, 94, .	3.3	138
52	Thickness-dependent dielectric constants of (Ba,Sr)TiO3 thin films with Pt or conducting oxide electrodes. Journal of Applied Physics, 2002, 92, 432-437.	2.5	137
53	Comparison between ZnO films grown by atomic layer deposition using H2O or O3 as oxidant. Thin Solid Films, 2005, 478, 103-108.	1.8	136
54	Depletion layer thickness and Schottky type carrier injection at the interface between Pt electrodes and (Ba,â€‰Sr)TiO3 thin films. Journal of Applied Physics, 1999, 85, 287-295.	2.5	134

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55	Study on the degradation mechanism of the ferroelectric properties of thin Hf_{0.5}Zr_{0.5}O₂ films on TiN and Ir electrodes. Applied Physics Letters, 2014, 105, 072902.	3.3	133
56	Ferroelectric properties and switching endurance of Hf_{0.5}Zr_{0.5}O₂ films on TiN bottom and TiN or RuO₂ top electrodes. Physica Status Solidi - Rapid Research Letters, 2014, 8, 532-535.	2.4	131
57	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
58	Thermodynamic and Kinetic Origins of Ferroelectricity in Fluorite Structure Oxides. Advanced Electronic Materials, 2019, 5, 1800522.	5.1	128
59	Study on the size effect in Hf0.5Zr0.5O2 films thinner than 8â€‰nm before and after wake-up field cycling. Applied Physics Letters, 2015, 107, .	3.3	124
60	Dielectric and electrical properties of sputter grown (Ba,Sr)TiO3 thin films. Journal of Applied Physics, 1999, 86, 506-513.	2.5	122
61	Chemical structure of the interface in ultrathin HfO2/Si films. Applied Physics Letters, 2004, 84, 1305-1307.	3.3	117
62	Electrically configurable electroforming and bipolar resistive switching in Pt/TiO₂/Pt structures. Nanotechnology, 2010, 21, 305203.	2.6	117
63	Nociceptive Memristor. Advanced Materials, 2018, 30, 1704320.	21.0	116
64	Giant Negative Electrocaloric Effects of Hf_{0.5}Zr_{0.5}O₂ Thin Films. Advanced Materials, 2016, 28, 7956-7961.	21.0	115
65	Chemical interaction between atomic-layer-deposited HfO2 thin films and the Si substrate. Applied Physics Letters, 2002, 81, 334-336.	3.3	114
66	Metal oxide memories based on thermochemical and valence change mechanisms. MRS Bulletin, 2012, 37, 131-137.	3.5	114
67	(Ba,Sr)TiO3 thin films for ultra large scale dynamic random access memory.. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 56, 178-190.	3.5	113
68	Influences of interfacial intrinsic low-dielectric layers on the dielectric properties of sputtered (Ba,Sr)TiO3 thin films. Applied Physics Letters, 2000, 77, 124-126.	3.3	112
69	Enhanced electrical properties of SrTiO3 thin films grown by atomic layer deposition at high temperature for dynamic random access memory applications. Applied Physics Letters, 2008, 92, 222903.	3.3	112
70	Atomic Layer Deposition of SrTiO₃ Thin Films with Highly Enhanced Growth Rate for Ultrahigh Density Capacitors. Chemistry of Materials, 2011, 23, 2227-2236.	6.7	112
71	Comparison of HfO2 films grown by atomic layer deposition using HfCl4 and H2O or O3 as the oxidant. Journal of Applied Physics, 2003, 94, 3641-3647.	2.5	111
72	Selfâ€Limited Switching in Ta₂O₅/TaO<i>_x</i> Memristors Exhibiting Uniform Multilevel Changes in Resistance. Advanced Functional Materials, 2015, 25, 1527-1534.	14.9	111

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73	Mitigating wakeup effect and improving endurance of ferroelectric HfO2-ZrO2 thin films by careful La-doping. Journal of Applied Physics, 2019, 125, .	2.5	110
