Albena Paskaleva

List of Publications by Year
in descending order

77 papers	1,439 citations	304743 22 h-index	361022 35 g-index
78 all docs	78 docs citations	78 times ranked	1243 citing authors

#	Article	IF	Citations
1	Response of Commercial P-Channel Power VDMOS Transistors to Ionizing Irradiation and Bias Temperature Stress. Journal of Circuits, Systems and Computers, 2022, 31, .	1.5	1
2	Structural, morphological and optical properties of atomic layer deposited transition metal (Co, Ni) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.2	6
3	Radiation Tolerance and Charge Trapping Enhancement of ALD HfO2/Al2O3 Nanolaminated Dielectrics. Materials, 2021, 14, 849.	2.9	8
4	Physics and Applications of Ðdvanced and Multifunctional Materials. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900267.	1.8	0
5	Al₂O₃/HfO₂ Multilayer Highâ€k Dielectric Stacks for Charge Trapping Flash Memories. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700854.	1.8	27
6	A review of pulsed NBTI in P-channel power VDMOSFETs. Microelectronics Reliability, 2018, 82, 28-36.	1.7	12
7	On the Limits of Scalpel AFM for the 3D Electrical Characterization of Nanomaterials. Advanced Functional Materials, 2018, 28, 1802266.	14.9	19
8	Hole and electron trapping in HfO₂/Al₂O₃ nanolaminated stacks for emerging non-volatile flash memories. Nanotechnology, 2018, 29, 505206.	2.6	18
9	Advanced Oxide Materials âˆ’ Growth, Application, Characterization. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800546.	1.8	0
10	Analysis of Conduction and Charging Mechanisms in Atomic Layer Deposited Multilayered HfO₂/Al₂O₃ Stacks for Use in Charge Trapping Flash Memories. Advances in Condensed Matter Physics, 2018, 2018, 1-9.	1.1	2
11	Consideration of conduction mechanisms in high-k dielectric stacks as a tool to study electrically active defects. Facta Universitatis - Series Electronics and Energetics, 2017, 30, 511-548.	0.9	11
12	Model based precise analysis of the injection currents in Al/ZrO2/Al2O3/ZrO2/SiO2/Si structures for use in charge trapping non-volatile memory devices. Materials Science in Semiconductor Processing, 2016, 44, 30-37.	4.0	2
13	A comparative study of charge trapping in HfO2/Al2O3 and ZrO2/Al2O3 based multilayered metal/high-k/oxide/Si structures. Thin Solid Films, 2016, 614, 7-15.	1.8	15
14	Tailoring the Electrical Properties of HfO₂ MOS-Devices by Aluminum Doping. ACS Applied Materials & Interfaces, 2015, 7, 17032-17043.	8.0	33
15	Improved electrical behavior of ZrO2-based MIM structures by optimizing the O3 oxidation pulse time. Materials Science in Semiconductor Processing, 2015, 29, 124-131.	4.0	10
16	Time-dependent-dielectric-breakdown characteristics of Hf-doped Ta2O5/SiO2 stack. Microelectronics Reliability, 2014, 54, 381-387.	1.7	4
17	Nanoscale Characterization of TiO₂ Films Grown by Atomic Layer Deposition on RuO₂ Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 2486-2492.	8.0	21
18	Resistive switching in TiO2-based metalâ€“insulatorâ€“metal structures with Al2O3 barrier layer at the metal/dielectric interface. Thin Solid Films, 2014, 563, 10-14.	1.8	20

