Maria Luisa Polignano

List of Publications by Year
in descending order

112	757	687363 13	642732 23
papers	citations	h-index	g-index

115	115	115	313
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Gettering mechanisms in silicon. Journal of Applied Physics, 1988, 64, 869-876.	2.5	85
2	Proximity gettering of slow diffuser contaminants in CMOS image sensors. Solid-State Electronics, 2014, 91, 91-99.	1.4	44
3	Thermoreflectance temperature imaging of integrated circuits: calibration technique and quantitative comparison with integrated sensors and simulations. Journal Physics D: Applied Physics, 2006, 39, 4159-4166.	2.8	37
4	A comparison of gettering techniques for very large scale integration. Journal of Applied Physics, 1984, 55, 579-585.	2.5	34
5	Generationâ€recombination phenomena in almost ideal siliconpâ€njunctions. Journal of Applied Physics, 1988, 64, 6349-6356.	2.5	29
6	Comparison among lifetime techniques for the detection of transition metal contamination. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1996, 42, 157-163.	3.5	25
7	Mechanism of nonâ€Shockley conduction in almost ideal silicon junction diodes. Journal of Applied Physics, 1984, 55, 3823-3830.	2.5	22
8	Crystal defects and junction properties in the evolution of device fabrication technology. Journal of Physics Condensed Matter, 2002, 14, 13403-13410.	1.8	22
9	Dark Current Spectroscopy of Transition Metals in CMOS Image Sensors. ECS Journal of Solid State Science and Technology, 2017, 6, P217-P226.	1.8	22
10	The Role of Dopant and Segregation Annealing in Silicon pâ€“n Junction Gettering. Physica Status Solidi A, 1987, 103, 643-654.	1.7	21
11	Metal contamination monitoring and gettering. Materials Science in Semiconductor Processing, 1998, 1, 119-130.	4.0	19
12	Currentâ€voltage characteristics of ideal silicon diodes in the range 300â€“400 K. Journal of Applied Physics, 1985, 57, 646-647.	2.5	16
13	The Role of Oxygen in Silicon pâ€“n Junction Gettering. Physica Status Solidi A, 1987, 103, 307-316.	1.7	15
14	Modeling the generation current due to donor-acceptor twins in silicon p-n junctions. IEEE Transactions on Electron Devices, 1985, 32, 628-631.	3.0	13
15	Molibdenum contamination in silicon 1. Molibdenum detection by lifetime techniques. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 53, 300-309.	3.5	13
16	Detection of Metal Segregation at the Oxide-Silicon Interface. Journal of the Electrochemical Society, 2002, 149, G429.	2.9	13
17	Molybdenum Contamination in Silicon: Detection and Impact on Device Performances. Solid State Phenomena, 0, 145-146, 123-126.	0.3	13
18	An extension of the model for the extracurrent in almost ideal silicon junction diodes. Journal of Applied Physics, 1984, 56, 1230-1232.	2.5	12

