Rainer Waser

List of Publications by Citations

702 papers	42,153 citations	93 h-index	184 g-index
738 ext. papers	45,929 ext. citations	4.7 avg, IF	7.69 L-index

#	Paper	IF	Citations
702	Nanoionics-based resistive switching memories. *Nature Materials*, **2007**, 6, 833-40	27	3976
701	Redox-Based Resistive Switching Memories Nanoionic Mechanisms, Prospects, and Challenges. *Advanced Materials*, **2009**, 21, 2632-2663	24	3799
700	Switching the electrical resistance of individual dislocations in single-crystalline SrTiO3. *Nature Materials*, **2006**, 5, 312-20	27	1406
699	Complementary resistive switches for passive nanocrossbar memories. *Nature Materials*, **2010**, 9, 403-6	27	1057
698	Resistive switching mechanism of TiO2 thin films grown by atomic-layer deposition. *Journal of Applied Physics*, **2005**, 98, 033715	2.5	938
697	Electrochemical metallization memories--fundamentals, applications, prospects. *Nanotechnology*, **2011**, 22, 254003	3.4	565
696	dc Electrical Degradation of Perovskite-Type Titanates: I, Ceramics. *Journal of the American Ceramic Society*, **1990**, 73, 1645-1653	3.8	539
695	Electrical properties of the grain boundaries of oxygen ion conductors: Acceptor-doped zirconia and ceria. *Progress in Materials Science*, **2006**, 51, 151-210	42.2	507
694	Nanoscale cation motion in TaO(x), HfO(x) and TiO(x) memristive systems. *Nature Nanotechnology*, **2016**, 11, 67-74	28.7	419
693	Electrochemical dynamics of nanoscale metallic inclusions in dielectrics. *Nature Communications*, **2014**, 5, 4232	17.4	411
692	Nanobatteries in redox-based resistive switches require extension of memristor theory. *Nature Communications*, **2013**, 4, 1771	17.4	395
691	Chemical solution deposition of electronic oxide films. *Comptes Rendus Chimie*, **2004**, 7, 433-461	2.7	385
690	dc Electrical Degradation of Perovskite-Type Titanates: III, A Model of the Mechanism. *Journal of the American Ceramic Society*, **1990**, 73, 1663-1673	3.8	354
689	Bulk Conductivity and Defect Chemistry of Acceptor-Doped Strontium Titanate in the Quenched State. *Journal of the American Ceramic Society*, **1991**, 74, 1934-1940	3.8	344
688	Electroceramic materials. *Acta Materialia*, **2000**, 48, 151-178	8.4	329
687	The dielectric response as a function of temperature and film thickness of fiber-textured (Ba,Sr)TiO3 thin films grown by chemical vapor deposition. *Journal of Applied Physics*, **1997**, 82, 2497-2504	2.5	328
686	Unit-cell scale mapping of ferroelectricity and tetragonality in epitaxial ultrathin ferroelectric films. *Nature Materials*, **2007**, 6, 64-9	27	322

685	Theoretical current-voltage characteristics of ferroelectric tunnel junctions. *Physical Review B*, **2005**, 72,	3.3	314
684	Bipolar and Unipolar Resistive Switching in Cu-Doped $ hbox{SiO}_{2}$. *IEEE Transactions on Electron Devices*, **2007**, 54, 2762-2768	2.9	308
683	Leakage currents in Ba0.7Sr0.3TiO3 thin films for ultrahigh-density dynamic random access memories. *Journal of Applied Physics*, **1997**, 82, 2359-2364	2.5	302
682	Coexistence of filamentary and homogeneous resistive switching in Fe-doped SrTiO3 thin-film memristive devices. *Advanced Materials*, **2010**, 22, 4819-22	24	291
681	dc Electrical Degradation of Perovskite-Type Titanates: II, Single Crystals. *Journal of the American Ceramic Society*, **1990**, 73, 1654-1662	3.8	272
680	Electrode kinetics of Cu SiO2-based resistive switching cells: Overcoming the voltage-time dilemma of electrochemical metallization memories. *Applied Physics Letters*, **2009**, 94, 072109	3.4	268
679	Coexistence of Bipolar and Unipolar Resistive Switching Behaviors in a Pt TiO[sub 2] Pt Stack. *Electrochemical and Solid-State Letters*, **2007**, 10, G51		268
678	Origin of the Ultra-nonlinear Switching Kinetics in Oxide-Based Resistive Switches. *Advanced Functional Materials*, **2011**, 21, 4487-4492	15.6	267
677	Phase diagrams and physical properties of single-domain epitaxial Pb(Zr1 Tix)O3 thin films. *Physical Review B*, **2003**, 67,	3.3	263
676	Beyond von Neumann--logic operations in passive crossbar arrays alongside memory operations. *Nanotechnology*, **2012**, 23, 305205	3.4	252
675	In situ observation of filamentary conducting channels in an asymmetric Ta 05-x/TaO2-x bilayer structure. *Nature Communications*, **2013**, 4, 2382	17.4	249
674	Resistive switching in metal ferroelectric metal junctions. *Applied Physics Letters*, **2003**, 83, 4595-4597	3.4	248
673	TiO2--a prototypical memristive material. *Nanotechnology*, **2011**, 22, 254001	3.4	237
672	Characteristic electroforming behavior in Pt/TiO2/Pt resistive switching cells depending on atmosphere. *Journal of Applied Physics*, **2008**, 104, 123716	2.5	231
671	Dielectric, infrared, and Raman response of undoped SrTiO3 ceramics: Evidence of polar grain boundaries. *Physical Review B*, **2001**, 64,	3.3	219
670	Progress in the Synthesis of Nanocrystalline BaTiO3 Powders for MLCC. *International Journal of Applied Ceramic Technology*, **2005**, 2, 1-14	2	218
669	Effects of Moisture on the Switching Characteristics of Oxide-Based, Gapless-Type Atomic Switches. *Advanced Functional Materials*, **2012**, 22, 70-77	15.6	217
668	Electrode influence on the charge transport through SrTiO3 thin films. *Journal of Applied Physics*, **1995**, 78, 6113-6121	2.5	215

667	Thermodynamic theory of epitaxial ferroelectric thin films with dense domain structures. *Physical Review B*, **2001**, 64,	3.3	205
666	Grain Boundary Defect Chemistry of Acceptor-Doped Titanates: Space Charge Layer Width. *Journal of the American Ceramic Society*, **1994**, 77, 235-243	3.8	205
665	Impact of defect distribution on resistive switching characteristics of Sr2TiO4 thin films. *Advanced Materials*, **2010**, 22, 411-4	24	197
664	Electrochemical metallization memories□undamentals, applications, prospects. *Nanotechnology*, **2011**, 22, 289502	3.4	193
663	Grain boundaries in dielectric and mixed-conducting ceramics. *Acta Materialia*, **2000**, 48, 797-825	8.4	192
662	Processing and electrical properties of Pb (ZrxTi1□)O3 (x=0.2□.75) films: Comparison of metallo-organic decomposition and sol-gel processes. *Journal of Applied Physics*, **1992**, 72, 1566-1576	2.5	191
661	Atomically controlled electrochemical nucleation at superionic solid electrolyte surfaces. *Nature Materials*, **2012**, 11, 530-5	27	187
660	Generic relevance of counter charges for cation-based nanoscale resistive switching memories. *ACS Nano*, **2013**, 7, 6396-402	16.7	183
659	The interface screening model as origin of imprint in PbZrxTi1□O3 thin films. I. Dopant, illumination, and bias dependence. *Journal of Applied Physics*, **2002**, 92, 2680-2687	2.5	182
658	Raman scattering studies on nanocrystalline BaTiO3 Part I□solated particles and aggregates. *Journal of Raman Spectroscopy*, **2007**, 38, 1288-1299	2.3	175
657	Low current resistive switching in Cu□iO2 cells. *Applied Physics Letters*, **2008**, 92, 122910	3.4	167
656	Dielectric Properties of Ba(Zr,Ti)O3-Based Ferroelectrics for Capacitor Applications. *Journal of the American Ceramic Society*, **2001**, 84, 759-766	3.8	166
655	Control of the morphology of CSD-prepared (Ba,Sr)TiO3 thin films. *Journal of the European Ceramic Society*, **1999**, 19, 1339-1343	6	158
654	Differentiating 180□and 90□switching of ferroelectric domains with three-dimensional piezoresponse force microscopy. *Applied Physics Letters*, **2000**, 77, 3444-3446	3.4	154
653	Mechanism for bipolar switching in a Pt/TiO2/Pt resistive switching cell. *Physical Review B*, **2009**, 79,	3.3	152
652	Piezoresponse force microscopy of lead titanate nanograins possibly reaching the limit of ferroelectricity. *Applied Physics Letters*, **2002**, 81, 5231-5233	3.4	151
651	Coexistence of Grain-Boundaries-Assisted Bipolar and Threshold Resistive Switching in Multilayer Hexagonal Boron Nitride. *Advanced Functional Materials*, **2017**, 27, 1604811	15.6	149
650	Ferroelectric thin films grown on tensile substrates: Renormalization of the Curie□Weiss law and apparent absence of ferroelectricity. *Journal of Applied Physics*, **1999**, 85, 1698-1701	2.5	135

649	Redox Reactions at Cu,Ag/Ta2O5 Interfaces and the Effects of Ta2O5 Film Density on the Forming Process in Atomic Switch Structures. *Advanced Functional Materials*, **2015**, 25, 6374-6381	15.6	133
648	0-pi Josephson tunnel junctions with ferromagnetic barrier. *Physical Review Letters*, **2006**, 97, 247001	7.4	133
647	Nanoscale resistive switching in SrTiO3 thin films. *Physica Status Solidi - Rapid Research Letters*, **2007**, 1, R86-R88	2.5	131
646	Advanced dielectrics: Bulk ceramics and thin films. *Advanced Materials*, **1991**, 3, 334-340	24	130
645	Anomalous Resistance Hysteresis in Oxide ReRAM: Oxygen Evolution and Reincorporation Revealed by In Situ TEM. *Advanced Materials*, **2017**, 29, 1700212	24	129
644	Simulation of multilevel switching in electrochemical metallization memory cells. *Journal of Applied Physics*, **2012**, 111, 014501	2.5	129
643	Switching kinetics of electrochemical metallization memory cells. *Physical Chemistry Chemical Physics*, **2013**, 15, 6945-52	3.6	126
642	High density 3D memory architecture based on the resistive switching effect. *Solid-State Electronics* , **2009**, 53, 1287-1292	1.7	126
641	Ultrathin epitaxial ferroelectric films grown on compressive substrates: Competition between the surface and strain effects. *Journal of Applied Physics*, **2002**, 91, 2247-2254	2.5	125
640	Imaging three-dimensional polarization in epitaxial polydomain ferroelectric thin films. *Journal of Applied Physics*, **2002**, 91, 1477-1481	2.5	125
639	Thermochemical resistive switching: materials, mechanisms, and scaling projections. *Phase Transitions*, **2011**, 84, 570-602	1.3	124
638	Current status and challenges of ferroelectric memory devices. *Microelectronic Engineering*, **2005**, 80, 296-304	2.5	120
637	Quantum conductance and switching kinetics of AgI-based microcrossbar cells. *Nanotechnology*, **2012**, 23, 145703	3.4	118
636	Misfit dislocations in nanoscale ferroelectric heterostructures. *Applied Physics Letters*, **2005**, 86, 192910	3.4	116
635	Formation of micro-crystals on the (100) surface of SrTiO3 at elevated temperatures. *Surface Science*, **2000**, 460, 112-128	1.8	113
634	Relaxation mechanism of ferroelectric switching in Pb(Zr,Ti)O3 thin films. *Journal of Applied Physics*, **2001**, 89, 2332-2336	2.5	113
633	Phase-Change and Redox-Based Resistive Switching Memories. *Proceedings of the IEEE*, **2015**, 103, 1274-1288	14.9	112
632	Influence of Precursor Chemistry on the Formation of MTiO3 (M = Ba, Sr) Ceramic Thin Films. *Journal of Sol-Gel Science and Technology*, **1998**, 12, 67-79	2.3	111

631	Nanosize ferroelectric oxides Tracking down the superparaelectric limit. *Applied Physics A: Materials Science and Processing*, **2005**, 80, 1247-1255	2.6	111
630	Nanoionic Resistive Switching Memories: On the Physical Nature of the Dynamic Reset Process. *Advanced Electronic Materials*, **2016**, 2, 1500233	6.4	110
629	Realization of Boolean Logic Functionality Using Redox-Based Memristive Devices. *Advanced Functional Materials*, **2015**, 25, 6414-6423	15.6	109
628	Resistive non-volatile memory devices (Invited Paper). *Microelectronic Engineering*, **2009**, 86, 1925-1928	2.5	109
627	Dynamic leakage current compensation in ferroelectric thin-film capacitor structures. *Applied Physics Letters*, **2005**, 86, 142907	3.4	108
626	Memristors: Devices, Models, and Applications. *Proceedings of the IEEE*, **2012**, 100, 1911-1919	14.3	107
625	Chemical solution deposition of ferroelectric yttrium-doped hafnium oxide films on platinum electrodes. *Applied Physics Letters*, **2014**, 104, 202903	3.4	106
624	Coercive field of ultrathin Pb(Zr0.52Ti0.48)O3 epitaxial films. *Applied Physics Letters*, **2003**, 83, 3356-3358	3.4	105
623	Improved endurance behavior of resistive switching in (Ba,Sr)TiO3 thin films with W top electrode. *Applied Physics Letters*, **2008**, 93, 222102	3.4	103
622	Resistive switching and data reliability of epitaxial (Ba,Sr)TiO3 thin films. *Applied Physics Letters*, **2006**, 88, 042901	3.4	103
621	Grain-Boundary Defect Chemistry of Acceptor-Doped Titanates: Inversion Layer and Low-Field Conduction. *Journal of the American Ceramic Society*, **2005**, 80, 2301-2314	3.8	103
620	Do dislocations act as atomic autobahns for oxygen in the perovskite oxide SrTiO3?. *Nanoscale*, **2014**, 6, 12864-76	7.7	101
619	Scaling of structure and electrical properties in ultrathin epitaxial ferroelectric heterostructures. *Journal of Applied Physics*, **2006**, 100, 051609	2.5	101
618	Size effects in ultrathin epitaxial ferroelectric heterostructures. *Applied Physics Letters*, **2004**, 84, 5225-5227	3.4	100
617	Observation of vacancy defect migration in the cation sublattice of complex oxides by 18O tracer experiments. *Physical Review Letters*, **2003**, 90, 105901	7.4	99
616	Origin of soft-mode stiffening and reduced dielectric response in SrTiO3 thin films. *Physical Review B*, **2002**, 66,	3.3	99
615	Polymorphism in micro-, submicro-, and nanocrystalline NaNbO3. *Journal of Physical Chemistry B*, **2005**, 109, 20122-30	3.4	98
614	Electrochemical metallization cells Blending nanoionics into nanoelectronics?. *MRS Bulletin*, **2012**, 37, 124-130	3.2	96