#	Article	IF	Citations
19	The influence of technology and switching parameters on resistive switching behavior of Pt/HfO2/TiN MIM structures. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 621-630.	0.9	3
20	Atomic Layer Deposition of Thin Oxide Films for Resistive Switching. ECS Transactions, 2013, 58, 163-170.	0.5	5
21	Influence of Hf doping on interfacial layers of Ta2O5 stacks studied by ellipsometry. Applied Surface Science, 2013, 271, 12-18.	6.1	2
22	Detailed leakage current analysis of metalâ€"insulatorâ€"metal capacitors with ZrO2, ZrO2/SiO2/ZrO2, and ZrO2/Al2O3/ZrO2 as dielectric and TiN electrodes. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 01A109.	1.2	48
23	Interfacial layers in Ta2O5 based stacks and constituent depth profiles by spectroscopic ellipsometry. Applied Surface Science, 2012, 258, 4507-4512.	6.1	6
24	Doped Ta2O5 and mixed HfO2â€"Ta2O5 films for dynamic memories applications at the nanoscale. Microelectronics Reliability, 2012, 52, 642-650.	1.7	13
25	Constant current stress of lightly Al-doped Ta2O5. Materials Science in Semiconductor Processing, 2012, 15, 98-107.	4.0	3
26	Lightly Al-doped Ta2O5: Electrical properties and mechanisms of conductivity. Microelectronics Reliability, 2011, 51, 2102-2109.	1.7	11
27	Structural and dielectric properties of Ru-based gate/Hf-doped Ta2O5 stacks. Applied Surface Science, 2011, 257, 7876-7880.	6.1	13
28	Hf-doped Ta2O5 stacks under constant voltage stress. Microelectronic Engineering, 2011, 88, 305-313.	2.4	5
29	Effect of Al gate on the electrical behaviour of Al-doped Ta2O5stacks. Journal Physics D: Applied Physics, 2011, 44, 235103.	2.8	4
30	Evidence for a conduction through shallow traps in Hf-doped Ta2O5. Materials Science in Semiconductor Processing, 2010, 13, 349-355.	4.0	8
31	High-k HfO2â€"Ta2O5 mixed layers: Electrical characteristics and mechanisms of conductivity. Microelectronic Engineering, 2010, 87, 668-676.	2.4	22
32	Constant current stress-induced leakage current in mixed HfO2â€"Ta2O5 stacks. Microelectronics Reliability, 2010, 50, 794-800.	1.7	10
33	(Invited) Electrical Scanning Probe Microscopy Techniques for the Detailed Characterization of High-k Dielectric Layers. ECS Transactions, 2010, 28, 139-156.	0.5	4
34	Spectroscopic ellipsometry of very thin tantalum pentoxide on Si. Applied Surface Science, 2009, 255, 9211-9216.	6.1	10
35	Influence of the amorphous/crystalline phase of Zr1â^'xAlxO2 high-k layers on the capacitance performance of metal insulator metal stacks. Journal of Applied Physics, 2009, 106, 054107.	2.5	24
36	Degradation behavior of Ta2O5 stacks and its dependence on the gate electrode. Microelectronics Reliability, 2008, 48, 1193-1197.	1.7	6

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37	Electrical characteristics of Ti-doped Ta2O5 stacked capacitors. Thin Solid Films, 2008, 516, 8684-8692.	1.8	31
38	Effect of Ti doping on Ta2O5 stacks with Ru and Al gates. Applied Surface Science, 2008, 254, 5879-5885.	6.1	18
39	Effects of the metal gate on the stress-induced traps in Ta2O5/SiO2 stacks. Microelectronics Reliability, 2008, 48, 514-525.	1.7	22
40	Tunneling atomic-force microscopy as a highly sensitive mapping tool for the characterization of film morphology in thin high-k dielectrics. Applied Physics Letters, 2008, 92, .	3.3	76
41	Impact of Si substrate nitridation on electrical characteristics of Ta₂O₅stack capacitors. Journal Physics D: Applied Physics, 2007, 40, 6709-6717.	2.8	18
42	Polarity asymmetry of stress and charge trapping behavior of thin Hf- and Zr-silicate layers. Microelectronics Reliability, 2007, 47, 2094-2099.	1.7	0
43	Stress-induced leakage currents of the RF sputtered Ta2O5 on N-implanted silicon. Applied Surface Science, 2007, 253, 4396-4403.	6.1	9
44	Challenges of Ta2O5 as high-k dielectric for nanoscale DRAMs. Microelectronics Reliability, 2007, 47, 913-923.	1.7	89
45	Metal gates and gate-deposition-induced defects in Ta2O5 stack capacitors. Microelectronics Reliability, 2007, 47, 2088-2093.	1.7	2
46	Beneficial effect of post-metallization H2annealing on Ta2O5stack capacitors. Journal Physics D: Applied Physics, 2006, 39, 2950-2954.	2.8	24
47	Influence of the metal electrode on the characteristics of thermal Ta2O5 capacitors. Microelectronic Engineering, 2006, 83, 1918-1926.	2.4	24
48	Composition of Ta2O5 stacked films on N2O- and NH3-nitrided Si. Applied Surface Science, 2006, 253, 2841-2851.	6.1	28
49	Conduction mechanisms and an evidence for phonon-assisted conduction process in thin high-k HfxTiySizO films. Microelectronics Reliability, 2005, 45, 1124-1133.	1.7	3
50	Electrical properties of hafnium silicate films obtained from a single-source MOCVD precursor. Microelectronics Reliability, 2005, 45, 819-822.	1.7	24
51	Electrical behavior of 4H-SiC metal-oxide-semiconductor structures with Al2O3 as gate dielectric. Journal of Applied Physics, 2005, 97, 124507.	2.5	23
52	Dielectric properties of rf sputtered Ta2O5on rapid thermally nitrided Si. Semiconductor Science and Technology, 2005, 20, 233-238.	2.0	24
53	Charge trapping and conduction mechanisms in Ta2O5on nitrided silicon. Journal Physics D: Applied Physics, 2005, 38, 4210-4216.	2.8	18
54	Different current conduction mechanisms through thin high-kHfxTiySizO films due to the varying Hf to Ti ratio. Journal of Applied Physics, 2004, 95, 5583-5590.	2.5	71