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19	Self-interstitials and generation lifetime in silicon p-n junctions. Physica Status Solidi A, 1987, 100, 177-186.	1.7	12
20	Residual non-idealities in the almost ideal silicon p-n junction. Applied Physics A: Solids and Surfaces, 1990, 50, 273-286.	1.4	12
21	‹title›Investigation of metal contamination by photocurrent measurements: validation and application to ion implantation processes‹/title›. , 1995, , .		12
22	Quantitative Evaluation of Iron at the Silicon Surface after Wet Cleaning Treatments. Journal of the Electrochemical Society, 2004, 151, G289.	2.9	11
23	A comparative analysis of different measurement techniques to monitor metal and organic contamination in silicon device processing. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 495-505.	1.8	10
24	Phosphorus Silica Glass as Dopant Source. Journal of the Electrochemical Society, 1980, 127, 2734-2738.	2.9	9
25	Very long current transients in reverse-biased almost ideal n/sup +/-p junctions. IEEE Electron Device Letters, 1989, 10, 36-38.	3.9	9
26	A Novel Method for the Simultaneous Characterization of Bulk Impurities and Surface States by Photocurrent Measurements. Journal of the Electrochemical Society, 2000, 147, 1577.	2.9	9
27	The critical field for donorâ€acceptor twins in silicon. Journal of Applied Physics, 1985, 57, 1406-1407.	2.5	8
28	Highly Sensitive Detection of Inorganic Contamination. Solid State Phenomena, 0, 145-146, 101-104.	0.3	8
29	Niobium Contamination in Silicon. ECS Transactions, 2010, 33, 133-144.	0.5	8
30	High resolution thermoreflectance imaging on transistor arrays with defect-induced leakage. European Physical Journal Special Topics, 2005, 125, 423-425.	0.2	8
31	Nickel Contamination in Silicon: Electrical Activity Study and Microscopy Analysis. ECS Transactions, 2008, 16, 195-206.	0.5	7
32	Contamination by slow diffusers in ion implantation processes: The examples of molybdenum and tungsten. Nuclear Instruments & Methods in Physics Research B, 2015, 356-357, 164-171.	1.4	7
33	Reviewâ€"Characterization of Metal-Contamination Effects in Silicon. ECS Journal of Solid State Science and Technology, 2016, 5, P3048-P3058.	1.8	7
34	Phosphorus diffusion into silicon from chemically vapour-deposited phosphosilicate glass. Thin Solid Films, 1982, 87, 373-378.	1.8	6
35	Incremental sheet resistance and spreading resistance: A comparison. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1992, 10, 408.	1.6	6
36	Denuded Zone Thickness from Surface Photovoltage Measurements: Comparison with Microscopy Techniques. Journal of the Electrochemical Society, 1998, 145, 1632-1639.	2.9	6

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37	Early detection of crystal defects in the device process flow by electron beam inspection. , 0, , .		6
38	Molybdenum Contamination in Indium and Boron Implantation Processes. ECS Transactions, 2007, 10, 85-94.	0.5	6
39	Characterization of Organic Contamination in Semiconductor Manufacturing Processes. , 2009, , .		6
40	Study of SiO2î—¸Si interfaces by photocurrent measurements. Journal of Non-Crystalline Solids, 1997, 216, 88-94.	3.1	5
41	Surface Recombination Velocity from Photocurrent Measurements: Validation and Applications. Journal of the Electrochemical Society, 1999, 146, 4640-4646.	2.9	5
42	The impact of the nitridation process on the properties of the Siâ€“SiO2 interface. Journal of Non-Crystalline Solids, 2001, 280, 39-47.	3.1	5
43	Dislocation Generation in Device Fabrication Process. Solid State Phenomena, 2003, 95-96, 439-446.	0.3	5
44	Comparability of TXRF Systems at Different Laboratories. ECS Transactions, 2009, 25, 325-335.	0.5	5
45	Comparison of techniques for detecting metal contamination in silicon wafers. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 149, 313-321.	2.9	5
46	Review of applications of Defect Photoluminescence Imaging (DPLI) during IC processing. , 2019, , .		5
47	The impact of the metallization technology on junction behavior. Journal of Applied Physics, 1990, 68, 1869-1877.	2.5	4
48	Metal contamination reduction in the evolution of ion implantation technology. , 0, , .		4
49	Leakage current and deep levels in CoSi2 silicided junctions. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 124-125, 349-353.	3.5	4
50	The evolution of the ion implantation damage in device processing. Journal of Materials Science: Materials in Electronics, 2008, 19, 182-188.	2.2	4
51	(Invited) Defect Generation in Device Processing and Impact on the Electrical Performances. ECS Transactions, 2013, 50, 303-317.	0.5	4
52	ToF-SIMS depth profiles on Argon-implanted amorphous carbon. Damage effect and hydrogen characterization. Surface and Interface Analysis, 2016, 48, 428-431.	1.8	4
53	On the mechanism responsible for phosphorus inactivation in heavily doped silicon. Thin Solid Films, 1982, 97, 363-367.	1.8	3
54	Thermodynamic and kinetic properties of arsenic-implanted silicon. Thin Solid Films, 1986, 135, 59-72.	1.8	3