613	Dielectric analysis of intergrated ceramic thin film capacitors. *Integrated Ferroelectrics*, **1997**, 15, 39-51	0.8	96
612	Ionic conduction in zirconia films of nanometer thickness. *Acta Materialia*, **2005**, 53, 5161-5166	8.4	96
611	Impedance spectroscopy of TiO2 thin films showing resistive switching. *Applied Physics Letters*, **2006**, 89, 082909	3.4	94
610	Depolarizing-field-mediated 180□switching in ferroelectric thin films with 90□domains. *Applied Physics Letters*, **2002**, 80, 1424-1426	3.4	94
609	Nanoionic transport and electrochemical reactions in resistively switching silicon dioxide. *Nanoscale* , **2012**, 4, 3040-3	7.7	93
608	Multi-valued and Fuzzy Logic Realization using TaOx Memristive Devices. *Scientific Reports*, **2018**, 8, 8	4.9	92
607	Impact of oxygen exchange reaction at the ohmic interface in TaO-based ReRAM devices. *Nanoscale*, **2016**, 8, 17774-17781	7.7	92
606	. *IEEE Electron Device Letters*, **2011**, 32, 191-193	4.4	92
605	Mechanical force sensors using organic thin-film transistors. *Journal of Applied Physics*, **2005**, 97, 093708	2.5	85
604	Electronic properties of grain boundaries in SrTiO3 and BaTiO3 ceramics. *Solid State Ionics*, **1995**, 75, 89-99	3.3	84
603	Method to distinguish ferroelectric from nonferroelectric origin in case of resistive switching in ferroelectric capacitors. *Applied Physics Letters*, **2008**, 92, 062907	3.4	83
602	The interface screening model as origin of imprint in PbZrxTi1□O3 thin films. II. Numerical simulation and verification. *Journal of Applied Physics*, **2002**, 92, 2688-2696	2.5	83
601	Self-limited single nanowire systems combining all-in-one memristive and neuromorphic functionalities. *Nature Communications*, **2018**, 9, 5151	17.4	83
600	Spectromicroscopic insights for rational design of redox-based memristive devices. *Nature Communications*, **2015**, 6, 8610	17.4	82
599	Microstructure of columnar-grained SrTiO3 and BaTiO3 thin films prepared by chemical solution deposition. *Journal of Materials Research*, **1998**, 13, 2206-2217	2.5	82
598	Probing Cu doped Ge0.3Se0.7 based resistance switching memory devices with random telegraph noise. *Journal of Applied Physics*, **2010**, 107, 024517	2.5	81
597	Dopant influence on dielectric losses, leakage behaviour, and resistance degradation of SrTiO3 thin films. *Thin Solid Films*, **1997**, 305, 66-73	2.2	80
596	Resistive Switching Mechanisms on TaOx and SrRuO3 Thin-Film Surfaces Probed by Scanning Tunneling Microscopy. *ACS Nano*, **2016**, 10, 1481-92	16.7	79

595	Voltage-time dilemma of pure electronic mechanisms in resistive switching memory cells. *Journal of Applied Physics*, **2010**, 107, 054517	2.5	79
594	PZT thin films for piezoelectric microactuator applications. *Sensors and Actuators A: Physical*, **2002**, 97-98, 680-684	3.9	78
593	Oxygen vacancy migration and time-dependent leakage current behavior of Ba0.3Sr0.7TiO3 thin films. *Applied Physics Letters*, **2005**, 86, 112904	3.4	77
592	Investigation of the electroforming process in resistively switching TiO2 nanocrosspoint junctions. *Applied Physics Letters*, **2010**, 96, 122902	3.4	76
591	A Complementary Resistive Switch-Based Crossbar Array Adder. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2015**, 5, 64-74	5.2	75
590	Effect of anisotropic in-plane strains on phase states and dielectric properties of epitaxial ferroelectric thin films. *Applied Physics Letters*, **2005**, 86, 052903	3.4	75
589	Solubility of Hydrogen Defects in Doped and Undoped BaTiO3. *Journal of the American Ceramic Society*, **1988**, 71, 58-63	3.8	75
588	Spectroscopic proof of the correlation between redox-state and charge-carrier transport at the interface of resistively switching Ti/PCMO devices. *Advanced Materials*, **2014**, 26, 2730-5	24	73
587	Influence of temperature and interface charge on the grain-boundary conductivity in acceptor-doped SrTiO3 ceramics. *Journal of Applied Physics*, **1998**, 83, 2083-2092	2.5	73
586	Multidimensional Simulation of Threshold Switching in NbO2 Based on an Electric Field Triggered Thermal Runaway Model. *Advanced Electronic Materials*, **2016**, 2, 1600169	6.4	73
585	Charge injection in SrTiO3 thin films. *Thin Solid Films*, **1997**, 299, 53-58	2.2	71
584	Dynamics of ferroelectric nanodomains in BaTiO(3) epitaxial thin films via piezoresponse force microscopy. *Nanotechnology*, **2008**, 19, 375703	3.4	71
583	On the origin of bistable resistive switching in metal organic charge transfer complex memory cells. *Applied Physics Letters*, **2007**, 91, 083506	3.4	71
582	Direct hysteresis measurements of single nanosized ferroelectric capacitors contacted with an atomic force microscope. *Applied Physics Letters*, **2001**, 79, 3678-3680	3.4	71
581	Grain-Boundary Effect on the Curie-Weiss Law of Ferroelectric Ceramics and Polycrystalline Thin Films: Calculation by the Method of Effective Medium **2002**, 9, 5-16		70
580	Quantifying redox-induced Schottky barrier variations in memristive devices via in operando spectromicroscopy with graphene electrodes. *Nature Communications*, **2016**, 7, 12398	17.4	68
579	Impact of the Counter-Electrode Material on Redox Processes in Resistive Switching Memories. *ChemElectroChem*, **2014**, 1, 1287-1292	4.3	68
578	Understanding filamentary growth in electrochemical metallization memory cells using kinetic Monte Carlo simulations. *Nanoscale*, **2015**, 7, 12673-81	7.7	66

577	Applicability of Well-Established Memristive Models for Simulations of Resistive Switching Devices. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2014**, 61, 2402-2410	3.9	66
576	Temperature-induced Phase Transitions in Micro-, Submicro-, and Nanocrystalline NaNbO3. *Journal of Physical Chemistry C*, **2007**, 111, 18493-18502	3.8	66
575	Towards the limit of ferroelectric nanosized grains. *Nanotechnology*, **2003**, 14, 250-253	3.4	66
574	Reversible and irreversible processes in donor-doped Pb(Zr,Ti)O3. *Applied Physics Letters*, **2000**, 77, 3830-3832	3.4	66
573	Growth and Crystallization of TiO2 Thin Films by Atomic Layer Deposition Using a Novel Amido Guanidinate Titanium Source and Tetrakis-dimethylamido-titanium. *Chemistry of Materials*, **2013**, 25, 2934-2943	9.6	65
572	Processes and Effects of Oxygen and Moisture in Resistively Switching TaOx and HfOx. *Advanced Electronic Materials*, **2018**, 4, 1700458	6.4	65
571	The influence of copper top electrodes on the resistive switching effect in TiO2 thin films studied by conductive atomic force microscopy. *Applied Physics Letters*, **2009**, 95, 013109	3.4	64
570	Piezoresponse in the light of surface adsorbates: Relevance of defined surface conditions for perovskite materials. *Applied Physics Letters*, **2004**, 85, 2896-2898	3.4	64
569	Polarization states of polydomain epitaxial Pb(Zr1⊠Tix)O3 thin films and their dielectric properties. *Physical Review B*, **2006**, 73,	3.3	63
568	Crossbar Logic Using Bipolar and Complementary Resistive Switches. *IEEE Electron Device Letters*, **2011**, 32, 710-712	4.4	62
567	Impact of the electroforming process on the device stability of epitaxial Fe-doped SrTiO3 resistive switching cells. *Journal of Applied Physics*, **2009**, 106, 114507	2.5	62
566	Kinetics of oxygen incorporation in SrTiO3 (Fe-doped): an optical investigation. *Sensors and Actuators B: Chemical*, **1992**, 7, 763-768	8.5	62
565	Redox processes in silicon dioxide thin films using copper microelectrodes. *Applied Physics Letters*, **2011**, 99, 203103	3.4	61
564	Reversible and irreversible polarization processes in ferroelectric ceramics and thin films. *Journal of Applied Physics*, **2003**, 93, 1735-1742	2.5	61
563	Electrostrictive resonances in (Ba0.7Sr0.3)TiO3 thin filmsat microwave frequencies. *Applied Physics Letters*, **2004**, 85, 624-626	3.4	60
562	Morphological and electrical changes in TiO2 memristive devices induced by electroforming and switching. *Physica Status Solidi - Rapid Research Letters*, **2010**, 4, 16-18	2.5	59
561	Scaling Potential of Local Redox Processes in Memristive SrTiO $_{3}$ Thin-Film Devices. *Proceedings of the IEEE*, **2012**, 100, 1979-1990	14.3	57
560	Electrical Conductivity of Epitaxial SrTiO3 Thin Films as a Function of Oxygen Partial Pressure and Temperature. *Journal of the American Ceramic Society*, **2006**, 89, 2845-2852	3.8	57

559	Verification of redox-processes as switching and retention failure mechanisms in Nb:SrTiO3/metal devices. *Nanoscale*, **2016**, 8, 13967-75	7.7	57
558	A Simulation Study of Oxygen-Vacancy Behavior in Strontium Titanate: Beyond Nearest-Neighbor Interactions. *Journal of Physical Chemistry C*, **2014**, 118, 15185-15192	3.8	56
557	Hysteretic resistance concepts in ferroelectric thin films. *Journal of Applied Physics*, **2006**, 100, 051611	2.5	56
556	Registered Deposition of Nanoscale Ferroelectric Grains by Template-Controlled Growth. *Advanced Materials*, **2005**, 17, 1357-1361	24	56
555	Advanced chemical deposition techniques - from research to production. *Integrated Ferroelectrics*, **2001**, 36, 3-20	0.8	56
554	Optical investigation of oxygen incorporation in SrTiO3. *Solid State Ionics*, **1992**, 53-56, 578-582	3.3	56
553	Volatile resistance states in electrochemical metallization cells enabling non-destructive readout of complementary resistive switches. *Nanotechnology*, **2014**, 25, 425202	3.4	55
552	Subfilamentary Networks Cause Cycle-to-Cycle Variability in Memristive Devices. *ACS Nano*, **2017**, 11, 6921-6929	16.7	55
551	Reversible alternation between bipolar and unipolar resistive switching in polycrystalline barium strontium titanate thin films. *Journal of Applied Physics*, **2010**, 107, 094506	2.5	55
550	An electrochemical study of the adsorption of pyridine and chloride ions on smooth and roughened silver surfaces. *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*, **1981**, 117, 257-266		55
549	Raman scattering studies on nanocrystalline BaTiO3 Part II—consolidated polycrystalline ceramics. *Journal of Raman Spectroscopy*, **2007**, 38, 1300-1306	2.3	54
548	A new phase of the c(4 x 2) superstructure of alkanethiols grown by vapor phase deposition on gold. *Langmuir*, **2005**, 21, 5256-8	4	54
547	The origin of faceting of ultraflat gold films epitaxially grown on mica. *Applied Surface Science*, **2005** , 249, 197-202	6.7	54
546	Diffusion of Hydrogen Defects in BaTiO3 Ceramics and SrTiO3 Single Crystals. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1986**, 90, 1223-1230		54
545	Improved Switching Stability and the Effect of an Internal Series Resistor in HfO2/TiOx Bilayer ReRAM Cells. *IEEE Transactions on Electron Devices*, **2018**, 65, 3229-3236	2.9	53
544	Realization of regular arrays of nanoscale resistive switching blocks in thin films of Nb-doped SrTiO3. *Applied Physics Letters*, **2008**, 93, 023110	3.4	53
543	Enhancement of p-type conductivity in nanocrystalline BaTiO3 ceramics. *Applied Physics Letters*, **2005**, 86, 082110	3.4	53
542	Electrochemical Tantalum Oxide for Resistive Switching Memories. *Advanced Materials*, **2017**, 29, 1703357	24	52

541	On the stochastic nature of resistive switching in Cu doped Ge0.3Se0.7 based memory devices. *Journal of Applied Physics*, **2011**, 110, 054509	2.5	52
540	Nanobattery Effect in RRAMs—Implications on Device Stability and Endurance. *IEEE Electron Device Letters*, **2014**, 35, 208-210	4.4	51
539	Polarization and lattice strains in epitaxial BaTiO3 films grown by high-pressure sputtering. *Journal of Applied Physics*, **2007**, 101, 114106	2.5	51
538	STM study of mixed alkanethiol/biphenylthiol self-assembled monolayers on Au(111). *Langmuir*, **2006**, 22, 3021-7	4	51
537	Space charge concept for acceptor-doped zirconia and ceria and experimental evidences. *Solid State Ionics*, **2004**, 173, 63-67	3.3	51
536	Determination of acceptor concentrations and energy levels in oxides using an optoelectrochemical technique. *Solid State Communications*, **1990**, 76, 1077-1081	1.6	51
535	Atomic structure and chemistry of dislocation cores at low-angle tilt grain boundary in SrTiO3 bicrystals. *Acta Materialia*, **2015**, 89, 344-351	8.4	49
534	A Novel Reference Scheme for Reading Passive Resistive Crossbar Memories. *IEEE Nanotechnology Magazine*, **2006**, 5, 687-691	2.6	49
533	Reversible and irreversible domain wall contributions to the polarization in ferroelectric thin films. *Ferroelectrics*, **1999**, 221, 251-257	0.6	49
532	Nanosized Conducting Filaments Formed by Atomic-Scale Defects in Redox-Based Resistive Switching Memories. *Chemistry of Materials*, **2017**, 29, 3164-3173	9.6	48
531	Chemical modifications of Pb(Zr0.3,Ti0.7)O3 precursor solutions and their influence on the morphological and electrical properties of the resulting thin films. *Journal of Sol-Gel Science and Technology*, **2007**, 42, 337-352	2.3	48
530	Correlation between switching and fatigue in PbZr0.3Ti0.7O3 thin films. *Applied Physics Letters*, **2000**, 77, 1894	3.4	48
529	Formation and Movement of Cationic Defects During Forming and Resistive Switching in SrTiO3 Thin Film Devices. *Advanced Functional Materials*, **2015**, 25, 6360-6368	15.6	47
528	Resistive switching of rose bengal devices: A molecular effect?. *Journal of Applied Physics*, **2006**, 100, 094504	2.5	47
527	Detection of filament formation in forming-free resistive switching SrTiO3 devices with Ti top electrodes. *Applied Physics Letters*, **2012**, 100, 223503	3.4	46
526	Low-voltage operation of metal-ferroelectric-insulator-semiconductor diodes incorporating a ferroelectric polyvinylidene fluoride copolymer Langmuir-Blodgett film. *Journal of Applied Physics*, **2006**, 100, 024110	2.5	46
525	Tuning electrochemically driven surface transformation in atomically flat LaNiO thin films for enhanced water electrolysis. *Nature Materials*, **2021**, 20, 674-682	27	46
524	Influence of charge compensation mechanisms on the sheet electron density at conducting LaAlO3/SrTiO3-interfaces. *Applied Physics Letters*, **2012**, 100, 052103	3.4	45