74	Resistive Switching in Ptâˆ•Al[sub 2]O[sub 3]âˆ•TiO[sub 2]âˆ•Ru Stacked Structures. Electrochemical and Solid-State Letters, 2006, 9, G343.	2.2	107
75	Study on the resistive switching time of TiO2 thin films. Applied Physics Letters, 2006, 89, 012906.	3.3	103
76	Resistive switching memory: observations with scanning probe microscopy. Nanoscale, 2011, 3, 490-502.	5.6	102
77	Modeling of Negative Capacitance in Ferroelectric Thin Films. Advanced Materials, 2019, 31, e1805266.	21.0	101
78	Densification and Mechanical Properties of Titanium Diboride with Silicon Nitride as a Sintering Aid. Journal of the American Ceramic Society, 1999, 82, 3037-3042.	3.8	96
79	Review of defect chemistry in fluorite-structure ferroelectrics for future electronic devices. Journal of Materials Chemistry C, 2020, 8, 10526-10550.	5.5	94
80	Ferroelectric domain wall memory with embedded selector realized in LiNbO3 single crystals integrated on Si wafers. Nature Materials, 2020, 19, 1188-1194.	27.5	92
81	Interfacial reaction between chemically vapor-deposited HfO2 thin films and a HF-cleaned Si substrate during film growth and postannealing. Applied Physics Letters, 2002, 80, 2368-2370.	3.3	91
82	Atomic Layer Deposition of Ru Thin Films Using 2,4-(Dimethylpentadienyl)(ethylcyclopentadienyl)Ru by a Liquid Injection System. Journal of the Electrochemical Society, 2007, 154, D95.	2.9	88
83	Scale-up and optimization of HfO2-ZrO2 solid solution thin films for the electrostatic supercapacitors. Nano Energy, 2017, 39, 390-399.	16.0	87
84	Suppression in the negative bias illumination instability of Zn-Sn-O transistor using oxygen plasma treatment. Applied Physics Letters, 2011, 99, .	3.3	85
85	Thermal annealing effects on the structural and electrical properties of HfO2/Al2O3 gate dielectric stacks grown by atomic layer deposition on Si substrates. Journal of Applied Physics, 2003, 94, 2563-2571.	2.5	84
86	Stabilization of Tetragonal HfO₂ under Low Active Oxygen Source Environment in Atomic Layer Deposition. Chemistry of Materials, 2012, 24, 3534-3543.	6.7	84
87	Study on the internal field and conduction mechanism of atomic layer deposited ferroelectric Hf_{0.5}Zr_{0.5}O₂ thin films. Journal of Materials Chemistry C, 2015, 3, 6291-6300.	5.5	82
88	Deposition and Electrical Characterization of Very ThinSrTiO3Films for Ultra Large Scale Integrated Dynamic Random Access Memory Application. Japanese Journal of Applied Physics, 1995, 34, 5178-5183.	1.5	80
89	Tunneling-assisted Poole-Frenkel conduction mechanism in HfO2 thin films. Journal of Applied Physics, 2005, 98, 113701.	2.5	80
90	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

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91	Comparison between atomic-layer-deposited HfO2 films using O3 or H2O oxidant and Hf[N(CH3)2]4 precursor. Applied Physics Letters, 2004, 85, 5953-5955.	3.3	78
92	Electronic resistance switching in the Al/TiO_x/Al structure for forming-free and area-scalable memory. Nanoscale, 2015, 7, 11063-11074.	5.6	78
93	(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
94	Study on the electrical conduction mechanism of bipolar resistive switching TiO2 thin films using impedance spectroscopy. Applied Physics Letters, 2010, 96, .	3.3	76
95	Improvement of the photo-bias stability of the Znâ€“Snâ€“O field effect transistors by an ozone treatment. Journal of Materials Chemistry, 2012, 22, 10994.	6.7	76