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55	Analysis of Non-Uniform Contamination Profiles by Lifetime Data. Solid State Phenomena, 1998, 63-64, 413-420.	0.3	3
56	Characterization of nitrided silicon-silicon dioxide interfaces. Materials Research Society Symposia Proceedings, 1999, 591, 200.	0.1	3
57	Influence of Cobalt Contamination in the Measurement of Diffusion Length of Silicon Wafers. Solid State Phenomena, 2004, 95-96, 373-380.	0.3	3
58	Oxide Thinning in Shallow Trench Isolation. , 2006, , .		3
59	Revealing Copper Contamination in Silicon after Low Temperature Treatments. ECS Transactions, 2009, 25, 337-348.	0.5	3
60	Molybdenum and Tungsten Contamination in MOS Capacitors. ECS Journal of Solid State Science and Technology, 2016, 5, P203-P210.	1.8	3
61	Analysis of Near-Surface Metal Contamination by Photoluminescence Measurements. ECS Journal of Solid State Science and Technology, 2018, 7, R12-R16.	1.8	3
62	Low temperature drive-in of surface-deposited copper in silicon wafers. EPJ Applied Physics, 2004, 27, 435-438.	0.7	3
63	An Anomalous Effect in Angle Lapping and Staining Ionâ€implanted Layers. Journal of the Electrochemical Society, 1981, 128, 2034-2036.	2.9	2
64	Phosphorus Silica Glass as Dopant Source: II . Validity of the Etch Rate Datum. Journal of the Electrochemical Society, 1981, 128, 2037-2038.	2.9	2
65	Spectrometry of very longâ€current transients in almost ideal siliconpâ€njunctions. Journal of Applied Physics, 1993, 74, 387-396.	2.5	2
66	Interface properties of annealed and nitrided HTO layers. Microelectronic Engineering, 2001, 59, 379-384.	2.4	2
67	Electrical fingerprint of pipeline defects. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2004, 114-115, 299-303.	3.5	2
68	Assessing Various Analytical Techniques with Different Lateral Resolution by Investigating Spin-coated Inorganic Contamination on Si Wafer Surfaces. ECS Transactions, 2009, 25, 311-323.	0.5	2
69	Reference Samples for Ultra Trace Analysis of Organic Compounds on Substrate Surfaces. Solid State Phenomena, 0, 187, 295-298.	0.3	2
70	Tellurium Contamination in Silicon. ECS Journal of Solid State Science and Technology, 2013, 2, N28-N34.	1.8	2
71	Tungsten contamination in ion implantation. Nuclear Instruments & Methods in Physics Research B, 2016, 377, 99-104.	1.4	2
72	Point and extended defect interaction in low â€“ high energy phosphorus implantation sequences. Materials Today: Proceedings, 2018, 5, 14778-14784.	1.8	2

