Ãlvaro del Prado

List of Publications by Year
in descending order

76 papers	1,157 citations	394421 19 h-index	454955 30 g-index
76 all docs	76 docs citations	76 times ranked	1009 citing authors

#	Article	IF	Citations
1	Indium tin oxide obtained by high pressure sputtering for emerging selective contacts in photovoltaic cells. Materials Science in Semiconductor Processing, 2022, 137, 106189.	4.0	5
2	On the Optoelectronic Mechanisms Ruling Tiâ€hyperdoped Si Photodiodes. Advanced Electronic Materials, 2022, 8, .	5.1	12
3	On the properties of GaP supersaturated with Ti. Journal of Alloys and Compounds, 2020, 820, 153358.	5.5	1
4	Strong subbandgap photoconductivity in GaP implanted with Ti. Progress in Photovoltaics: Research and Applications, 2018, 26, 214-222.	8.1	9
5	Transport mechanisms in silicon heterojunction solar cells with molybdenum oxide as a hole transport layer. Solar Energy Materials and Solar Cells, 2018, 185, 61-65.	6.2	41
6	A robust method to determine the contact resistance using the van der Pauw set up. Measurement: Journal of the International Measurement Confederation, 2017, 98, 151-158.	5.0	13
7	Deposition of Intrinsic a-Si:H by ECR-CVD to Passivate the Crystalline Silicon Heterointerface in HIT Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1059-1064.	2.5	3
8	Electrical Characterization of Amorphous Silicon MIS-Based Structures for HIT Solar Cell Applications. Nanoscale Research Letters, 2016, 11, 335.	5.7	2
9	Room temperature photo-response of titanium supersaturated silicon at energies over the bandgap. Journal Physics D: Applied Physics, 2016, 49, 055103.	2.8	14
10	Limitations of high pressure sputtering for amorphous silicon deposition. Materials Research Express, 2016, 3, 036401.	1.6	4
11	Meyer Neldel rule application to silicon supersaturated with transition metals. Journal Physics D: Applied Physics, 2015, 48, 075102.	2.8	8
12	Amorphous/crystalline silicon interface characterization by capacitance and conductance measurements. , 2015, , .		1
13	Room-temperature operation of a titanium supersaturated silicon-based infrared photodetector. Applied Physics Letters, 2014, 104, .	3.3	49
14	(Invited) High Pressure Sputtering for High-K Dielectric Deposition. Is It Worth Trying. ECS Transactions, 2014, 61, 27-39.	0.5	2
15	Electrical decoupling effect on intermediate band Ti-implanted silicon layers. Journal Physics D: Applied Physics, 2013, 46, 135108.	2.8	10
16	Hydrogenated amorphous silicon deposited by high pressure sputtering for HIT solar cells. , 2013, , .		0
17	The Intermediate Band approach in the third solar cell generation context. , 2013, , .		0
18	Towards high-k integration with III-V channels: Interface optimization of high pressure sputtered gadolinium oxide on indium phospide. , 2013, , .		1