523	Memory Devices: Energy□Space□Time Tradeoffs. *Proceedings of the IEEE*, **2010**, 98, 2185-2200	14.3	45
522	Smart materials and structures. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 8330-1	11.5	45
521	Understanding the Coexistence of Two Bipolar Resistive Switching Modes with Opposite Polarity in Pt/TiO/Ti/Pt Nanosized ReRAM Devices. *ACS Applied Materials & Interfaces*, **2018**, 10, 29766-29778	9.5	44
520	TrI4: The role of grain boundaries in conduction and breakdown of perovskite-type titanates. *Ferroelectrics*, **1992**, 133, 109-114	0.6	44
519	3-Bit Multilevel Switching by Deep Reset Phenomenon in Pt/W/TaOX/Pt-ReRAM Devices. *IEEE Electron Device Letters*, **2016**, 37, 564-567	4.4	43
518	Insights into Nanoscale Electrochemical Reduction in a Memristive Oxide: the Role of Three-Phase Boundaries. *Advanced Functional Materials*, **2014**, 24, 4466-4472	15.6	43
517	A HfO2-Based Complementary Switching Crossbar Adder. *Advanced Electronic Materials*, **2015**, 1, 1500138	6.4	43
516	Spectroscopic study of the electric field induced valence change of Fe-defect centers in SrTiO3. *Physical Chemistry Chemical Physics*, **2011**, 13, 20779-86	3.6	43
515	Faradaic currents during electroforming of resistively switching Ag-Ge-Se type electrochemical metallization memory cells. *Physical Chemistry Chemical Physics*, **2009**, 11, 5974-9	3.6	43
514	Short-time piezoelectric measurements in ferroelectric thin films using a double-beam laser interferometer. *Review of Scientific Instruments*, **2003**, 74, 2613-2615	1.7	43
513	Early self-assembled stages in epitaxial SrRuO3 on LaAlO3. *Applied Physics Letters*, **2003**, 82, 2497-2499	3.4	43
512	Space charges and defect concentration profiles at complex oxide interfaces. *Physical Review B*, **2016**, 93,	3.3	42
511	Origin of the SET Kinetics of the Resistive Switching in Tantalum Oxide Thin Films. *IEEE Electron Device Letters*, **2014**, 35, 259-261	4.4	42
510	Materials, technologies, and circuit concepts for nanocrossbar-based bipolar RRAM. *Applied Physics A: Materials Science and Processing*, **2011**, 102, 791-809	2.6	42
509	Redox-based resistive switching memories. *Journal of Nanoscience and Nanotechnology*, **2012**, 12, 7628-40	1.3	42
508	Function by defects at the atomic scale □New concepts for non-volatile memories. *Solid-State Electronics*, **2010**, 54, 830-840	1.7	42
507	Chemical Solution Deposition of Ferroelectric Thin Films - State of the Art and Recent Trends. *Ferroelectrics*, **2002**, 267, 293-301	0.6	42
506	Multistate Memristive Tantalum Oxide Devices for Ternary Arithmetic. *Scientific Reports*, **2016**, 6, 36652	4.9	41

505	Humidity effects on the redox reactions and ionic transport in a Cu/Ta2O5/Pt atomic switch structure. *Japanese Journal of Applied Physics*, **2016**, 55, 06GJ09	1.4	41
504	Oxygen Exchange Processes between Oxide Memristive Devices and Water Molecules. *Advanced Materials*, **2018**, 30, e1800957	24	41
503	Bond nature of active metal ions in SiO2-based electrochemical metallization memory cells. *Nanoscale*, **2013**, 5, 1781-4	7.7	41
502	Electro-degradation and resistive switching of Fe-doped SrTiO3 single crystal. *Journal of Applied Physics*, **2013**, 113, 083713	2.5	41
501	High temperature conductance characteristics of LaAlO3/SrTiO3-heterostructures under equilibrium oxygen atmospheres. *Applied Physics Letters*, **2010**, 97, 012103	3.4	41
500	Chemical Solution Deposited BaTiO3 and SrTiO3 Thin Films With Columnar Microstructure. *Materials Research Society Symposia Proceedings*, **1997**, 474, 9		41
499	Grain Boundary Defect Chemistry of Acceptor-Doped Titanates: High Field Effects **1997**, 1, 51-64		41
498	Study of electrical and mechanical contribution to switching in ferroelectric/ferroelastic polycrystals. *Acta Materialia*, **2000**, 48, 3271-3282	8.4	41
497	Cluster-like resistive switching of SrTiO3:Nb surface layers. *New Journal of Physics*, **2013**, 15, 103017	2.9	40
496	Ag/GeSx/Pt-based complementary resistive switches for hybrid CMOS/nanoelectronic logic and memory architectures. *Scientific Reports*, **2013**, 3, 2856	4.9	40
495	Analysis of Transient Currents During Ultrafast Switching of $hbox{TiO}_{2}$ Nanocrossbar Devices. *IEEE Electron Device Letters*, **2011**, 32, 1116-1118	4.4	40
494	Dysprosium scandate thin films as an alternate amorphous gate oxide prepared by metal-organic chemical vapor deposition. *Applied Physics Letters*, **2006**, 89, 232902	3.4	40
493	SrTa2O6 thin films for high-K dielectric applications grown by chemical vapor deposition on different substrates. *Journal of Applied Physics*, **2005**, 97, 073521	2.5	40
492	Microemulsion mediated synthesis of nanocrystalline (Kx,Na1⊠)NbO3 powders. *Journal of Crystal Growth*, **2005**, 280, 191-200	1.6	40
491	Nonlinear Electrical Properties of Grain Boundaries in Oxygen Ion Conductors: Acceptor-Doped Ceria. *Electrochemical and Solid-State Letters*, **2005**, 8, J1		40
490	Direct observation of charge transfer in solid electrolyte for electrochemical metallization memory. *Advanced Materials*, **2012**, 24, 4552-6	24	39
489	An associative capacitive network based on nanoscale complementary resistive switches for memory-intensive computing. *Nanoscale*, **2013**, 5, 5119-28	7.7	39
488	Capacity based nondestructive readout for complementary resistive switches. *Nanotechnology*, **2011**, 22, 395203	3.4	39

487	Finite-Element Analysis of Ceramic Multilayer Capacitors: Failure Probability Caused by Wave Soldering and Bending Loads. *Journal of the American Ceramic Society*, **2004**, 83, 1433-1440	3.8	39
486	Reversible and irreversible piezoelectric and ferroelectric response in ferroelectric ceramics and thin films. *Journal of the European Ceramic Society*, **2004**, 24, 725-732	6	39
485	Bismuth zinc niobate (Bi1.5ZnNb1.5O7) ceramics derived from metallo-organic decomposition precursor solution. *Solid State Communications*, **2004**, 132, 481-486	1.6	39
484	Resistive donor-doped SrTiO3 sensors: I, basic model for a fast sensor response. *Sensors and Actuators B: Chemical*, **2004**, 101, 335-345	8.5	39
483	Degradation of dielectric ceramics. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1989**, 109, 171-182	5.3	39
482	Relation Between Enhancement in Growth and Thickness-Dependent Crystallization in ALD TiO[sub 2] Thin Films. *Journal of the Electrochemical Society*, **2011**, 158, D6	3.9	38
481	Impact of the top-electrode material on the permittivity of single-crystalline Ba0.7Sr0.3TiO3 thin films. *Applied Physics Letters*, **2005**, 86, 202908	3.4	38
480	Curie□Weiss-type law for the strain and stress effects on the dielectric response of ferroelectric thin films. *Applied Physics Letters*, **2000**, 77, 2596-2598	3.4	38
479	SET kinetics of electrochemical metallization cells: influence of counter-electrodes in SiO/Ag based systems. *Nanotechnology*, **2017**, 28, 135205	3.4	37
478	Exploiting the switching dynamics of HfO2-based ReRAM devices for reliable analog memristive behavior. *APL Materials*, **2019**, 7, 091105	5.7	37
477	Nanoarchitectonics for Controlling the Number of Dopant Atoms in Solid Electrolyte Nanodots. *Advanced Materials*, **2018**, 30, 1703261	24	37
476	Rate-limiting processes in the fast SET operation of a gapless-type Cu-Ta2O5 atomic switch. *AIP Advances*, **2013**, 3, 032114	1.5	37
475	Spark plasma sintering of nanocrystalline BaTiO3-powders: Consolidation behavior and dielectric characteristics. *Journal of the European Ceramic Society*, **2011**, 31, 1723-1731	6	37
474	Analysis of shape effects on the piezoresponse in ferroelectric nanograins with and without adsorbates. *Applied Physics Letters*, **2005**, 87, 082901	3.4	37
473	Dielectric relaxation of perovskite□type oxide thin films. *Integrated Ferroelectrics*, **1995**, 10, 231-245	0.8	37
472	Dynamics of the metal-insulator transition of donor-doped SrTiO3. *Physical Review B*, **2016**, 94,	3.3	37
471	Standards for the Characterization of Endurance in Resistive Switching Devices. *ACS Nano*, **2021**,	16.7	36
470	Transport limits in defect-engineered LaAlO3/SrTiO3 bilayers. *Nanoscale*, **2015**, 7, 1013-22	7.7	35

469	. *IEEE Electron Device Letters*, **2013**, 34, 114-116	4.4	35
468	Forming-Free $hbox{TiO}_{2}$-Based Resistive Switching Devices on CMOS-Compatible W-Plugs. *IEEE Electron Device Letters*, **2011**, 32, 1588-1590	4.4	35
467	Sharp ferroelectric phase transition in strained single-crystalline SrRuO3/Ba0.7Sr0.3TiO3/SrRuO3 capacitors. *Applied Physics Letters*, **2003**, 83, 5011-5013	3.4	35
466	Capacitance and admittance spectroscopy analysis of hydrogen-degraded Pt/(Ba, Sr)TiO3/Pt thin-film capacitors. *Applied Physics Letters*, **2000**, 77, 2045-2047	3.4	35
465	Reliable fabrication of 3 nm gaps between nanoelectrodes by electron-beam lithography. *Nanotechnology*, **2012**, 23, 125302	3.4	34
464	Fatigue effect in ferroelectric PbZr1□TixO3 thin films. *Journal of Applied Physics*, **2006**, 99, 114104	2.5	34
463	Aggregate linear properties of ferroelectric ceramics and polycrystalline thin films: Calculation by the method of effective piezoelectric medium. *Journal of Applied Physics*, **1998**, 84, 1524-1529	2.5	34
462	Comparison of in-plane and out-of-plane optical amplification in AFM measurements. *Review of Scientific Instruments*, **2005**, 76, 046101	1.7	33
461	An Optical In-Situ Method to Study Redox-Kinetics in SrTiO3. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1993**, 97, 1098-1104		33
460	Topotactic Phase Transition Driving Memristive Behavior. *Advanced Materials*, **2019**, 31, e1903391	24	32
459	Analytical analysis of the generic SET and RESET characteristics of electrochemical metallization memory cells. *Nanoscale*, **2013**, 5, 11003-10	7.7	32
458	Design of defect-chemical properties and device performance in memristive systems. *Science Advances*, **2020**, 6, eaaz9079	14.3	31
457	Stateful Three-Input Logic with Memristive Switches. *Scientific Reports*, **2019**, 9, 14618	4.9	31
456	Lifetime estimation due to imprint failure in ferroelectric SrBi2Ta2O9 thin films. *Applied Physics Letters*, **2000**, 76, 363-365	3.4	31
455	Numerical simulation of the defect chemistry and electrostatics at grain boundaries in titanate ceramics. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **1996**, 39, 179-187	3.1	31
454	Ordering and Phase Control in Epitaxial Double-Perovskite Catalysts for the Oxygen Evolution Reaction. *ACS Catalysis*, **2017**, 7, 7029-7037	13.1	30
453	Modeling of Quantized Conductance Effects in Electrochemical Metallization Cells. *IEEE Nanotechnology Magazine*, **2015**, 14, 505-512	2.6	30
452	Comment on real-time observation on dynamic growth/dissolution of conductive filaments in oxide-electrolyte- based ReRAM. *Advanced Materials*, **2013**, 25, 162-4	24	30

451	Field-emission resonances at tip/alpha,omega-mercaptoalkyl ferrocene/Au interfaces studied by STM. *Small*, **2009**, 5, 496-502	11	30
450	Electrochemical and thermochemical memories **2008**,		30
449	Liquid Injection MOCVD of Dysprosium Scandate Films. *Journal of the Electrochemical Society*, **2007**, 154, G147	3.9	30
448	Ion migration in crystalline and amorphous HfOX. *Journal of Chemical Physics*, **2017**, 146, 094508	3.9	29
447	Detection of Fe2+ valence states in Fe doped SrTiO3 epitaxial thin films grown by pulsed laser deposition. *Physical Chemistry Chemical Physics*, **2013**, 15, 8311-7	3.6	29
446	Current Compliance-Dependent Nonlinearity in ${rm TiO}_{2}$ ReRAM. *IEEE Electron Device Letters*, **2013**, 34, 996-998	4.4	29
445	Compact modeling of CRS devices based on ECM cells for memory, logic and neuromorphic applications. *Nanotechnology*, **2013**, 24, 384008	3.4	29
444	Abnormal bipolar-like resistance change behavior induced by symmetric electroforming in Pt/TiO2/Pt resistive switching cells. *Nanotechnology*, **2009**, 20, 375201	3.4	29
443	A Nonvolatile Memory With Resistively Switching Methyl-Silsesquioxane. *IEEE Electron Device Letters*, **2009**, 30, 8-10	4.4	29
442	Wedgelike ultrathin epitaxial BaTiO3 films for studies of scaling effects in ferroelectrics. *Applied Physics Letters*, **2008**, 93, 072902	3.4	29
441	Effects of ferroelectric switching on the piezoelectric small-signal response (d33) and electrostriction (M33) of lead zirconate titanate thin films. *Journal of Applied Physics*, **2004**, 95, 4976-4980	2.5	29
440	Thermodynamic Ground States of Complex Oxide Heterointerfaces. *ACS Applied Materials & Interfaces*, **2017**, 9, 1086-1092	9.5	27
439	Realization of Minimum and Maximum Gate Function in Ta2O5-based Memristive Devices. *Scientific Reports*, **2016**, 6, 23967	4.9	27
438	Reduction of the forming voltage through tailored oxygen non-stoichiometry in tantalum oxide ReRAM devices. *Scientific Reports*, **2018**, 8, 10861	4.9	27
437	Stoichiometry dependence and thermal stability of conducting NdGaO3/SrTiO3 heterointerfaces. *Applied Physics Letters*, **2013**, 102, 071601	3.4	27
436	Controlled local filament growth and dissolution in Ag□e□Se. *Physica Status Solidi - Rapid Research Letters*, **2008**, 2, 129-131	2.5	27
435	Mechanical crosstalk between vertical and lateral piezoresponse force microscopy. *Review of Scientific Instruments*, **2006**, 77, 036103	1.7	27
434	Aging-induced dielectric relaxation in barium titanate ceramics. *Applied Physics Letters*, **2007**, 90, 112902	3.4	27