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55	Electrical characterization and reliability aspects of zirconium silicate films obtained from novel MOCVD precursors. Microelectronic Engineering, 2004, 72, 315-320.	2.4	11
56	XPS study of N2 annealing effect on thermal Ta2O5 layers on Si. Applied Surface Science, 2004, 225, 86-99.	6.1	109
57	Title is missing!. Journal of Materials Science: Materials in Electronics, 2003, 14, 671-675.	2.2	4
58	Electrical characterization of zirconium silicate films obtained from novel MOCVD precursors. Microelectronics Reliability, 2003, 43, 1253-1257.	1.7	11
59	High temperature-induced crystallization in tantalum pentoxide layers and its influence on the electrical properties. Thin Solid Films, 2003, 426, 191-199.	1.8	65
60	Properties of vacuum-deposited polyimide films. Vacuum, 2003, 70, 37-45.	3.5	4
61	Density and spatial distribution of MERIE-like plasma induced defects in SiO2. Physica Status Solidi A, 2003, 199, 243-249.	1.7	1
62	Zirconium silicate films obtained from novel MOCVD precursors. Journal of Non-Crystalline Solids, 2003, 322, 147-153.	3.1	17
63	Oxygen annealing modification of conduction mechanism in thin rf sputtered Ta2O5 on Si. Solid-State Electronics, 2002, 46, 1887-1898.	1.4	58
64	Influence of oxidation temperature on the microstructure and electrical properties of Ta2O5 on Si. Microelectronics Journal, 2002, 33, 907-920.	2.0	38
65	Breakdown fields and conduction mechanisms in thin Ta2O5 layers on Si for high density DRAMs. Microelectronics Reliability, 2002, 42, 157-173.	1.7	33
66	Influence of Î³ radiation on thin Ta2O5â€"Si structures. Microelectronics Journal, 2001, 32, 553-562.	2.0	84
67	Leakage currents and conduction mechanisms of Ta2O5 layers on Si obtained by RF sputtering. Vacuum, 2000, 58, 470-477.	3.5	24
68	Structural nature of the N 2 RIE plasma induced slow states and bulk traps in thin SiO 2 Si structures. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 71, 115-119.	3.5	1
69	Damage in thin SiO2â€"Si structures induced by RIE-mode nitrogen and oxygen plasma. Solid-State Electronics, 1998, 42, 777-784.	1.4	19
70	Structural changes in thin SiO2 on Si after RIE-like nitrogen plasma action. Applied Surface Science, 1997, 120, 306-316.	6.1	8
71	Mobility degradation of inversion layer carriers due to MERIE-type plasma action. Solid-State Electronics, 1996, 39, 1033-1041.	1.4	7
72	Influence of the rapid thermal annealing in vacuum on the XPS characteristics of thin SiO2. Applied Surface Science, 1996, 103, 359-367.	6.1	5

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73	Low-permittivity evaporated polymer-polyimide. Vacuum, 1996, 47, 1345-1346.	3.5	6
74	The effect of rapid thermal annealing in vacuum on the properties of thin SiO2films. Journal Physics D: Applied Physics, 1995, 28, 906-913.	2.8	10
75	Rapid thermal annealing of SiO2 for VLSI applications. Journal of Non-Crystalline Solids, 1995, 187, 35-39.	3.1	3
76	Radiation effects on wet- and dry-oxide metal-oxide-semiconductor devices. Thin Solid Films, 1993, 223, 293-297.	1.8	2
77	Fowler-Nordheim tunnelling injection in the Si-SiO2system treated with argon plasma. Semiconductor Science and Technology, 1993, 8, 1566-1570.	2.0	9