96	Time-Dependent Negative Capacitance Effects in Al₂O₃/BaTiO₃ Bilayers. Nano Letters, 2016, 16, 4375-4381.	9.1	75
97	Preparation and characterization of ferroelectric Hf_{0.5}Zr_{0.5}O₂thin films grown by reactive sputtering. Nanotechnology, 2017, 28, 305703.	2.6	75
98	Investigation on the Growth Initiation of Ru Thin Films by Atomic Layer Deposition. Chemistry of Materials, 2010, 22, 2850-2856.	6.7	74
99	Real-time identification of the evolution of conducting nano-filaments in TiO2 thin film ReRAM. Scientific Reports, 2013, 3, 3443.	3.3	74
100	Multicolor Changeable Optical Coating by Adopting Multiple Layers of Ultrathin Phase Change Material Film. ACS Photonics, 2016, 3, 1265-1270.	6.6	73
101	A comprehensive study on the mechanism of ferroelectric phase formation in hafnia-zirconia nanolaminates and superlattices. Applied Physics Reviews, 2019, 6, .	11.3	73
102	Epitaxial Brownmillerite Oxide Thin Films for Reliable Switching Memory. ACS Applied Materials & Interfaces, 2016, 8, 7902-7911.	8.0	72
103	Understanding the Coexistence of Two Bipolar Resistive Switching Modes with Opposite Polarity in Pt/TiO₂/Ti/Pt Nanosized ReRAM Devices. ACS Applied Materials & Interfaces, 2018, 10, 29766-29778.	8.0	71
104	Fabrication and Electrical Characterization ofPt/(Ba,Sr)TiO3/PtCapacitors for Ultralarge-Scale Integrated Dynamic Random Access Memory Applications. Japanese Journal of Applied Physics, 1996, 35, 1548-1552.	1.5	69
105	Growth Behavior of Al-Doped TiO₂ Thin Films by Atomic Layer Deposition. Chemistry of Materials, 2008, 20, 3723-3727.	6.7	69
106	The Inlaid Al₂O₃ Tunnel Switch for Ultrathin Ferroelectric Films. Advanced Materials, 2009, 21, 2870-2875.	21.0	69
107	Memristive tri-stable resistive switching at ruptured conducting filaments of a Pt/TiO₂/Pt cell. Nanotechnology, 2012, 23, 185202.	2.6	69
108	Atomic Layer Deposition of SrTiO₃ Films with Cyclopentadienyl-Based Precursors for Metalâ€“Insulatorâ€“Metal Capacitors. Chemistry of Materials, 2013, 25, 953-961.	6.7	69

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109	Ferroelectric properties of lightly doped La:HfO2 thin films grown by plasma-assisted atomic layer deposition. Applied Physics Letters, 2017, 111, .	3.3	69
110	Atomic-layer-deposited Al2O3 thin films with thin SiO2 layers grown by in situ O3 oxidation. Journal of Applied Physics, 2004, 96, 2323-2329.	2.5	68
111	Synthesis of SnS Thin Films by Atomic Layer Deposition at Low Temperatures. Chemistry of Materials, 2017, 29, 8100-8110.	6.7	68
112	Highly Flexible Resistive Switching Memory Based on the Electronic Switching Mechanism in the Al/TiO₂/Al/Polyimide Structure. ACS Applied Materials & Interfaces, 2018, 10, 1828-1835.	8.0	68
113	Morphotropic Phase Boundary of Hf_{1â€"<i>x</i>}Zr_{<i>x</i>}O₂ Thin Films for Dynamic Random Access Memories. ACS Applied Materials & Interfaces, 2018, 10, 42666-42673.	8.0	68
114	Titanium dioxide thin films for next-generation memory devices. Journal of Materials Research, 2013, 28, 313-325.	2.6	67
115	Chemically Conformal ALD of SrTiO[sub 3] Thin Films Using Conventional Metallorganic Precursors. Journal of the Electrochemical Society, 2005, 152, C229.	2.9	66
116	Transformation of the Crystalline Structure of an ALD TiO[sub 2] Film on a Ru Electrode by O[sub 3] Pretreatment. Electrochemical and Solid-State Letters, 2006, 9, F5.	2.2	66
117	Influence of carrier injection on resistive switching of TiO2 thin films with Pt electrodes. Applied Physics Letters, 2006, 89, 162912.	3.3	66