433	Mononuclear precursor for MOCVD of HfO2 thin films. *Chemical Communications*, **2004**, 1610-1	5.8	27
432	Effects of the top-electrode size on the piezoelectric properties (d33 and S) of lead zirconate titanate thin films. *Journal of Applied Physics*, **2004**, 96, 2800-2804	2.5	27
431	Surface treatment effects on the thickness dependence of the remanent polarization of PbZr0.52Ti0.48O3 capacitors. *Applied Physics Letters*, **2003**, 83, 126-128	3.4	27
430	Investigation of grain boundary segregation in acceptor and donor doped strontium titanate. *Solid State Ionics*, **1995**, 75, 127-136	3.3	27
429	Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM). *IEEE Transactions on Electron Devices*, **2020**, 67, 3115-3122	2.9	26
428	Quasi-two-dimensional conducting layer on TiO2 (110) introduced by sputtering as a template for resistive switching. *Applied Physics Letters*, **2013**, 102, 131604	3.4	26
427	Investigation of the Impact of High Temperatures on the Switching Kinetics of Redox-Based Resistive Switching Cells using a High-Speed Nanoheater. *Advanced Electronic Materials*, **2017**, 3, 1700294	6.4	26
426	Understanding on the selective carbon monoxide sensing characteristics of copper oxide-zinc oxide composite thin films. *Sensors and Actuators B: Chemical*, **2017**, 253, 685-696	8.5	26
425	Ferroelectric field effect transistors using very thin ferroelectric polyvinylidene fluoride copolymer films as gate dielectrics. *Journal of Applied Physics*, **2010**, 107, 124119	2.5	26
424	Cu-adatom-mediated bonding in close-packed benzoate/Cu(110)-systems. *Langmuir*, **2009**, 25, 856-64	4	26
423	Growth of ternary PbTiOx films in a combination of binary oxide atomic layer depositions. *Journal of Applied Physics*, **2007**, 101, 014114	2.5	26
422	Liquid Injection ALD of Pb(Zr,Ti)O[sub x] Thin Films by a Combination of Self-Regulating Component Oxide Processes. *Journal of the Electrochemical Society*, **2007**, 154, G262	3.9	26
421	Phase states of nanocrystalline ferroelectric ceramics and their dielectric properties. *Journal of Applied Physics*, **2005**, 97, 114315	2.5	26
420	Interface-related decrease of the permittivity in PbZrxTi1□O3 thin films. *Applied Physics Letters*, **2002**, 80, 1427-1429	3.4	26
419	Functional graded high-K (Ba1□Srx)TiO3 thin films for capacitor structures with low temperature coefficient. *Integrated Ferroelectrics*, **1999**, 24, 169-179	0.8	26
418	Stability and Degradation of Perovskite Electrocatalysts for Oxygen Evolution Reaction. *Electrochimica Acta*, **2016**, 218, 156-162	6.7	26
417	Physical origins and suppression of Ag dissolution in GeS(x)-based ECM cells. *Physical Chemistry Chemical Physics*, **2014**, 16, 18217-25	3.6	25
416	Evidence for multifilamentary valence changes in resistive switching SrTiO3 devices detected by transmission X-ray microscopy. *APL Materials*, **2013**, 1, 042102	5.7	25

415	Enhanced stability of platinized silicon substrates using an unconventional adhesion layer deposited by CSD for high temperature dielectric thin film deposition. *Applied Physics A: Materials Science and Processing*, **2007**, 87, 705-708	2.6	25
414	Preparation and characterisation of amorphous Cu:7,7,8,8-Tetracyanoquinodimethane thin films with low surface roughness via thermal co-deposition. *Thin Solid Films*, **2006**, 515, 1893-1896	2.2	25
413	Interface-related thickness dependence of the tunability in BaSrTiO3 thin films. *Applied Physics Letters*, **2004**, 85, 4708-4710	3.4	25
412	Modelling and numerical simulation of the electrical, mechanical, and thermal coupled behaviour of Multilayer capacitors (MLCs). *Journal of the European Ceramic Society*, **2002**, 22, 1285-1296	6	25
411	Integration of ferroelectric lead titanate nanoislands for direct hysteresis measurements. *Applied Physics Letters*, **2005**, 87, 142904	3.4	25
410	Nanoscale polarization relaxation in a polycrystalline ferroelectric thin film: Role of local environments. *Applied Physics Letters*, **2005**, 86, 262910	3.4	25
409	Interfacial and microstructural properties of SrTiO3 thin films grown on Si(001) substrates. *Journal of Applied Physics*, **2002**, 92, 7200-7205	2.5	25
408	Digital reflection-type phase shifter based on a ferroelectric planar capacitor. *IEEE Microwave and Wireless Components Letters*, **2001**, 11, 407-409	2.6	25
407	Homogeneity and variation of donor doping in Verneuil-grown SrTiO3:Nb single crystals. *Scientific Reports*, **2016**, 6, 32250	4.9	25
406	Nanospectroscopy of Infrared Phonon Resonance Enables Local Quantification of Electronic Properties in Doped SrTiO3 Ceramics. *Advanced Functional Materials*, **2018**, 28, 1802834	15.6	25
405	Determination of the electrostatic potential distribution in Pt/Fe:SrTiO3/Nb:SrTiO3 thin-film structures by electron holography. *Scientific Reports*, **2014**, 4, 6975	4.9	24
404	Different threshold and bipolar resistive switching mechanisms in reactively sputtered amorphous undoped and Cr-doped vanadium oxide thin films. *Journal of Applied Physics*, **2018**, 123, 044502	2.5	24
403	A Theoretical and Experimental View on the Temperature Dependence of the Electronic Conduction through a Schottky Barrier in a Resistively Switching SrTiO3-Based Memory Cell. *Advanced Electronic Materials*, **2018**, 4, 1800062	6.4	24
402	Mott-transition-based RRAM. *Materials Today*, **2019**, 28, 63-80	21.8	24
401	Electrical Transport through Single Nanoparticles and Nanoparticle Arrays. *Journal of Physical Chemistry C*, **2012**, 116, 20657-20665	3.8	24
400	Growth of Noble Metal Ru Thin Films by Liquid Injection Atomic Layer Deposition. *Journal of Physical Chemistry C*, **2009**, 113, 11329-11335	3.8	24
399	Growth Behavior of Atomic-Layer-Deposited Pb(Zr,Ti)O[sub x] Thin Films on Planar Substrate and Three-Dimensional Hole Structures. *Journal of the Electrochemical Society*, **2008**, 155, D715	3.9	24
398	Radiofrequency sputter deposition of germanium selenide thin films for resistive switching. *Thin Solid Films*, **2008**, 516, 1223-1226	2.2	24

397	Liquid-Injection MOCVD of ZrO2 Thin Films using Zirconium Bis(diethlyamido)-bis(di-tert-butylmalonato) as a Novel Precursor. *Chemical Vapor Deposition*, **2006**, 12, 295-300		24
396	Thin Films of HfO[sub 2] for High-k Gate Oxide Applications from Engineered Alkoxide- and Amide-Based MOCVD Precursors. *Journal of the Electrochemical Society*, **2007**, 154, G77	3.9	24
395	Lattice strain and lattice expansion of the SrRuO3 layers in SrRuO3/PbZr0.52Ti0.48O3/SrRuO3 multilayer thin films. *Journal of Applied Physics*, **2002**, 92, 101-105	2.5	24
394	Resistance degradation behavior of Ba0.7Sr0.3TiO3 thin films compared to mechanisms found in titanate ceramics and single crystals. *Integrated Ferroelectrics*, **1998**, 22, 83-94	0.8	24
393	Time Evolution of the Potential Distribution in Earth Alkaline Titanates under de Voltage Stress. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1988**, 92, 1516-1522		24
392	Addressing Multiple Resistive States of Polyoxovanadates: Conductivity as a Function of Individual Molecular Redox States. *Journal of the American Chemical Society*, **2018**, 140, 16635-16640	16.4	24
391	Understanding the role of single molecular ZnS precursors in the synthesis of In(Zn)P/ZnS nanocrystals. *ACS Applied Materials & Interfaces*, **2014**, 6, 18233-42	9.5	23
390	Avalanche-Discharge-Induced Electrical Forming in Tantalum Oxide-Based Metal□Insulator□Metal Structures. *Advanced Functional Materials*, **2015**, 25, 7154-7162	15.6	23
389	Identification of screw dislocations as fast-forming sites in Fe-doped SrTiO3. *Applied Physics Letters*, **2013**, 102, 183504	3.4	23
388	Liquid Injection Atomic Layer Deposition of Crystalline TiO[sub 2] Thin Films with a Smooth Morphology from Ti(O-i-Pr)[sub 2](DPM)[sub 2]. *Journal of the Electrochemical Society*, **2009**, 156, D296	3.9	23
387	Thickness dependence of intrinsic dielectric response and apparent interfacial capacitance in ferroelectric thin films. *Journal of Applied Physics*, **2007**, 101, 074102	2.5	23
386	Photoemission study of SrTiO3 surface layers instability upon metal deposition. *Applied Physics A: Materials Science and Processing*, **2007**, 89, 451-455	2.6	23
385	Nanoimprint for future non-volatile memory and logic devices. *Microelectronic Engineering*, **2008**, 85, 870-872	2.5	23
384	An interfacial defect layer observed at (Ba,Sr)TiO3/Pt interface. *Thin Solid Films*, **2003**, 429, 282-285	2.2	23
383	Chemical Solution Deposition of Epitaxial La1□ (Ca, Sr) x MnO3 Thin Films **1999**, 3, 255-260		23
382	Field-enhanced route to generating anti-Frenkel pairs in HfO2. *Physical Review Materials*, **2018**, 2,	3.2	23
381	Three-Dimensional Electric Field Probing of Ferroelectrics on the Nanometer Scale Using Scanning Force Microscopy **2001**, 287-298		23
380	Compact Modeling of Complementary Switching in Oxide-Based ReRAM Devices. *IEEE Transactions on Electron Devices*, **2019**, 66, 1268-1275	2.9	22

379	Resistive Switching of Individual, Chemically Synthesized TiO2 Nanoparticles. *Small*, **2015**, 11, 6444-56	11	22
378	SrTiO3 thin film capacitors on silicon substrates with insignificant interfacial passive layers. *Applied Physics Letters*, **2010**, 97, 132907	3.4	22
377	Hot-forging of Ba6-3xRE8+2xTi18O54 ceramics (RE=La, Ce, Nd, Sm). *Ferroelectrics*, **1997**, 201, 127-135	0.6	22
376	Electrical characterization of ferroelectric, paraelectric, and superparaelectric thin films. *Integrated Ferroelectrics*, **1998**, 21, 27-40	0.8	22
375	Size effects in nanoscale ferroelectrics. *Journal of Alloys and Compounds*, **2008**, 449, 2-6	5.7	22
374	Simulation of the charge transport across grain boundaries in p-type SrTiO3 ceramics under dc load: Debye relaxation and dc bias dependence of long-term conductivity. *Journal of Applied Physics*, **2002**, 91, 3037-3043	2.5	22
373	Mononuclear Mixed Ketoester-alkoxide Compound of Titanium as a Promising Precursor for Low-Temperature MOCVD of TiO2 Thin Films. *Chemical Vapor Deposition*, **2003**, 9, 295-298		22
372	Fabrication and electrical characterisation of Zr-substituted BaTiO3 thin films. *Applied Physics A: Materials Science and Processing*, **2005**, 81, 25-29	2.6	22
371	A novel integrated thin film capacitor realized by a multilayer ceramic electrode sandwich structure. *Journal of the European Ceramic Society*, **1999**, 19, 1413-1415	6	22
370	Modeling of electroceramics Applications and prospects. *Journal of the European Ceramic Society*, **1999**, 19, 655-664	6	22
369	The influence of the local oxygen vacancy concentration on the piezoresponse of strontium titanate thin films. *Nanoscale*, **2015**, 7, 14351-7	7.7	21
368	Effect of RESET Voltage on Distribution of SET Switching Time of Bipolar Resistive Switching in a Tantalum Oxide Thin Film. *IEEE Transactions on Electron Devices*, **2015**, 62, 1561-1567	2.9	21
367	Insulator-to-metal transition of SrTiO3:Nb single crystal surfaces induced by Ar+ bombardment. *Applied Physics Letters*, **2013**, 102, 101603	3.4	21
366	Integration of GexSe1 xIn crossbar arrays for non-volatile memory applications. *Microelectronic Engineering*, **2009**, 86, 1054-1056	2.5	21
365	Resistively switching Pt/spin-on glass/Ag nanocells for non-volatile memories fabricated with UV nanoimprint lithography. *Microelectronic Engineering*, **2009**, 86, 1060-1062	2.5	21
364	Microstructure and interfaces of HfO2 thin films grown on silicon substrates. *Journal of Crystal Growth*, **2004**, 262, 295-303	1.6	21
363	Theoretical calculations and performance results of a PZT thin film actuator. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2003**, 50, 1240-6	3.2	21
362	Schottky barrier formed by network of screw dislocations in SrTiO3. *Applied Physics Letters*, **2005**, 87, 162105	3.4	21