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19	High pressure sputtering as a viable technique for future high permittivity dielectric on IIIâ€“V integration: GdOx on InP demonstration. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 01A115.	1.2	7
20	Sub-Bandgap External Quantum Efficiency in Ti Implanted Si Heterojunction with Intrinsic Thin Layer Cells. Japanese Journal of Applied Physics, 2013, 52, 122302.	1.5	16
21	Double Ion Implantation and Pulsed Laser Melting Processes for Third Generation Solar Cells. International Journal of Photoenergy, 2013, 2013, 1-7.	2.5	5
22	Electrical properties of silicon supersaturated with titanium or vanadium for intermediate band material. , 2013, , .		2
23	Ruling out the impact of defects on the below band gap photoconductivity of Ti supersaturated Si. Journal of Applied Physics, 2013, 114, 053110.	2.5	17
24	Far infrared photoconductivity in a silicon based material: Vanadium supersaturated silicon. Applied Physics Letters, 2013, 103, 032101.	3.3	32
25	Ion implantation and pulsed laser melting processing for the development of an intermediate band material. AIP Conference Proceedings, 2012, , .	0.4	4
26	Insulator to metallic transition due to intermediate band formation in Ti-implanted silicon. Solar Energy Materials and Solar Cells, 2012, 104, 159-164.	6.2	32
27	Low temperature intermediate band metallic behavior in Ti implanted Si. Thin Solid Films, 2012, 520, 6614-6618.	1.8	18
28	Sub-bandgap spectral photo-response analysis of Ti supersaturated Si. Applied Physics Letters, 2012, 101, .	3.3	35
29	UV and visible Raman scattering of ultraheavily Ti implanted Si layers for intermediate band formation. Semiconductor Science and Technology, 2011, 26, 115003.	2.0	17
30	Anomalous thermal oxidation of gadolinium thin films deposited on silicon by high pressure sputtering. Microelectronic Engineering, 2011, 88, 2991-2996.	2.4	12
31	Towards metal electrode interface scavenging of rare-earth scandates: A Sc2O3 and Gd2O3 study. Microelectronic Engineering, 2011, 88, 1357-1360.	2.4	12
32	Electrical characterization of high-pressure reactive sputtered ScOx films on silicon. Thin Solid Films, 2011, 519, 2268-2272.	1.8	2
33	Sub-bandgap absorption in Ti implanted Si over the Mott limit. Journal of Applied Physics, 2011, 109, .	2.5	53
34	Effect of interlayer trapping and detrapping on the determination of interface state densities on high-k dielectric stacks. Journal of Applied Physics, 2010, 107, .	2.5	24
35	Nitridation of Si by N[sub 2] Electron Cyclotron Resonance Plasma and Integration with ScO[sub x] Deposition. Journal of the Electrochemical Society, 2010, 157, H430.	2.9	2
36	Electrical Characterization of High-Pressure Reactive Sputtered Sc₂O₃ Films on Silicon. ECS Transactions, 2010, 28, 287-297.	0.5	1

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37	Scandium oxide deposited by high-pressure sputtering for memory devices: Physical and interfacial properties. Journal of Applied Physics, 2010, 107, .	2.5	16
38	Interfacial Properties of HfO<inf>2</inf>/ SiN/Si Gate Structures. , 2009, , .		1
39	Growth of Silicon Nitride on Silicon by Electron Cyclotron Resonance Plasma Nitridation. , 2009, , .		0
40	Physical properties of high pressure reactively sputtered hafnium oxide. Vacuum, 2008, 82, 1391-1394.	3.5	11
41	Influence of interlayer trapping and detrapping mechanisms on the electrical characterization of hafnium oxide/silicon nitride stacks on silicon. Journal of Applied Physics, 2008, 104, .	2.5	25
42	Optical spectroscopic study of the SiNâˆ•HfO2 interfacial formation during rf sputtering of HfO2. Applied Physics Letters, 2007, 91, .	3.3	17
43	High-pressure reactively sputtered HfO2: Composition, morphology, and optical properties. Journal of Applied Physics, 2007, 102, .	2.5	33
44	Hafnium oxide thin films deposited by high pressure reactive sputtering in atmosphere formed with different Ar/O2 ratios. Materials Science in Semiconductor Processing, 2006, 9, 1020-1024.	4.0	33
45	Oxygen to silicon ratio determination of SiOxHy thin films. Thin Solid Films, 2005, 492, 232-235.	1.8	7
46	Physical properties of high pressure reactively sputtered TiO2. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 1523-1530.	2.1	41
47	Annealing effects on the interface and insulator properties of plasma-deposited Al/SiOxNyHz/Si devices. Semiconductor Science and Technology, 2004, 19, 133-141.	2.0	4
48	Conductance Transient Comparative Analysis of Electron-Cyclotron Resonance Plasma-Enhanced Chemical Vapor Deposited SiNx, SiO2/SiNxand SiOxNyDielectric Films on Silicon Substrates. Japanese Journal of Applied Physics, 2004, 43, 66-70.	1.5	1
49	Influence of H on the composition and atomic concentrations of â€œN-richâ€•plasma deposited SiOxNyHz films. Journal of Applied Physics, 2004, 95, 5373-5382.	2.5	2
50	Compositional analysis of thin SiOxNy:H films by heavy-ion ERDA, standard RBS, EDX and AES: a comparison. Nuclear Instruments & Methods in Physics Research B, 2004, 217, 237-245.	1.4	14
51	Bonding structure and hydrogen content in silicon nitride thin films deposited by the electron cyclotron resonance plasma method. Thin Solid Films, 2004, 459, 203-207.	1.8	27
52	Procesos de oxidaciÃ³n de Si mediante plasma de resonancia ciclotrÃ³nica de electrones. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 379-382.	1.9	0
53	Title is missing!. Journal of Materials Science: Materials in Electronics, 2003, 14, 287-290.	2.2	1
54	A comparative study of anodic tantalum pentoxide and high-pressure sputtered titanium oxide. Journal of Materials Science: Materials in Electronics, 2003, 14, 375-378.	2.2	2