118	Local structure and conduction mechanism in amorphous Inâ€"Gaâ€"Znâ€"O films. Applied Physics Letters, 2009, 94, 112112.	3.3	66
119	Voltage Drop in a Ferroelectric Single Layer Capacitor by Retarded Domain Nucleation. Nano Letters, 2017, 17, 7796-7802.	9.1	66
120	Reversible transition between the polar and antipolar phases and its implications for wake-up and fatigue in HfO2-based ferroelectric thin film. Nature Communications, 2022, 13, 645.	12.8	66
121	Atomic Layer Deposition of ZrO2 Thin Films with High Dielectric Constant on TiN Substrates. Electrochemical and Solid-State Letters, 2008, 11, G9.	2.2	65
122	Improved endurance of resistive switching TiO2 thin film by hourglass shaped MagnÃ©li filaments. Applied Physics Letters, 2011, 98, .	3.3	65
123	Growth Characteristics of Atomic Layer Deposited TiO[sub 2] Thin Films on Ru and Si Electrodes for Memory Capacitor Applications. Journal of the Electrochemical Society, 2005, 152, C552.	2.9	64
124	Reduction of Electrical Defects in Atomic Layer Deposited HfO₂ Films by Al Doping. Chemistry of Materials, 2010, 22, 4175-4184.	6.7	64
125	Leakage current of sol-gel derived Pb(Zr,â€ŠTi)O3 thin films having Pt electrodes. Applied Physics Letters, 1999, 75, 3411-3413.	3.3	63
126	Structure and Electrical Properties of Al-Doped HfO₂ and ZrO₂ Films Grown via Atomic Layer Deposition on Mo Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 22474-22482.	8.0	63

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127	What Will Come After Vâ€NANDâ€"Vertical Resistive Switching Memory?. Advanced Electronic Materials, 2019, 5, 1800914.	5.1	61
128	Reasons for obtaining an optical dielectric constant from the Pooleâ€"Frenkel conduction behavior of atomic-layer-deposited HfO[sub 2] films. Applied Physics Letters, 2005, 86, 072903.	3.3	60
129	Cyclic PECVD of Ge[sub 2]Sb[sub 2]Te[sub 5] Films Using Metallorganic Sources. Journal of the Electrochemical Society, 2007, 154, H318.	2.9	60
130	Correlation of the change in transfer characteristics with the interfacial trap densities of amorphous Inâ€"Gaâ€"Znâ€"O thin film transistors under light illumination. Applied Physics Letters, 2011, 98, .	3.3	59
131	Role of ZrO2 incorporation in the suppression of negative bias illumination-induced instability in Znâ€"Snâ€"O thin film transistors. Applied Physics Letters, 2011, 98, .	3.3	59
132	Subâ€Picosecond Processes of Ferroelectric Domain Switching from Field and Temperature Experiments. Advanced Functional Materials, 2012, 22, 192-199.	14.9	59
133	Improvement in the leakage current characteristic of metal-insulator-metal capacitor by adopting RuO2 film as bottom electrode. Applied Physics Letters, 2011, 99, .	3.3	58
134	Deposition and characterization of ZrO₂ thin films on silicon substrate by MOCVD. Journal of Materials Research, 1993, 8, 1361-1367.	2.6	57
135	Chemical Vapor Deposition of Ru Thin Films with an Enhanced Morphology, Thermal Stability, and Electrical Properties Using a RuO₄ Precursor. Chemistry of Materials, 2009, 21, 207-209.	6.7	57
136	Thermodynamic Calculations and Metallorganic Chemical Vapor Deposition of Ruthenium Thin Films Using Bis(ethyl-Ï€-cyclopentadienyl)Ru for Memory Applications. Journal of the Electrochemical Society, 2000, 147, 1161.	2.9	55
137	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