361	Spectroscopic Indications of Tunnel Barrier Charging as the Switching Mechanism in Memristive Devices. *Advanced Functional Materials*, **2017**, 27, 1702282	15.6	20
360	Preparation and characterization of GeSx thin-films for resistive switching memories. *Thin Solid Films*, **2013**, 527, 299-302	2.2	20
359	Simulation of TaOx-based complementary resistive switches by a physics-based memristive model **2014**,		20
358	Reliability analysis of the low resistance state stability of Ge0.3Se0.7 based solid electrolyte nonvolatile memory cells. *Applied Physics Letters*, **2009**, 94, 123503	3.4	20
357	Investigation of the amorphous to crystalline phase transition of chemical solution deposited Pb(Zr0.3Ti0.7)O3 thin films by soft X-ray absorption and soft X-ray emission spectroscopy. *Journal of Sol-Gel Science and Technology*, **2008**, 48, 239-252	2.3	20
356	Surface layer of SrRuO3 epitaxial thin films under oxidizing and reducing conditions. *Journal of Applied Physics*, **2007**, 101, 023701	2.5	20
355	Fabrication of arrays of SrZrO3nanowires by pulsed laser deposition. *Nanotechnology*, **2004**, 15, S122-S125	3.4	20
354	SrBi2Ta2O9 ferroelectric thin film capacitors: degradation in a hydrogen ambient. *Applied Physics A: Materials Science and Processing*, **2003**, 77, 571-579	2.6	20
353	Electromechanical properties of Ba(Ti1-xZrx)O3 thin films. *Applied Physics A: Materials Science and Processing*, **2005**, 81, 11-13	2.6	20
352	Structural and electrical properties of wet-chemically deposited Sr(Ti1-yZry)O3 (y=0□1) thin films. *Integrated Ferroelectrics*, **1995**, 10, 155-164	0.8	20
351	A SIMS study of cation and anion diffusion in tantalum oxide. *Physical Chemistry Chemical Physics*, **2018**, 20, 989-996	3.6	20
350	Structure and thermoelectric properties of EuTi(O,N)3 □ □*Journal of Applied Physics*, **2013**, 114, 033701	2.5	19
349	Percolative BaTiO3□Ni composite nanopowders from alkoxide-mediated synthesis. *Journal of the European Ceramic Society*, **2010**, 30, 561-567	6	19
348	Composition influences on the electrical and electromechanical properties of lead zirconate titanate thin films. *Journal of Applied Physics*, **2006**, 100, 124105	2.5	19
347	In-situ compensation of the parasitic capacitance for nanoscale hysteresis measurements. *Journal of the European Ceramic Society*, **2004**, 24, 1145-1147	6	19
346	In-plane polarization states and their instabilities in polydomain epitaxial ferroelectric thin films. *Applied Physics Letters*, **2001**, 78, 530-532	3.4	19
345	Surface layer on KNbO3 and the hysteresis loop anomaly. *Journal of Physics and Chemistry of Solids*, **1996**, 57, 1765-1775	3.9	19
344	In-Gap States and Band-Like Transport in Memristive Devices. *Nano Letters*, **2019**, 19, 54-60	11.5	19

343	Physical simulation of dynamic resistive switching in metal oxides using a Schottky contact barrier model **2015**,		18
342	Processes and Limitations during Filament Formation and Dissolution in GeSx-based ReRAM Memory Cells. *Journal of Physical Chemistry C*, **2015**, 119, 18678-18685	3.8	18
341	Chemically-inactive interfaces in thin film Ag/AgI systems for resistive switching memories. *Scientific Reports*, **2013**, 3, 1169	4.9	18
340	Impedance spectroscopy study of the unipolar and bipolar resistive switching states of atomic layer deposited polycrystalline ZrO2 thin films. *Physica Status Solidi (A) Applications and Materials Science*, **2015**, 212, 751-766	1.6	18
339	Compositional Substitutions and Aliovalent Doping of BaTiO3-Based Thin Films on Nickel Foils Prepared by Chemical Solution Deposition. *Journal of the American Ceramic Society*, **2010**, 93, 506-515	3.8	18
338	Synthesis, spark plasma sintering and electrical conduction mechanism in BaTiO3□Cu composites. *Journal of the European Ceramic Society*, **2011**, 31, 773-782	6	18
337	Nanostructured resistive memory cells based on 8-nm-thin TiO2 films deposited by atomic layer deposition. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2011**, 29, 01AD01	1.3	18
336	Study on the dynamic resistance switching properties of NiO thin films. *Thin Solid Films*, **2010**, 518, 2258-2260	2.2	18
335	Electrical and Structural Characterization of Biphenylethanethiol SAMs. *Journal of Physical Chemistry C*, **2007**, 111, 6392-6397	3.8	18
334	MOCVD of ZrO2 and HfO2 Thin Films from Modified Monomeric Precursors. *Chemical Vapor Deposition*, **2006**, 12, 172-180		18
333	Liquid Injection Atomic Layer Deposition of TiO[sub x] Films Using Ti[OCH(CH[sub 3])[sub 2]][sub 4]. *Journal of the Electrochemical Society*, **2007**, 154, G134	3.9	18
332	Sample-tip interaction of piezoresponse force microscopy in ferroelectric nanostructures. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2006**, 53, 2253-60	3.2	18
331	Mixed amide□halonate compound of hafnium as a novel monomeric precursor for MOCVD of HfO2 thin films. *Journal of Materials Chemistry*, **2006**, 16, 437-440		18
330	Molecular structure of ferrocenethiol islands embedded into alkanethiol self-assembled monolayers by UHV-STM. *Physica Status Solidi (A) Applications and Materials Science*, **2006**, 203, 1448-1452	1.6	18
329	Non-Linear Imprint Behavior of PZT Thin Films. *Integrated Ferroelectrics*, **2003**, 53, 361-369	0.8	18
328	A Mathematical-Physical Model for the Charge Transport in p-Type SrTiO3 Ceramics Under dc Load: Maxwell-Wagner Relaxation **2002**, 9, 87-100		18
327	How to analyse relaxation and leakage currents of dielectric thin films: Simulation of voltage-step and voltage-ramp techniques. *Integrated Ferroelectrics*, **1995**, 8, 317-332	0.8	18
326	3-bit Resistive RAM Write-Read Scheme Based on Complementary Switching Mechanism. *IEEE Electron Device Letters*, **2017**, 38, 449-452	4.4	17

325	Introduction to new memory paradigms: memristive phenomena and neuromorphic applications. *Faraday Discussions*, **2019**, 213, 11-27	3.6	17
324	Low-current operations in 4F(2)-compatible Ta2O5-based complementary resistive switches. *Nanotechnology*, **2015**, 26, 415202	3.4	17
323	Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices. *Advanced Electronic Materials*, **2018**, 4, 1700243	6.4	17
322	Interrelation of Sweep and Pulse Analysis of the SET Process in SrTiO3 Resistive Switching Memories. *IEEE Electron Device Letters*, **2014**, 35, 924-926	4.4	17
321	Nanocomposite thin films for miniaturized multi-layer ceramic capacitors prepared from barium titanate nanoparticle based hybrid solutions. *Journal of Materials Chemistry*, **2011**, 21, 7953		17
320	LI-MOCVD of HfO2 thin films using engineered amide based Hf precursors. *Surface and Coatings Technology*, **2007**, 201, 9109-9116	4.4	17
319	Thin films of high-k dysprosium scandate prepared by metal organic chemical vapor deposition for metal□nsulator□etal capacitor applications. *Solid State Communications*, **2008**, 147, 332-335	1.6	17
318	Liquid-Injection Atomic Layer Deposition of TiO[sub x] and Pb□iO Films. *Journal of the Electrochemical Society*, **2006**, 153, F199	3.9	17
317	Laser crystallization studies of barium strontium titanate thin films. *Journal of the European Ceramic Society*, **2004**, 24, 3013-3020	6	17
316	Rectangular (3 x 2 square root of 3) superlattice of a dodecanethiol self-assembled monolayer on Au(111) observed by ultra-high-vacuum scanning tunneling microscopy. *Journal of Physical Chemistry B*, **2005**, 109, 11424-6	3.4	17
315	BST thin films grown in a multiwafer MOCVD reactor. *Journal of the European Ceramic Society*, **2001**, 21, 1547-1551	6	17
314	Electrical conductivity and segregation effects of doped SrTiO3 thin films. *Journal of the European Ceramic Society*, **2001**, 21, 1673-1676	6	17
313	Influence of the Film-Electrode Interface in Thin-Film Capacitors. *Ferroelectrics*, **2002**, 271, 315-320	0.6	17
312	Deposition of thin BST films in a multi-wafer planetary reactor. *Integrated Ferroelectrics*, **2000**, 30, 183-192	2.8	17
311	Migration of complexes at the silver/electrolyte interface. *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*, **1983**, 150, 89-95		17
310	Variability-Aware Modeling of Filamentary Oxide-Based Bipolar Resistive Switching Cells Using SPICE Level Compact Models. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2020**, 67, 4618-4630	3.9	17
309	Field-Driven Hopping Transport of Oxygen Vacancies in Memristive Oxide Switches with Interface-Mediated Resistive Switching. *Physical Review Applied*, **2018**, 10,	4.3	17
308	Oxygen partial pressure dependence of surface space charge formation in donor-doped SrTiO3. *APL Materials*, **2017**, 5, 056106	5.7	16

307	PrxBa1-xCoO3Oxide Electrodes for Oxygen Evolution Reaction in Alkaline Solutions by Chemical Solution Deposition. *Journal of the Electrochemical Society*, **2016**, 163, F166-F170	3.9	16
306	Molecular dynamics simulations of oxygen vacancy diffusion in SrTiO3. *Journal of Physics Condensed Matter*, **2012**, 24, 485002	1.8	16
305	Influence of the thickness and area of NiCr/Ag electrodes on the characteristics of BaTiO3- ceramic based positive-temperature-coefficient thermistors. *Journal of Materials Science*, **1998**, 33, 4603-4608	4.3	16
304	Electrical and optical properties of chemical solution deposited barium hafnate titanate thin films. *Thin Solid Films*, **2008**, 516, 4970-4976	2.2	16
303	Structural investigations of Pt□iOx electrode stacks for ferroelectric thin film devices. *Journal of Applied Physics*, **2006**, 99, 114107	2.5	16
302	Transport of hydrogen species in a single crystal SrTiO3. *Solid State Ionics*, **2006**, 177, 1469-1476	3.3	16
301	Shift of Phase Transition Temperature in Strontium Titanate Thin Films. *Integrated Ferroelectrics*, **2003**, 58, 1371-1379	0.8	16
300	Crystallization Temperature Limit of (Ba,Sr)TiO3 Thin Films Prepared by a Non Oxocarbonate Phase Forming CSD Route. *Journal of Sol-Gel Science and Technology*, **2005**, 33, 299-306	2.3	16
299	Leakage Currents in CVD (Ba,Sr)TiO3 Thin Films. *Materials Research Society Symposia Proceedings*, **1996**, 433, 285		16
298	Resistance switching behavior of atomic layer deposited SrTiO3 film through possible formation of Sr2Ti6O13 or Sr1Ti11O20 phases. *Scientific Reports*, **2016**, 6, 20550	4.9	16
297	Degradation Kinetics during Oxygen Electrocatalysis on Perovskite-Based Surfaces in Alkaline Media. *Langmuir*, **2018**, 34, 1347-1352	4	15
296	Directed Immobilization of Janus-AuNP in Heterometallic Nanogaps: a Key Step Toward Integration of Functional Molecular Units in Nanoelectronics. *Journal of Physical Chemistry C*, **2014**, 118, 27142-27149	3.8	15
295	Inhomogeneity of donor doping in SrTiO3 substrates studied by fluorescence-lifetime imaging microscopy. *Applied Physics Letters*, **2013**, 103, 162904	3.4	15
294	Structural ordering of □Ferrocenylalkanethiol monolayers on Au(111) studied by scanning tunneling microscopy. *Surface Science*, **2009**, 603, 716-722	1.8	15
293	Properties of SrBi2Ta2O9 thin films grown by MOCVD for high density FeRAM applications. *Integrated Ferroelectrics*, **1998**, 21, 367-379	0.8	15
292	Nonlinear Electrical Properties of Grain Boundaries in Oxygen Ion Conductors. *Electrochemical and Solid-State Letters*, **2005**, 8, E67		15
291	Consolidation, Microstructure and Crystallography of Dense NaNbO3 Ceramics with Ultra-Fine Grain Size. *Journal of the Ceramic Society of Japan*, **2006**, 114, 995-1000		15
290	Characterization of Ba(Ti,Zr)O3 ceramics sintered under reducing conditions. *Journal of the European Ceramic Society*, **2004**, 24, 1473-1477	6	15

289	Influence of the morphology of ferroelectric SrBi2Ta2O9 thin films deposited by metal organic decomposition on its electrical characteristics. *Applied Surface Science*, **2005**, 249, 23-30	6.7	15
288	SrZrO3 Nanopatterning Using Self-Organized SrRuO3 as a Template. *Advanced Materials*, **2005**, 17, 281-284	2.4	15
287	Effects of ferroelectric fatigue on the piezoelectric properties (d33) of tetragonal lead zirconate titanate thin films. *Applied Physics Letters*, **2005**, 86, 112908	3.4	15
286	Morphology and electrical properties of SrTiO3-films on conductive oxide films. *Journal of the European Ceramic Society*, **2001**, 21, 1597-1600	6	15
285	Polar grain boundaries in undoped SrTiO3 ceramics. *Journal of the European Ceramic Society*, **2001**, 21, 2681-2686	6	15
284	Size Effects on Polarization in Epitaxial Ferroelectric Films and the Concept of Ferroelectric Tunnel Junctions Including First Results. *Materials Research Society Symposia Proceedings*, **2001**, 688, 1		15
283	Compensation of the Parasitic Capacitance of a Scanning Force Microscope Cantilever Used for Measurements on Ferroelectric Capacitors of Submicron Size by Means of Finite Element Simulations. *Japanese Journal of Applied Physics*, **2002**, 41, 7198-7201	1.4	15
282	Optical absorption relaxation applied to SrTiO3 and ZrO2: An in-situ method to study trapping effects on chemical diffusion. *Solid State Ionics*, **1994**, 72, 41-46	3.3	15
281	Simulation and comparison of two sequential logic-in-memory approaches using a dynamic electrochemical metallization cell model. *Microelectronics Journal*, **2014**, 45, 1416-1428	1.8	14
280	High Growth Rate in Atomic Layer Deposition of TiO2 thin films by UV Irradiation. *Electrochemical and Solid-State Letters*, **2011**, 14, H146		14
279	Effect of in-plane shear strain on phase states and dielectric properties of epitaxial ferroelectric thin films. *Journal of Applied Physics*, **2008**, 104, 054118	2.5	14
278	Laser annealing of BST thin films with reduced cracking at an elevated temperature. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2006**, 133, 235-240	3.1	14
277	Finite-Element Analysis of Ceramic Multilayer Capacitors: Modeling and Electrical Impedance Spectroscopy for a Nondestructive Failure Test. *Journal of the American Ceramic Society*, **2004**, 83, 1153-1159	3.8	14
276	Experimental and numerical investigations of heat transport and crystallization kinetics in laser-induced modification of barium strontium titanate thin films. *Applied Physics A: Materials Science and Processing*, **2005**, 80, 1553-1562	2.6	14
275	Metal-organic chemical-vapor deposition of (Ba,Sr)TiO3: Nucleation and growth on Pt-(111). *Journal of Applied Physics*, **2005**, 98, 084904	2.5	14
274	Grain-boundary decorated titanate ceramics: Preparation and processing. *Solid State Ionics*, **1995**, 75, 123-126	3.3	14
273	Interface-driven formation of a two-dimensional dodecagonal fullerene quasicrystal. *Nature Communications*, **2017**, 8, 15367	17.4	13
272	Understanding the conductive channel evolution in Na:WO(3-x)-based planar devices. *Nanoscale*, **2015**, 7, 6023-30	7.7	13

