

Miguel Zabala

List of Publications by Year in descending order

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papers

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citations

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g-index

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all docs

52
docs citations

52
times ranked

961
citing authors

#	ARTICLE	IF	CITATIONS
1	Synaptic devices based on HfO ₂ memristors. , 2021, , 383-426.		2
2	Study of RTN signals in resistive switching devices based on neural networks. Solid-State Electronics, 2021, 183, 108034.	1.4	5
3	Analysis of the Characteristic Current Fluctuations in the High Resistance State of HfO ₂ -based Memristors. , 2021, , .		0
4	Capacitance Electrochemical pH Sensor Based on Different Hafnium Dioxide (HfO ₂) Thicknesses. Chemosensors, 2021, 9, 13.	3.6	19
5	Methodology for the characterization and observation of filamentary spots in HfO _x -based memristor devices. Microelectronic Engineering, 2020, 223, 111232.	2.4	17
6	Electrochemical Capacitive K ⁺ EMIS Chemical Sensor Based on the Dibromoaza[7]helicene as an Ionophore for Potassium Ions Detection. Electroanalysis, 2016, 28, 2892-2899.	2.9	23
7	Development of a novel capacitance electrochemical biosensor based on silicon nitride for ochratoxin A detection. Sensors and Actuators B: Chemical, 2016, 234, 446-452.	7.8	38
8	Optimization of low-resistance strip sensors process and studies of radiation resistance. , 2015, , .		0
9	Investigation of the resistive switching behavior in Ni/HfO ₂ -based RRAM devices. , 2015, , .		2
10	Effect of the blistering of ALD Al ₂ O ₃ films on the silicon surface in Al-Al ₂ O ₃ -Si structures. , 2015, , .		2
11	Development of a capacitive chemical sensor based on Co(II)-phthalocyanine acrylate-polymer/HfO ₂ /SiO ₂ for detection of perchlorate. Journal of Sensors and Sensor Systems, 2015, 4, 17-23.		12
12	A Fully Integrated Electrochemical BioMEMS Fabrication Process for Cytokine Detection: Application for Heart Failure. Procedia Engineering, 2014, 87, 377-379.	1.2	8
13	Analysis of the Switching Variability in Ni/HfO ₂ -Based RRAM Devices. IEEE Transactions on Device and Materials Reliability, 2014, 14, 769-771.	2.0	71
14	Low-resistance strip sensors for beam-loss event protection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 765, 252-257.	1.6	2
15	Functional and performance evaluation of low-resistance strip sensors for beam-loss event protection. , 2014, , .		1
16	A Novel Three-Dimensional Biosensor Based on Aluminum Oxide: Application for Early-Stage Detection of Human Interleukin-10. Methods in Molecular Biology, 2014, 1172, 49-64.	0.9	10
17	Impact of electrical stress on the electrical characteristics of 2MeV electron irradiated metal-oxide-silicon capacitors with atomic layer deposited Al ₂ O ₃ , HfO ₂ and nanolaminated dielectrics. Solid-State Electronics, 2013, 89, 198-206.	1.4	5
18	Charge trapping analysis of Al ₂ O ₃ films deposited by atomic layer deposition using H ₂ O or O ₃ as oxidant. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, .	1.2	18