138	Dispersion in Ferroelectric Switching Performance of Polycrystalline Hf_{0.5}Zr_{0.5}O₂ Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 35374-35384.	8.0	55
139	Understanding ferroelectric phase formation in doped HfO₂ thin films based on classical nucleation theory. Nanoscale, 2019, 11, 19477-19487.	5.6	55
140	Nucleationâ€Limited Ferroelectric Orthorhombic Phase Formation in Hf_{0.5}Zr_{0.5}O₂ Thin Films. Advanced Electronic Materials, 2019, 5, 1800436.	5.1	55
141	High-k properties of atomic-layer-deposited HfO2 films using a nitrogen-containing Hf[N(CH3)2]4 precursor and H2O oxidant. Applied Physics Letters, 2003, 83, 5503-5505.	3.3	54
142	Effects of carbon residue in atomic layer deposited HfO2 films on their time-dependent dielectric breakdown reliability. Applied Physics Letters, 2007, 90, 182907.	3.3	54
143	Structural properties and electronic structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>HfO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms films. Physical Review B, 2010, 82, .	3.2	54
144	Post-Annealing Effects on Fixed Charge and Slow/Fast Interface States of TiN/Al2O3/p-Si Metalâ€"Oxideâ€"Semiconductor Capacitor. Japanese Journal of Applied Physics, 2003, 42, 1222-1226.	1.5	52

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145	Improvement in Photo-Bias Stability of High-Mobility Indium Zinc Oxide Thin-Film Transistors by Oxygen High-Pressure Annealing. IEEE Electron Device Letters, 2013, 34, 894-896.	3.9	52
146	Preparation and Electrical Properties ofSrTiO3Thin Films Deposited by Liquid Source Metal-Organic Chemical Vapor Deposition (MOCVD). Japanese Journal of Applied Physics, 1996, 35, 4890-4895.	1.5	51
147	Atomic Layer Deposition of Al2O3Thin Films from a 1-Methoxy-2-methyl-2-propoxide Complex of Aluminum and Water. Chemistry of Materials, 2005, 17, 626-631.	6.7	51
148	Atomic Layer Deposition and Electrical Properties of SrTiO[sub 3] Thin Films Grown Using Sr(C[sub) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Electrochemical Society, 2007, 154, G127.	2.9	51
149	Influence of Substrates on the Nucleation and Growth Behaviors of Ge₂Sb₂Te₅ Films by Combined Plasma-Enhanced Atomic Layer and Chemical Vapor Deposition. Chemistry of Materials, 2009, 21, 2386-2396.	6.7	51
150	Thickness effect of ultra-thin Ta2O5 resistance switching layer in 28 nm-diameter memory cell. Scientific Reports, 2015, 5, 15965.	3.3	51
151	Fabrication of a Cuâ€Coneâ€Shaped Cation Source Inserted Conductive Bridge Random Access Memory and Its Improved Switching Reliability. Advanced Functional Materials, 2019, 29, 1806278.	14.9	51
152	Influence of the oxygen concentration of atomic-layer-deposited HfO2 films on the dielectric property and interface trap density. Applied Physics Letters, 2005, 86, 112907.	3.3	50
153	Properties of lanthanum oxide thin films deposited by cyclic chemical vapor deposition using tris(isopropyl-cyclopentadienyl)lanthanum precursor. Journal of Applied Physics, 2006, 100, 024111.	2.5	50
154	Textile Resistance Switching Memory for Fabric Electronics. Advanced Functional Materials, 2017, 27, 1605593.	14.9	50
155	Orientation effects in chemical solution derived Pb(Zr0.3,Ti0.7)O3 thin films on ferroelectric properties. Thin Solid Films, 2002, 416, 264-270.	1.8	49
156	Filamentary Resistive Switching Localized at Cathode Interface in NiO Thin Films. Journal of the Electrochemical Society, 2009, 156, G213.	2.9	49
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