271	On the universality of the I-V switching characteristics in non-volatile and volatile resistive switching oxides. *Faraday Discussions*, **2019**, 213, 183-196	3.6	13
270	Study of atomic layer deposited ZrO2 and ZrO2/TiO2 films for resistive switching application. *Physica Status Solidi (A) Applications and Materials Science*, **2014**, 211, 301-309	1.6	13
269	Local conductivity of epitaxial Fe-doped SrTiO3 thin films. *Phase Transitions*, **2011**, 84, 483-488	1.3	13
268	Reversible and Irreversible Contributions to the Polarization in SrBi2Ta2O9 Ferroelectric Capacitors. *Materials Research Society Symposia Proceedings*, **1997**, 493, 267		13
267	Ferromagnetic 0□Josephson junctions. *Applied Physics A: Materials Science and Processing*, **2007**, 89, 613-617	2.6	13
266	Microstructure and electrical properties of BaTiO3 and (Ba,Sr)TiO3 ferroelectric thin films on nickel electrodes. *Journal of Sol-Gel Science and Technology*, **2007**, 42, 203-207	2.3	13
265	Microemulsion mediated synthesis of nanocrystalline BaTiO3: possibilities, potential and perspectives. *International Journal of Materials Research*, **2006**, 97, 499-507		13
264	Effect of interfaces in Monte Carlo computer simulations of ferroelectric materials. *Applied Physics Letters*, **2004**, 84, 2379-2381	3.4	13
263	Thickness Dependence of Piezoelectric Properties for PZT Thin Films with Regard to MEMS Applications. *Integrated Ferroelectrics*, **2003**, 54, 527-535	0.8	13
262	Monte Carlo simulations of imprint behavior in ferroelectrics. *Applied Physics Letters*, **2005**, 87, 242902	3.4	13
261	HRS Instability in Oxide-Based Bipolar Resistive Switching Cells. *IEEE Transactions on Electron Devices*, **2020**, 67, 4208-4215	2.9	13
260	Dependence of the SET switching variability on the initial state in HfOx-based ReRAM. *Physica Status Solidi (A) Applications and Materials Science*, **2016**, 213, 316-319	1.6	13
259	In-memory adder functionality in 1S1R arrays **2015**,		12
258	Tuning the surface electronic structure of a Pt3Ti(111) electro catalyst. *Nanoscale*, **2016**, 8, 13924-33	7.7	12
257	Enhanced fullerene-Au(111) coupling in (2□ □2□)R30□superstructures with intermolecular interactions. *Beilstein Journal of Nanotechnology*, **2015**, 6, 1421-31	3	12
256	On the SET/RESET current asymmetry in electrochemical metallization memory cells. *Physica Status Solidi - Rapid Research Letters*, **2014**, 8, 540-544	2.5	12
255	Electronic structure of epitaxial Fe-doped SrTiO3 thin films. *Phase Transitions*, **2011**, 84, 489-500	1.3	12
254	Texture etched Al-doped ZnO: a new material for enhanced light trapping in thin film solar cells		12

253	Noncentrosymmetric phase of submicron NaNbO3 crystallites. *Journal of Electroceramics*, **2007**, 19, 273-280	1.9	12
252	Effects of Thermal Annealing on the Structure of Ferroelectric Thin Films. *Journal of the American Ceramic Society*, **2006**, 89, 1321-1325	3.8	12
251	Preparation and Characterisation of High Density, High Purity Lanthanum Aluminate Bulk Ceramics **2003**, 10, 193-202		12
250	Lamellar ferroelectric domains in PbTiO3 grains imaged and manipulated by AFM. *Surface Science*, **2003**, 532-535, 483-487	1.8	12
249	Structural and morphologic evolution of Pt/Ba0.7Sr0.3TiO3/Pt capacitors with annealing processes. *Applied Physics Letters*, **2002**, 80, 2728-2730	3.4	12
248	Low temperature process and thin SBT films for ferroelectric memory devices. *Integrated Ferroelectrics*, **2000**, 30, 235-244	0.8	12
247	Impact of the Ohmic Electrode on the Endurance of Oxide-Based Resistive Switching Memory. *IEEE Transactions on Electron Devices*, **2021**, 68, 1024-1030	2.9	12
246	Correlation between the transport mechanisms in conductive filaments inside Ta2O5-based resistive switching devices and in substoichiometric TaOx thin films. *Applied Physics Letters*, **2018**, 112, 213504	3.4	12
245	Valence change detection in memristive oxide based heterostructure cells by hard X-ray photoelectron emission spectroscopy. *APL Materials*, **2018**, 6, 046106	5.7	11
244	Nonlinearity analysis of TaOX redox-based RRAM. *Microelectronic Engineering*, **2016**, 154, 38-41	2.5	11
243	Columnar self-assembly of a 3D-persulfurated coronene asterisk. The dominant role of aryl-sulfur bonds. *New Journal of Chemistry*, **2012**, 36, 477-483	3.6	11
242	An integrated microelectromechanical microwave switch based on piezoelectric actuation. *Journal of Electroceramics*, **2009**, 22, 145-149	1.5	11
241	The thermal stability of Pt/Ir coated AFM tips for resistive switching measurements. *Applied Surface Science*, **2011**, 257, 7627-7632	6.7	11
240	Electroforming and Resistance Switching Characteristics of Silver-Doped MSQ With Inert Electrodes. *IEEE Nanotechnology Magazine*, **2011**, 10, 338-343	2.6	11
239	Simulation of Electrical Properties of Grain Boundaries in Titanate Ceramics. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1997**, 101, 1238-1241		11
238	Pulsed laser ablation synthesis and characterization of layered SrBi2Ta2O9 films and integration into capacitors for non-volatile memories. *Integrated Ferroelectrics*, **1997**, 14, 51-57	0.8	11
237	Improved PbZr0.52Ti0.48O3 film quality on SrRuO3/SrTiO3 substrates. *Journal of Crystal Growth*, **2005**, 277, 210-217	1.6	11
236	Status and future aspects in nanoscale surface inspection of ferroics by scanning probe microscopy. *Ferroelectrics*, **2001**, 251, 11-20	0.6	11

235	Influence of Defects on the Properties of a 2D Ferroelectric: A Monte-Carlo Simulation Study. *Japanese Journal of Applied Physics*, **2002**, 41, 7202-7210	1.4	11
234	MOCVD of perovskite thin films using an aerosol-assisted liquid delivery system. *Advanced Materials for Optics and Electronics*, **2000**, 10, 169-175		11
233	Origin of Imprint in Ferroelectric CSD SrBi2Ta2O9 Thin Films. *Materials Research Society Symposia Proceedings*, **1998**, 541, 269		11
232	Nature of the surface layer in ABO3-type perovskites at elevated temperatures. *Applied Physics A: Materials Science and Processing*, **1996**, 62, 335-343	2.6	11
231	Chemical control of the electrical surface properties in donor-doped transition metal oxides. *Physical Review Materials*, **2019**, 3,	3.2	11
230	(Invited) Mobile Ions, Transport and Redox Processes in Memristive Devices. *ECS Transactions*, **2016**, 75, 27-39	1	11
229	Metallic filamentary conduction in valence change-based resistive switching devices: the case of TaO thin film with x~ 1. *Nanoscale*, **2019**, 11, 16978-16990	7.7	10
228	A 2D axisymmetric dynamic drift-diffusion model for numerical simulation of resistive switching phenomena in metal oxides **2016**,		10
227	Influence of stoichiometry on the performance of MIM capacitors from plasma-assisted ALD SrxTiyOz films. *Physica Status Solidi (A) Applications and Materials Science*, **2014**, 211, 389-396	1.6	10
226	Impact of composition and crystallization behavior of atomic layer deposited strontium titanate films on the resistive switching of Pt/STO/TiN devices. *Journal of Applied Physics*, **2014**, 116, 064503	2.5	10
225	Atomic Layer Deposition of TiOx/Al2O3 Bilayer Structures for Resistive Switching Memory Applications. *Chemical Vapor Deposition*, **2014**, 20, 282-290		10
224	Electrical Characterization of 4-Mercaptophenylamine-Capped Nanoparticles in a Heterometallic Nanoelectrode Gap. *Journal of Physical Chemistry C*, **2013**, 117, 22002-22009	3.8	10
223	Interaction between depolarization effects, interface layer, and fatigue behavior in PZT thin film capacitors. *Journal of Applied Physics*, **2017**, 122, 024105	2.5	10
222	Comment on Dynamic Processes of Resistive Switching in Metallic Filament-Based Organic Memory Devices *Journal of Physical Chemistry C*, **2013**, 117, 11878-11880	3.8	10
221	Formation Sequence of Lead Platinum Interfacial Phases in Chemical Solution Deposition Derived Pb(Zr1Tix)O3Thin Films. *Chemistry of Materials*, **2010**, 22, 6209-6211	9.6	10
220	Transverse magnetovoltage in epitaxial La0.67Ca0.33MnO3 thin films. *Solid State Communications*, **1998**, 109, 189-194	1.6	10
219	Striped phase of mercaptoalkylferrocenes on Au(111) with a potential for nanoscale surface patterning. *Langmuir*, **2008**, 24, 4577-80	4	10
218	Liquid injection MOCVD of TiO2 and SrTiO3 thin films from [Ti(OPri)2(tbaoac)2]: Film properties and compatibility with [Sr(thd)2]. *Surface and Coatings Technology*, **2007**, 201, 9135-9140	4.4	10

217	Morphology control of highly-transparent indium tin oxide thin films prepared by a chlorine-reduced metallo-organic decomposition technique. *Thin Solid Films*, **2007**, 515, 3797-3801	2.2	10
216	Self Assembly of Mixed Monolayers of Mercaptoundecylferrocene and Undecanethiol studied by STM. *Journal of Physics: Conference Series*, **2007**, 61, 852-855	0.3	10
215	Effects of reversible and irreversible ferroelectric switchings on the piezoelectric large-signal response of lead zirconate titanate thin films. *Journal of Applied Physics*, **2005**, 98, 124101	2.5	10
214	Influence of adsorbates on the piezoresponse of KNbO3. *Physica Status Solidi (A) Applications and Materials Science*, **2006**, 203, 616-621	1.6	10
213	Recrystallization of Oxygen Ion Implanted Ba0.7Sr0.3TiO3 Thin Films. *Journal of the American Ceramic Society*, **2004**, 83, 436-438	3.8	10
212	(Ba,Sr)TiO3 thin film growth in a batch processing MOCVD reactor. *Journal of the European Ceramic Society*, **2004**, 24, 271-276	6	10
211	Characterization of Chemical Solution Deposition-Derived Lead Hafnate Titanate Thin Films. *Journal of the American Ceramic Society*, **2005**, 88, 1312-1314	3.8	10
210	Contributions to in-plane piezoresponse on axially symmetrical samples. *Review of Scientific Instruments*, **2005**, 76, 106108	1.7	10
209	Advances in point defect chemistry: space charge controlled surface reactions. *Journal of the European Ceramic Society*, **2001**, 21, 1743-1747	6	10
208	Basic investigations on a piezoelectric bending actuator for micro-electro-mechanical applications. *Integrated Ferroelectrics*, **2001**, 35, 269-281	0.8	10
207	Externally determined and intrinsic contributions to the polarization switching currents in SrBi2Ta2O9 thin films. *Integrated Ferroelectrics*, **1998**, 22, 123-131	0.8	10
206	Imprint in ferroelectric SrBi2Ta2O9 capacitors for non-volatile memory applications. *Integrated Ferroelectrics*, **1998**, 22, 95-107	0.8	10
205	Influence of crystallization kinetics on texture of sol□gel PZT and BST thin films. *Journal of the European Ceramic Society*, **1999**, 19, 1391-1395	6	10
204	Trade-Off Between Data Retention and Switching Speed in Resistive Switching ReRAM Devices. *Advanced Electronic Materials*, **2021**, 7, 2000815	6.4	10
203	Critical ReRAM Stack Parameters Controlling Complimentary versus Bipolar Resistive Switching **2015**,		9
202	Introduction to Nanoionic Elements for Information Technology **2016**, 1-30		9
201	Simulation of polarity independent RESET in electrochemical metallization memory cells **2013**,		9
200	Electronic Conduction Mechanisms in BaTiO3□Ni Composites with Ultrafine Microstructure Obtained by Spark Plasma Sintering. *Journal of the American Ceramic Society*, **2010**, 93, 4075-4080	3.8	9

199	Single Electron Tunneling through a Tailored Arylthio-coronene. *Journal of Physical Chemistry C*, **2011**, 115, 9204-9209	3.8	9
198	Reduction of film thickness for chemical solution deposited PbZr0.3Ti0.7O3 thin films revealing no size effects and maintaining high remanent polarization and low coercive field. *Thin Solid Films*, **2008**, 516, 4713-4719	2.2	9
197	Structural, dielectric and electromechanical study of Hf-substituted BaTiO3 thin films fabricated by CSD. *Applied Physics A: Materials Science and Processing*, **2006**, 83, 285-288	2.6	9
196	Integration of Piezoelectric PZT Thin Films with Internal Electrodes into an Actuator Structure for MEMS Applications. *Integrated Ferroelectrics*, **2002**, 50, 21-32	0.8	9
195	Structure property relations of BST thin films. *Integrated Ferroelectrics*, **2001**, 38, 211-220	0.8	9
194	Detailed temperature dependence of the space charge layer width at grain boundaries in acceptor-doped SrTiO3-ceramics. *Journal of the European Ceramic Society*, **1999**, 19, 683-686	6	9
193	Study of the SET switching event of VCM-based memories on a picosecond timescale. *Journal of Applied Physics*, **2020**, 127, 204501	2.5	8
192	Electrically controlled transformation of memristive titanates into mesoporous titanium oxides via incongruent sublimation. *Scientific Reports*, **2018**, 8, 3774	4.9	8
191	Internal Cell Resistance as the Origin of Abrupt Reset Behavior in HfO2-Based Devices Determined from Current Compliance Series **2016**,		8
190	Band alignment at memristive metal-oxide interfaces investigated by hard x-ray photoemission spectroscopy. *Physical Review B*, **2014**, 90,	3.3	8
189	Volatile HRS asymmetry and subloops in resistive switching oxides. *Nanoscale*, **2017**, 9, 14414-14422	7.7	8
188	Physical modeling of the electroforming process in resistive-switching devices **2017**,		8
187	(Keynote) Atomic Scale and Interface Interactions in Redox-Based Resistive Switching Memories. *ECS Transactions*, **2014**, 64, 3-18	1	8
186	Bipolar resistive switching in oxides: Mechanisms and scaling. *Current Applied Physics*, **2011**, 11, e75-e78	2.6	8
185	Electronic transport properties of individual 4,4'-bis(mercaptoalkyl)-biphenyl derivatives measured in STM-based break junctions. *Physical Chemistry Chemical Physics*, **2010**, 12, 10518-24	3.6	8
184	Self-neutralization via electroreduction in photoemission from SrTiO3 single crystals. *Applied Physics A: Materials Science and Processing*, **2009**, 97, 449-454	2.6	8
183	Metallic nanogaps with access windows for liquid based systems. *Microelectronics Journal*, **2006**, 37, 591-594	1.8	8
182	Simultaneous measurement of the piezoelectric and dielectric response of nanoscale ferroelectric capacitors by an atomic force microscopy based approach. *Applied Physics A: Materials Science and Processing*, **2006**, 84, 67-71	2.6	8