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55	Microstructural modifications induced by rapid thermal annealing in plasma deposited SiOxNyHz films. Journal of Applied Physics, 2003, 94, 1019-1029.	2.5	9
56	Optical and structural properties of SiOxNyHz films deposited by electron cyclotron resonance and their correlation with composition. Journal of Applied Physics, 2003, 93, 8930-8938.	2.5	21
57	Rapid thermally annealed plasma deposited SiNx:H thin films: Application to metalâ€"insulatorâ€"semiconductor structures with Si, In0.53Ga0.47As, and InP. Journal of Applied Physics, 2003, 94, 2642-2653.	2.5	14
58	Bonding configuration and density of defects of SiO[sub x]H[sub y] thin films deposited by the electron cyclotron resonance plasma method. Journal of Applied Physics, 2003, 94, 7462.	2.5	35
59	Interfacial State Density and Conductance-Transient Three-Dimensional Profiling of Disordered-Induced Gap States on Metal Insulator Semiconductor Capacitors Fabricated from Electron-Cyclotron Resonance Plasma-Enhanced Chemical Vapor Deposited SiOxNyHzFilms. Japanese Journal of Applied Physics, 2003, 42, 4978-4981.	1.5	4
60	Characterization of nitrogen-rich silicon nitride films grown by the electron cyclotron resonance plasma technique. Semiconductor Science and Technology, 2003, 18, 633-641.	2.0	17
61	Rapid thermal annealing effects on the electrical behavior of plasma oxidized silicon/silicon nitride stacks gate insulators. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 1306.	1.6	9
62	Thermally induced modifications on bonding configuration and density of defects of plasma deposited SiOx:H films. Journal of Applied Physics, 2002, 92, 1906-1913.	2.5	19
63	Compositional analysis of SiOxNy:H films by heavy-ion ERDA: the problem of radiation damage. Surface and Interface Analysis, 2002, 34, 749-753.	1.8	8
64	Composition and optical properties of silicon oxynitride films deposited by electron cyclotron resonance. Vacuum, 2002, 67, 507-512.	3.5	40
65	Physical properties of plasma deposited SiOx thin films. Vacuum, 2002, 67, 525-529.	3.5	11
66	Rapid thermal annealing effects on plasma deposited SiOx:H films. Vacuum, 2002, 67, 531-536.	3.5	10
67	Temperature effects on the electrical properties and structure of interfacial and bulk defects in Al/SiNx:H/Si devices. Journal of Applied Physics, 2001, 90, 1573-1581.	2.5	15
68	Electrical properties of rapid thermally annealed SiNx:H/Si structures characterized by capacitance-voltage and surface photovoltage spectroscopy. Semiconductor Science and Technology, 2001, 16, 534-542.	2.0	8
69	Molecular models and activation energies for bonding rearrangement in plasma-depositedaâˆ'SiNx:Hdielectric thin films treated by rapid thermal annealing. Physical Review B, 2001, 63, .	3.2	38
70	Compositional analysis of amorphous SiNx: H films by ERDA and infrared spectroscopy. Surface and Interface Analysis, 2000, 30, 534-537.	1.8	13
71	Rapid thermal annealing effects on the structural properties and density of defects in SiO2 and SiNx:H films deposited by electron cyclotron resonance. Journal of Applied Physics, 2000, 87, 1187-1192.	2.5	84
72	Defect structure of SiNx:H films and its evolution with annealing temperature. Journal of Applied Physics, 2000, 88, 2149-2151.	2.5	21

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73	Thermally induced changes in the optical properties of SiNx:H films deposited by the electron cyclotron resonance plasma method. Journal of Applied Physics, 1999, 86, 2055-2061.	2.5	22
74	Thermal stability of a-SiNx:H films deposited by plasma electron cyclotron resonance. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 1280-1284.	2.1	13
75	Effect of substrate temperature in SiOxNy films deposited by electron cyclotron resonance. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 1263-1268.	2.1	15
76	Full composition range silicon oxynitride films deposited by ECR-PECVD at room temperature. Thin Solid Films, 1999, 343-344, 437-440.	1.8	30