#	ARTICLE	IF	CITATIONS
19	Thin dielectric films grown by atomic layer deposition: Properties and applications. , 2013, , .		0
20	Defect assessment and leakage control in atomic layer deposited Al ₂ O ₃ and HfO ₂ dielectrics. , 2013, , .		0
21	2MeV electron irradiation effects on the electrical characteristics of MOS capacitors with ALD Al ₂ O ₃ dielectrics of different thickness. Microelectronics Reliability, 2013, 53, 1333-1337.	1.7	6
22	2 MeV electron irradiation effects on bulk and interface of atomic layer deposited high-k gate dielectrics on silicon. Thin Solid Films, 2013, 534, 482-487.	1.8	8
23	Charge trapping and electrical degradation in atomic layer deposited Al ₂ O ₃ films. Microelectronic Engineering, 2013, 109, 57-59.	2.4	10
24	Diazonium modified gold microelectrodes onto polyimide substrates for impedimetric cytokine detection with an integrated Ag/AgCl reference electrode. Sensors and Actuators B: Chemical, 2013, 189, 165-172.	7.8	33
25	2 MeV electron irradiation effects on the electrical characteristics of metal-oxide-silicon capacitors with atomic layer deposited Al ₂ O ₃ , HfO ₂ and nanolaminated dielectrics. Solid-State Electronics, 2013, 79, 65-74.	1.4	23
26	Diode Characteristics and Thermal Donor Formation in Germanium-Doped Silicon Substrates. ECS Transactions, 2013, 50, 177-186.	0.5	1
27	Blistering of atomic layer deposition Al ₂ O ₃ layers grown on silicon and its effect on metal-insulator-semiconductor structures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	2.1	23
28	Electrical characterization of atomic-layer-deposited hafnium oxide films from hafnium tetrakis(dimethylamide) and water/ozone: Effects of growth temperature, oxygen source, and postdeposition annealing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	2.1	25
29	Bow Free 4" Diameter 3C-SiC Epilayers Formed upon Wafer-Bonded Si/SiC Substrates. ECS Solid State Letters, 2012, 1, P85-P88.	1.4	5
30	A novel biosensor based on hafnium oxide: Application for early stage detection of human interleukin-10. Sensors and Actuators B: Chemical, 2012, 175, 201-207.	7.8	85
31	Comparative Analysis of MIS Capacitance Structures With High-k Dielectrics Under Gamma, ¹⁶ O and p Radiation. IEEE Transactions on Nuclear Science, 2012, 59, 767-772.	2.0	1
32	Cytokine Detection using Diazonium Modified Gold Microelectrodes Onto Polyimide Substrates with Integrated Ag/AgCl Reference Electrode. Procedia Engineering, 2012, 47, 1181-1184.	1.2	6
33	Comparative analysis of MIS capacitive structures with high-K dielectrics under gamma, ¹⁶ O and p radiation. , 2011, , .		0
34	Negative-resistance effect in Al ₂ O ₃ based and nanolaminated MIS structures. , 2011, , .		0
35	Deposition Temperature and Thermal Annealing Effects on the Electrical Characteristics of Atomic Layer Deposited Al ₂ O ₃ Films on Silicon. Journal of the Electrochemical Society, 2011, 158, G108.	2.9	54
36	Novel Capacitance Biosensor Based on Hafnium Oxide for Interleukin-10 Protein Detection. Procedia Engineering, 2011, 25, 972-975.	1.2	3

#	ARTICLE	IF	CITATIONS
37	Comparison between Al ₂ O ₃ thin films grown by ALD using H ₂ O or O ₃ as oxidant source. , 2011, , .		6
38	Soft breakdown in irradiated high- ϵ nanolaminates. Microelectronic Engineering, 2011, 88, 1425-1427.	2.4	5
39	Electrical characteristics of metal-insulator-semiconductor structures with atomic layer deposited Al ₂ O ₃ , HfO ₂ , and nanolaminates on different silicon substrates. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01AA07.	1.2	41
40	Electrical characterization of high-k based metal-insulator-semiconductor structures with negative resistance effect when using Al ₂ O ₃ and nanolaminated films deposited on p-Si. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01A901.	1.2	14
41	Electron Irradiation Effects on Atomic Layer Deposited High-k Gate Dielectrics. ECS Transactions, 2011, 41, 349-359.	0.5	0
42	Fabrication of PPF Electrodes by a Rapid Thermal Process. Journal of the Electrochemical Society, 2011, 158, H63.	2.9	21
43	Deposited Thin SiO ₂ for Gate Oxide on n-Type and p-Type GaN. Journal of the Electrochemical Society, 2010, 157, H1008.	2.9	20
44	Integration of HfO ₂ on Si/SiC heterojunctions for the gate architecture of SiC power devices. Applied Physics Letters, 2010, 97, 013506.	3.3	8
45	Effect of Processing Conditions on the Electrical Characteristics of Atomic Layer Deposited Al ₂ O ₃ and HfO ₂ Films. ECS Transactions, 2010, 28, 213-221.	0.5	10
46	Impact of silicon substrate germanium doping on diode characteristics and on thermal donor formation. Physica B: Condensed Matter, 2009, 404, 4723-4726.	2.7	4
47	Thin high-k dielectric layers deposited by ALD. , 2009, , .		3
48	Evaluation of Surface Passivation Layers for Bulk Lifetime Estimation of High Resistivity Silicon for Radiation Detectors. Solid State Phenomena, 2008, 131-133, 431-436.	0.3	1
49	Evaluation of surface passivation layers for bulk lifetime estimation of high resistivity silicon for radiation detectors. , 2007, , .		1
50	Hydrogen-selective microelectrodes based on silicon needles. Sensors and Actuators B: Chemical, 2003, 91, 76-82.	7.8	39
51	CMOS integrated pressure sensor optimization using electrical network simulator-FEM tool coupling. Journal of Micromechanics and Microengineering, 1999, 9, 109-112.	2.6	3
52	Characterisation of HfO ₂ /Si/SiC MOS Capacitors. Materials Science Forum, 0, 679-680, 674-677.	0.3	0