181	Interfacial reactions and microstructure of BaTiO3 films prepared using fluoride precursor method. *Applied Surface Science*, **2004**, 221, 178-183	6.7	8
180	Influence of Asymmetric Oxide Electrode Structures on the Interface Capacity and the Failure Mechanisms in PZT Thin Films. *Integrated Ferroelectrics*, **2003**, 52, 63-71	0.8	8
179	Development of oxygen-permeable ceramic membranes for NOx-sensors. *Journal of the European Ceramic Society*, **2001**, 21, 1971-1975	6	8
178	Integration, electrical, and electromechanical properties of PZT and PMN-PT thin films for MEMS applications **2002**,		8
177	Far infrared and Raman spectroscopy of ferroelectric soft mode in SrTiO3 thin films and ceramics. *Integrated Ferroelectrics*, **2001**, 32, 11-20	0.8	8
176	dc Field-induced resistance degradation of perovskite-type titanates: A non-linear transport phenomenon. *Ferroelectrics*, **1990**, 109, 89-94	0.6	8
175	Utilizing the Switching Stochasticity of HfO/TiO-Based ReRAM Devices and the Concept of Multiple Device Synapses for the Classification of Overlapping and Noisy Patterns. *Frontiers in Neuroscience*, **2021**, 15, 661856	5.1	8
174	The influence of non-stoichiometry on the switching kinetics of strontium-titanate ReRAM devices. *Journal of Applied Physics*, **2016**, 120, 244502	2.5	8
173	Probing orbital ordering in LaVO3 epitaxial films by Raman scattering. *APL Materials*, **2016**, 4, 046103	5.7	8
172	Resistive Switching in Aqueous Nanopores by Shock Electrodeposition. *Electrochimica Acta*, **2016**, 222, 370-375	6.7	8
171	Forming-free metal-oxide ReRAM by oxygen ion implantation process **2016**,		8
170	Crossover From Deterministic to Stochastic Nature of Resistive-Switching Statistics in a Tantalum Oxide Thin Film. *IEEE Transactions on Electron Devices*, **2018**, 65, 4320-4325	2.9	8
169	Effect of the Threshold Kinetics on the Filament Relaxation Behavior of Ag-Based Diffusive Memristors. *Advanced Functional Materials*,2111242	15.6	8
168	Proton defects in BaTiO3: New aspects regarding the re-oxidation of dielectric materials fired in reducing atmospheres. *Journal of the European Ceramic Society*, **2013**, 33, 3007-3013	6	7
167	Design rules for threshold switches based on a field triggered thermal runaway mechanism. *Journal of Computational Electronics*, **2017**, 16, 1175-1185	1.8	7
166	Tuning cationic composition of La:EuTiO3 films. *APL Materials*, **2013**, 1, 052111	5.7	7
165	Embedded ferroelectric nanostructure arrays. *Nanotechnology*, **2009**, 20, 075305	3.4	7
164	Electrochemical Reactions in Nanoionics - Towards Future Resistive Switching Memories. *ECS Transactions*, **2009**, 25, 431-437	1	7

163	Direct electrical characterization of embedded ferroelectric lead titanate nanoislands. *Journal of Applied Physics*, **2008**, 103, 034113	2.5	7
162	Resistive Switching in Ge0.3Se0.7 Films by Means of Copper Ion Migration. *Zeitschrift Fur Physikalische Chemie*, **2007**, 221, 1469-1478	3.1	7
161	Protected nanoelectrodes of two different metals with 30nm gapwidth and access window. *Microelectronic Engineering*, **2006**, 83, 1702-1705	2.5	7
160	Variable size and shape distribution of ferroelectric nanoislands by chemical mechanical polishing. *Small*, **2006**, 2, 500-2	11	7
159	Fabrication of stress-induced SrRuO3 nanostructures by pulsed laser deposition. *Applied Physics A: Materials Science and Processing*, **2004**, 79, 1461-1464	2.6	7
158	Transmission Electron Microscopy Investigation of Pt/Ba0.7Sr0.3TiO3/Pt Capacitors with Different Annealing Processes. *Journal of the American Ceramic Society*, **2003**, 86, 1190-1195	3.8	7
157	High temperature conductivity behavior of doped SrTiO3 thin films. *Integrated Ferroelectrics*, **2001**, 33, 363-372	0.8	7
156	Growth of (Ba,Sr)TiO 3 Thin Films by MOCVD: Stoichiometry Effects. *Integrated Ferroelectrics*, **2002**, 45, 59-68	0.8	7
155	Influence of dry etching using argon on structural and electrical properties of crystalline and non-crystalline SrBi2Ta2O9 thin films. *Integrated Ferroelectrics*, **1999**, 27, 213-225	0.8	7
154	Comprehensive model for the electronic transport in Pt/SrTiO3 analog memristive devices. *Physical Review B*, **2020**, 102,	3.3	7
153	Threshold Switching in Amorphous Cr-Doped Vanadium Oxide for New Crossbar Selector **2016**,		7
152	Thin film proton conducting membranes for micro-solid oxide fuel cells by chemical solution deposition. *Thin Solid Films*, **2017**, 636, 446-457	2.2	6
151	Study of Memristive Associative Capacitive Networks for CAM Applications. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **2015**, 5, 153-161	5.2	6
150	Grain growth and crystallinity of ultrafine barium titanate particles prepared by various routes. *Ceramics International*, **2013**, 39, 6673-6680	5.1	6
149	Recent progress in redox-based resistive switching **2012**,		6
148	Feasibility studies for filament detection in resistively switching SrTiO3 devices by employing grazing incidence small angle X-ray scattering. *Journal of Applied Physics*, **2013**, 113, 064509	2.5	6
147	An Important Failure Mechanism in MOCVD (Ba,Sr)TiO3 thin Films: Resistance Degradation. *Materials Research Society Symposia Proceedings*, **1997**, 493, 9		6
146	The effect of Zr on the microstructure of Ba(Ti1−yZry)O3 thin films prepared by chemical-solution deposition. *Materials Letters*, **1998**, 35, 375-379	3.3	6

145	THIN FILMS OF UNDOPED LEAD TITANATE: MORPHOLOGY AND ELECTRICAL PROPERTIES. *Integrated Ferroelectrics*, **2008**, 98, 3-10	0.8	6
144	Comparison of three different architectures for active resistive memories. *AEU - International Journal of Electronics and Communications*, **2007**, 61, 345-352	2.8	6
143	Density inhomogeneity in ferroelectric thin films. *Applied Physics Letters*, **2006**, 89, 052901	3.4	6
142	Chemical deposition methods for ferroelectric thin films. *Ferroelectrics*, **2001**, 259, 205-214	0.6	6
141	Degradation mechanisms of SrBi2Ta2O9 ferroelectric thin film capacitors during forming gas annealing. *Integrated Ferroelectrics*, **2000**, 31, 341-350	0.8	6
140	Charge transport in perovskite-type titanates: Space charge effects in ceramics and films. *Ferroelectrics*, **1994**, 151, 125-131	0.6	6
139	Potential Dependence and Time Evolution of the Double Layer Structure and Topography of Silver Electrodes. Part I: Smooth Silver Films. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1984**, 88, 714-719		6
138	Curie-Weiss law of (Ba1-xSrx)TiO3 thin films prepared by chemical solution deposition. *European Physical Journal Special Topics*, **1998**, 08, Pr9-221-Pr9-224		6
137	Ultrafast switching in Ta2O5-based resistive memories **2016**,		6
136	Improvement of SET variability in TaO based resistive RAM devices. *Nanotechnology*, **2017**, 28, 465203	3.4	5
135	Mechanism of memristive switching in OxRAM **2019**, 137-170		5
134	Dysprosium-Doped (Ba,Sr)TiO3 Thin Films on Nickel Foilsfor Capacitor Applications. *Journal of the American Ceramic Society*, **2013**, 96, 1228-1233	3.8	5
133	Fast mapping of inhomogeneities in the popular metallic perovskite Nb:SrTiO3 by confocal Raman microscopy. *Physica Status Solidi - Rapid Research Letters*, **2014**, 08, 781-784	2.5	5
132	Bipolar Resistive Switching in Oxides for Memory Applications **2010**, 131-167		5
131	Electrical properties of Pt interconnects for passive crossbar memory arrays. *Microelectronic Engineering*, **2009**, 86, 2275-2278	2.5	5
130	A multilayer RRAM nanoarchitecture with resistively switching Ag-doped spin-on glass **2009**,		5
129	Comments on the processing of the niobium component for chemical solution derived niobium oxide-based thin-films. *Journal of Sol-Gel Science and Technology*, **2010**, 56, 236-243	2.3	5
128	Observation of unipolar resistance switching in silver doped methyl-silsesquioxane. *Microelectronic Engineering*, **2010**, 87, 1531-1533	2.5	5

127	Tungsten coatings by chemical solution deposition for ceramic electrodes in fluorescent tubes. *Journal of Materials Chemistry*, **2008**, 18, 3501		5
126	Piezoelectric Actuated MEMS for Integrated RF Switches Based on PZT Thin Film Bridges. *Ferroelectrics*, **2006**, 338, 89-95	0.6	5
125	Preparation, Processing, and Characterization of Nano-Crystalline BaTiO3 Powders and Ceramics Derived from Microemulsion-Mediated Synthesis. *Journal of the American Ceramic Society*, **2006**, 89, 060623005134004-?	3.8	5
124	Effect of different annealing procedures on the microstructure and the electrical properties of CSD derived (Ba,Sr)TiO3 thin films.. *Materials Research Society Symposia Proceedings*, **2004**, 811, 248		5
123	Integration of stacked capacitor module with ultra-thin ferroelectric SrBi2Ta2O9 film for high density ferroelectric random access memory applications at low voltage operation. *Thin Solid Films*, **2005**, 473, 328-334	2.2	5
122	Effect of ozone treatment on the electrical properties of (Ba0.7Sr0.3)TiO3 thin films. *Journal of Applied Physics*, **2005**, 97, 114904	2.5	5
121	Kinetic of phase transformation of SrBi2Ta2O9 deposited by metalorganic decomposition on platinum electrodes. *Applied Physics Letters*, **2002**, 81, 4410-4412	3.4	5
120	Laserannealing studies of barium strontium titanate thin films using short laser pulses. *Integrated Ferroelectrics*, **2000**, 30, 129-138	0.8	5
119	Frequency Dependence of the Coercive Voltage of Ferroelectric Thin Films. *Materials Research Society Symposia Proceedings*, **1999**, 596, 291		5
118	Potential Dependence and Time Evolution of the Double Layer Structure and Topography of Silver Electrodes Part II: Roughened Silver Films. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1984**, 88, 1177-1181		5
117	Effect of Cationic Interface Defects on Band Alignment and Contact Resistance in Metal/Oxide Heterojunctions. *Advanced Electronic Materials*, **2020**, 6, 1900808	6.4	5
116	Current-limiting amplifier for high speed measurement of resistive switching data. *Review of Scientific Instruments*, **2021**, 92, 054701	1.7	5
115	Hydroxyl Defect Effect on Reoxidation of Sc-Doped (Ba,Ca)(Ti,Zr)O3 Fired in Reducing Atmospheres. *Journal of the American Ceramic Society*, **2016**, 99, 1311-1317	3.8	5
114	Carbonate formation lowers the electrocatalytic activity of perovskite oxides for water electrolysis. *Journal of Materials Chemistry A*, **2021**, 9, 19940-19948	13	5
113	Energy Level Alignment at the Fullerene/Titanium Oxide Ultrathin Film Interface. *Journal of Physical Chemistry C*, **2017**, 121, 2815-2821	3.8	4
112	Analyses of a 1-layer neuromorphic network using memristive devices with non-continuous resistance levels. *APL Materials*, **2019**, 7, 091110	5.7	4
111	Spectroscopic elucidation of ionic motion processes in tunnel oxide-based memristive devices. *Faraday Discussions*, **2019**, 213, 215-230	3.6	4
110	Electrochemical metallization ReRAMs (ECM) - Experiments and modelling: general discussion. *Faraday Discussions*, **2019**, 213, 115-150	3.6	4

109	Physics and Chemistry of Nanoionic Cells **2016**, 253-288		4
108	Energy dissipation during pulsed switching of strontium-titanate based resistive switching memory devices **2016**,		4
107	Statistical modeling of electrochemical metallization memory cells **2014**,		4
106	Energy-efficient redox-based non-volatile memory devices and logic circuits **2013**,		4
105	Dielectric properties of highly c-axis oriented chemical solution deposition derived SrBi4Ti4O15 thin films. *Physica Status Solidi (A) Applications and Materials Science*, **2009**, 206, 157-166	1.6	4
104	Translational transitions at domain boundaries in octanethiol monolayers on Au(1 1 1). *Surface Science*, **2009**, 603, 1156-1159	1.8	4
103	High-k Dielectric Materials by Metalorganic Chemical Vapor Deposition: Growth and Characterization. *Ferroelectrics*, **2005**, 327, 111-119	0.6	4
102	Use of reactive gases with broad-beam radio frequency ion sources for industrial applications. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2004**, 22, 1493-1499	2.9	4
101	Contact mode potentiometric measurements with an atomic force microscope on high resistive perovskite thin films. *Journal of the European Ceramic Society*, **2005**, 25, 2353-2356	6	4
100	A NOVEL DESIGN FOR INTEGRATED RF-MEM SWITCHES USING FERROELECTRIC THIN FILMS. *Integrated Ferroelectrics*, **2005**, 76, 59-67	0.8	4
99	Segregation phenomena in thin films of BaTiO3. *Integrated Ferroelectrics*, **2001**, 33, 303-310	0.8	4
98	Electrical measurements on capacitor sizes in the submicron regime for the characterization of real memory cell capacitors. *Integrated Ferroelectrics*, **2001**, 37, 163-172	0.8	4
97	Relaxation mechanisms in ferroelectric thin film capacitors for feram application. *Integrated Ferroelectrics*, **2001**, 33, 39-48	0.8	4
96	Finite element simulations of interdigital electrode structures on high permittivity thin films. *Integrated Ferroelectrics*, **2001**, 32, 63-72	0.8	4
95	Influence of Excitation Frequency and Amplitude on the Switching Properties of SBT and PZT Thin Films at 10 MHZ Hysteresis Frequency. *Integrated Ferroelectrics*, **2002**, 47, 101-111	0.8	4
94	Temperature Dependence of the Reversible and Irreversible Polarization Contributions in Ferroelectric Thin Films. *Materials Research Society Symposia Proceedings*, **1999**, 596, 301		4
93	High resolution IR absorption spectroscopy of the OH stretch modes in SrTiO3:Fe. *Ferroelectrics*, **1990**, 107, 97-102	0.6	4
92	The structure and formation of nanotwins in BaTiO3 thin films		4

91	Hafnium carbide formation in oxygen deficient hafnium oxide thin films. *Applied Physics Letters*, **2016**, 108, 252903	3.4	4
90	Phase-change memories (PCM) - Experiments and modelling: general discussion. *Faraday Discussions*, **2019**, 213, 393-420	3.6	3
89	Heavily donor-doped, optically translucent ferroelectric barium titanate ceramics through defect chemical engineering. *CrystEngComm*, **2019**, 21, 2854-2862	3.3	3
88	Simulation of threshold switching based on an electric field induced thermal runaway **2016**,		3
87	Redox-based Resistive Memory **2014**, 137-161		3
86	New insights into redox based resistive switches **2013**,		3
85	Surface deformations as a necessary requirement for resistance switching at the surface of SrTiO3:N. *Nanotechnology*, **2013**, 24, 475701	3.4	3
84	Resistive switching near electrode interfaces: Estimations by a current model. *Journal of Applied Physics*, **2013**, 113, 053716	2.5	3
83	Liquid Injection Atomic Layer Deposition of Metallic Ru Thin Films from Ru(tmhd)3 and of High-k TiO2 Thin Films from Ti(O-i-Pr)2(tmhd)2. *ECS Transactions*, **2009**, 25, 289-298	1	3
82	Phenomenological considerations of resistively switching TiO2 in nano crossbar arrays **2009**,		3
81	LARGE AREA PIEZOELECTRIC ACTUATORS USING METAL FOIL SUBSTRATES WITH Pb(Zrx,Ti1 - x)O3 THIN FILMS. *Integrated Ferroelectrics*, **2008**, 100, 254-262	0.8	3
80	Effects of Thermal Annealing on Lead Zirconate Titanate Thin Film Capacitors with Platinum Electrodes. *Journal of the Electrochemical Society*, **2007**, 154, G251	3.9	3
79	Low Temperature Microwave Properties of Bismuth Based Dielectric Ceramics. *Ferroelectrics*, **2005**, 327, 33-37	0.6	3
78	A New Concept for Using Ferroelectric Transistors in Nonvolatile Memories. *Integrated Ferroelectrics*, **2004**, 60, 45-58	0.8	3
77	Scaling Effect on the Dielectric Constant in Ba(Ti x Zr1⊠)O3 Thin Films. *Journal of Electroceramics*, **2004**, 13, 101-104	1.5	3
76	Nanocrystalline Alkaline Earth Titanates and Their Conductivity Characteristics Under Changing Oxygen Ambients. *Journal of Electroceramics*, **2004**, 13, 599-603	1.5	3
75	Inhomogeneous Local Conductivity Induced by Thermal Reduction in BaTiO3 Thin Films and Single Crystals. *Integrated Ferroelectrics*, **2004**, 61, 43-49	0.8	3
74	Frequency and temperature dependence of the relative permittivity in ferroelectrics: Monte-Carlo simulation study. *Journal of Applied Physics*, **2003**, 93, 2890-2894	2.5	3

73	NEW RESULTS ON FATIGUE AND IMPRINT EFFECT. *Integrated Ferroelectrics*, **2005**, 73, 83-92	0.8	3
72	Scaling the Ferroelectric Field Effect Transistor. *Integrated Ferroelectrics*, **2005**, 70, 29-44	0.8	3
71	Domain switching, rotation processes and dielectric response of polycrystalline Pb(ZrxTi1-x)O3thin films. *Journal Physics D: Applied Physics*, **2001**, 34, 711-716	3	3
70	Influence of the measurement parameters on the reliability of ferroelectric thin films. *Integrated Ferroelectrics*, **2001**, 32, 1-9	0.8	3
69	Interfacial layers and their effect on leakage current in mocvd-deposited SBT thin films. *Integrated Ferroelectrics*, **2001**, 39, 189-198	0.8	3
68	Impedance Spectroscopic Studies of the System Silver/Aqueous Chloride Solution. *Zeitschrift Fur Physikalische Chemie*, **1984**, 139, 203-215	3.1	3
67	In-Memory Binary Vector–Matrix Multiplication Based on Complementary Resistive Switches. *Advanced Intelligent Systems*, **2020**, 2, 2000134	6	3
66	Electric transport properties of rare earth doped YbxCa1-xMnO3 ceramics (part I: Optimization of ceramic processing). *Journal of the European Ceramic Society*, **2019**, 39, 1245-1250	6	3
65	Intrinsic RESET Speed Limit of Valence Change Memories. *ACS Applied Electronic Materials*, **2021**, 3, 5563–5572	4	3
64	Structure and orbital ordering of ultrathin LaVO3 probed by atomic resolution electron microscopy and Raman spectroscopy. *Physica Status Solidi - Rapid Research Letters*, **2017**, 11, 1600350	2.5	2
63	Resistive switching in optoelectronic III-V materials based on deep traps. *Scientific Reports*, **2018**, 8, 9483	4.9	2
62	Quantum size effects and non-equilibrium states in nanoscale silicon dioxide based resistive switches **2014**,		2
61	Arylthio-substituted coronenes as tailored building blocks for molecular electronics. *Physical Chemistry Chemical Physics*, **2012**, 14, 1635-41	3.6	2
60	(Invited) The Role of Electrochemical Interfaces in ReRAM Memory Cells. *ECS Transactions*, **2013**, 58, 189-196	1	2
59	PbTiO3 nanoparticle precursors for chemical solution deposited electroceramic thin films. *Journal of Sol-Gel Science and Technology*, **2011**, 57, 36-42	2.3	2
58	Liquid injection atomic layer deposition of perovskite-type multi-component oxide thin films for ferroelectric and higher-k three dimensional capacitor structures **2008**,		2
57	From micrometric to nanometric scale switching of CuTCNQ-based non-volatile memory structures **2008**,		2
56	Comment on Dielectric tunability of (110) oriented barium strontium titanate epitaxial films on (100) orthorhombic substrates [Appl. Phys. Lett. 89, 042903 (2006)]. *Applied Physics Letters*, **2007**, 90, 036101	3.4	2

55	Liquid Injection Atomic Layer Deposition of Pb(Zr,Ti)O3 Thin Films on Three Dimensional Structures. *Applications of Ferroelectrics, IEEE International Symposium on*, **2007**,		2
54	Influence of Thickness and Zr Content on Ba(TixZr1-x)O3 Thin Films. *Ferroelectrics*, **2006**, 332, 153-157	0.6	2
53	On the Existence of Two Different Resistive Switching Mechanisms in Metal Organic Charge Transfer Complex Thin Films **2006**,		2
52	Polymorphism in Micro-, Submicro-, and Nanocrystalline NaNbO3. *Journal of Physical Chemistry B*, **2006**, 110, 16801-16801	3.4	2
51	MOCVD of SrTa2O6 Thin Films for High-k Applications. *Materials Research Society Symposia Proceedings*, **2004**, 811, 375		2
50	Structured oxide ceramics by a sodium chloride moulding technique. *Materials Letters*, **2004**, 58, 3348-3349	3.3	2
49	Relaxation effects and steady-state conduction in non-stoichiometric SBT films. *Integrated Ferroelectrics*, **2001**, 33, 245-252	0.8	2
48	Preparation of (PbxBa1-x)TiO3 thin films by MOCVD using an aerosol-assisted liquid delivery system. *Integrated Ferroelectrics*, **2000**, 30, 165-173	0.8	2
47	Imprint in Ferroelectric Thin Films Caused by Screening of an Electric Field in a Thin Surface Layer. *Materials Research Society Symposia Proceedings*, **2001**, 688, 1		2
46	3-Dimensional FEM simulations of resonances in the impedance characteristic of ceramic multilayer capacitors. *Ferroelectrics*, **1999**, 224, 185-194	0.6	2
45	Electrical characterization of semiconducting La doped SrTiO 3 thin films prepared by pulsed laser deposition. *Applied Surface Science*, **1996**, 96-98, 784-790	6.7	2
44	Semiconductive Behavior of Sb Doped SnO2 Thin Films. *Materials Research Society Symposia Proceedings*, **1995**, 401, 67		2
43	Static and Dynamic Properties of Domains. *Topics in Applied Physics*,31-46	0.5	2
42	Dielectric relaxation phenomena in superparaelectric and ferroelectric ceramic thin films and the relevance with respect to high density DRAM and FRAM applications. *European Physical Journal Special Topics*, **1998**, 08, Pr9-117-Pr9-120		2
41	Synthesis of nitrogen and lanthanum codoped barium titanate with a novel thermal ammonolysis reactor. *Journal of the European Ceramic Society*, **2016**, 36, 2719-2725	6	2
40	Hydroxyl defect effect on the resistance degradation behavior in Y-doped (Ba,Ca)(Ti,Zr)O 3 bulk ceramics. *Journal of the European Ceramic Society*, **2016**, 36, 3147-3155	6	2
39	The influence of interfacial (sub)oxide layers on the properties of pristine resistive switching devices **2018**,		2
38	Application of the Quantum-Point-Contact Formalism to Model the Filamentary Conduction in Ta 2 O. *Physical Review Applied*, **2022**, 17,	4.3	2

37	Overcoming the RESET Limitation in Tantalum Oxide-Based ReRAM Using an Oxygen-Blocking Layer **2017**,		1
36	ReRAM: Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices (Adv. Electron. Mater. 2/2018). *Advanced Electronic Materials*, **2018**, 4, 1870011	6.4	1
35	Live demonstration: An associative capacitive network based on nanoscale complementary resistive switches **2014**,		1
34	Thermal effects on the I-V characteristics of filamentary VCM based ReRAM-cells using a nanometer-sized heater **2017**,		1
33	An experimental associative capacitive network based on complementary resistive switches for memory-intensive computing **2014**,		1
32	Emerging Non-Volatile Memories by Exploiting Redox Reactions on the Nanoscale. *ECS Transactions*, **2009**, 25, 441-446	1	1
31	Non-Volatile Memory Concepts Based on Resistive Switching. *Applications of Ferroelectrics, IEEE International Symposium on*, **2007**,		1
30	The influence of non-ferroelectric interface layers and inclusions on the imprint behavior of ferroelectric thin film capacitors. *Applications of Ferroelectrics, IEEE International Symposium on*, **2007**,		1
29	Scaling of Ferroelectric-based Memory Concepts **2005**, 149-161		1
28	MOCVD GROWTH OF (Pb,Ba)(Zr,Ti)O3 THIN FILMS FOR MEMORY APPLICATIONS. *Integrated Ferroelectrics*, **2005**, 75, 225-233	0.8	1
27	Electrical characterization of grain boundary decorated SrTiO3 ceramics. *Journal of the European Ceramic Society*, **2001**, 21, 1753-1757	6	1
26	Optimization of Pt/SBT/CeO2/Si(100) gate stacks for low voltage ferroelectric field effect devices. *Integrated Ferroelectrics*, **2001**, 34, 47-54	0.8	1
25	Fabrication and Characterization of a PZT thin Film Actuator for a Micro Electromechanical Switch Application. *Materials Research Society Symposia Proceedings*, **2001**, 688, 1		1
24	PZT and PMN-PT Thin Film Cantilevers: Comparison between Monomorph and Bimorph Structures. *Materials Research Society Symposia Proceedings*, **2001**, 688, 1		1
23	Microstructure and properties of highly oriented PZT thin films on epitaxial ceramic electrodes prepared by CSD. *Ferroelectrics*, **1999**, 225, 107-115	0.6	1
22	Defect chemistry of donor-doped BaTiO with BaO-excess for reduction resistant PTCR thermistor applications - redox-behaviour. *Physical Chemistry Chemical Physics*, **2020**, 22, 8219-8232	3.6	1
21	Atomistic Investigation of the Schottky Contact Conductance Limits at SrTiO3 based Resistive Switching Devices **2018**,		1
20	Determining the Electrical Charging Speed Limit of ReRAM Devices. *IEEE Journal of the Electron Devices Society*, **2021**, 9, 667-678	2.3	1

19	Phase formation and crystal growth of SrBi2Ta2O9 thin films grown by metalorganic chemical vapor deposition. *Journal of Materials Research*, **2001**, 16, 2966-2973	2.5	0
18	Stabilizing amplifier with a programmable load line for characterization of nanodevices with negative differential resistance.. *Review of Scientific Instruments*, **2022**, 93, 024705	1.7	0
17	Oxygen Diffusion in Platinum Electrodes: A Molecular Dynamics Study of the Role of Extended Defects. *Advanced Materials Interfaces*, **2022**, 9, 2101257	4.6	0
16	Structural stratification of Sr1 □xCaxRuO3 thin films: Influence of aging process. *Physica Status Solidi (A) Applications and Materials Science*, **2013**, 210, 239-254	1.6	
15	Nonlinear Charge Transport in Acceptor-Doped Titanates. *Zeitschrift Fur Elektrotechnik Und Elektrochemie*, **1997**, 101, 1245-1246		
14	A DYNAMIC REFERENCE SCHEME FOR NONVOLATILE FERROELECTRIC RAM. *Integrated Ferroelectrics*, **2005**, 72, 31-37	0.8	
13	Capacitive-resistive nondriven plateline cell architecture for RRAM technology. *AEU - International Journal of Electronics and Communications*, **2006**, 60, 459-461	2.8	
12	High Speed and High Resolution Measurements on Submicron Capacitors for FeRAM Application. *Integrated Ferroelectrics*, **2003**, 53, 371-378	0.8	
11	Searching the Ferroelectric Limit by PFM **2005**, 343-354		
10	Thickness dependent morphology and electrical characteristics of SrBi2Ta2O9 deposited by metal organic decomposition. *Integrated Ferroelectrics*, **2001**, 37, 125-134	0.8	
9	(Pb 1□x Ba x)TiO 3 Thin Films Prepared by Liquid Delivery MOCVD: Influence of the Process Parameters on Film Formation and Electrical Properties. *Ferroelectrics*, **2002**, 268, 143-148	0.6	
8	On-Chip Integration of Pt/(Ba,Sr)TiO 3 /Pt Thin Film Capacitors. *Integrated Ferroelectrics*, **2002**, 48, 245-254	0.6	
7	Simulation of the Charge Transport Across Grain Boundaries in p-Type SrTiO 3 Ceramics. *Ferroelectrics*, **2002**, 268, 215-220	0.6	
6	Investigation of the Role of Carbonylchemistry to Pattern Platinum Electrodes. *Materials Research Society Symposia Proceedings*, **2001**, 688, 1		
5	Crystallization Kinetics and Texture of Sol-Gel PZT Thin Films. *Materials Research Society Symposia Proceedings*, **1998**, 541, 363		
4	Gate Stacks for Low Voltage Ferroelectric Field Effect Devices Based on Pt/SBT/CeO2/Si(100). *Materials Research Society Symposia Proceedings*, **1999**, 596, 437		
3	New Approach for Boundary Conditions: Space Charge Controlled Concentrations of Cation Vacancies in Donor Doped SrTiO3 for Short Diffusion Length **2000**, 473-478		
2	PZT thin films for piezoelectric micro-actuator applications **2001**, 990-993		

1	Comments on Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM) *IEEE Transactions on Electron Devices*, **2021**, 1-1	2.9