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73	Modeling heavy implants in amorphous substrates. IEEE Transactions on Electron Devices, 1985, 32, 2495-2502.	3.0	1
74	Oxygen content of substrates and tunnel oxide quality: an in-line systematic analysis. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1996, 36, 187-191.	3.5	1
75	Analysis and Suppression of Process-Induced Defects in Memory Devices.. Materials Research Society Symposia Proceedings, 2000, 610, 3101.	0.1	1
76	Surface characterization by photocurrent measurements. Applied Surface Science, 2000, 154-155, 276-282.	6.1	1
77	Metal contamination monitoring in ion implantation technology. , 0, , .		1
78	Simultaneous characterization of bulk impurities and interface states by photocurrent measurements. Applied Surface Science, 2004, 235, 340-350.	6.1	1
79	Chromium Contamination in Silicon: Detection and Impact on Oxide Performances. Solid State Phenomena, 2005, 103-104, 227-232.	0.3	1
80	Cobalt Contamination in Silicon. Solid State Phenomena, 2005, 108-109, 571-576.	0.3	1
81	Mechanical Stress and Defect Formation in Device Processing. ECS Transactions, 2006, 3, 199-210.	0.5	1
82	The Role of High Temperature Treatments in Stress Release and Defect Reduction. Solid State Phenomena, 2007, 131-133, 369-374.	0.3	1
83	Electrical and microscopy analysis of dislocations in present generation devices. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2992-2996.	0.8	1
84	Mechanical Stress and Defect Formation in Device-Processing: Validity of the Numerical Models for Mechanical Stress Calculation. IEEE Transactions on Electron Devices, 2007, 54, 1108-1114.	3.0	1
85	Improved TEM Sample Preparation by Low Energy FIB for Strain Analysis by Convergent Beam Electron Diffraction. ECS Transactions, 2009, 25, 385-396.	0.5	1
86	Defect generation by argon implantation: microscopy characterization and electrical properties. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 2005-2008.	0.8	1
87	Proximity Gettering of Slow Diffuser Contaminants. Solid State Phenomena, 0, 205-206, 271-277.	0.3	1
88	Extended defect generation by Xenon implantation in silicon. , 2014, , .		1
89	Optimization of laser anneal conditions for implanted shallow p/n-junctions. Microelectronic Engineering, 2014, 125, 51-57.	2.4	1
90	Palladium contamination in silicon. Solid-State Electronics, 2015, 106, 68-77.	1.4	1

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91	Metal contamination reduction in the evolution of ion implantation technology. , 0, , .		1
92	Packaging Trends and Technology in Wireless and SSD Applications. , 2011, , 237-287.		1
93	Gettering for VLSI. AIP Conference Proceedings, 1984, , .	0.4	0
94	Electrical behaviour of junctions obtained by rapid thermal annealing of BF2 implanted layers. Microelectronic Engineering, 1992, 19, 363-366.	2.4	0
95	Measurements of carrier diffusion length in processed wafers: correlation with the electrical behaviour. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 24, 192-198.	3.5	0
96	EBIC Characterization of Oxygen Precipitation and Denuded Zone in Intrinsically Gettered P-Type Czochralski Silicon. Solid State Phenomena, 1998, 63-64, 97-104.	0.3	0
97	Evaluating the Denuded Zone Depth by Measurements of the Recombination Activity of Bulk Defects. Materials Research Society Symposia Proceedings, 1998, 510, 569.	0.1	0
98	Denuded zone and diffusion length investigation by electron beam induced current technique in intrinsically gettered Czochralski silicon. Journal of Applied Physics, 1999, 85, 1395-1400.	2.5	0
99	Thin oxide reliability and gettering efficiency in advanced silicon substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 73, 99-105.	3.5	0
100	The Role of the Interstitial Oxygen in the Recovery and Evolution of the Boron Implantation Damage. Solid State Phenomena, 2009, 156-158, 269-274.	0.3	0
101	The role of the substrate in the high energy boron implantation damage recovering. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 168-172.	3.5	0
102	Analysis of Contaminated Oxide-Silicon Interfaces. Solid State Phenomena, 0, 178-179, 243-248.	0.3	0
103	The Impact Of Organic Contamination On The Oxide-Silicon Interface. AIP Conference Proceedings, 2011, , .	0.4	0
104	H<inf>2</inf> annealing for metallic contaminant reduction in BCD-SOI process: Benefits and drawbacks. , 2015, , .		0
105	Detection and Prevention of Palladium Contamination in Silicon Devices. Solid State Phenomena, 2015, 242, 252-257.	0.3	0
106	Detection and reduction of tungsten contamination in ion implantation processes. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 729-734.	0.8	0
107	Characterization Techniques for Ion-Implanted Layers in Silicon. , 2018, , .		0
108	Hafnium Impurity Defects in Silicon: A Characterization. ECS Journal of Solid State Science and Technology, 2018, 7, P583-P587.	1.8	0

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109	F-66 Investigation of Spin-Coated Inorganic Contamination on Si Surfaces by Various Analytical Techniques. Powder Diffraction, 2010, 25, 215-215.	0.2	0
110	Analysis of the dark current distribution of complementary metal-oxide-semiconductor image sensors in the presence of metal contaminants. Semiconductor Science and Technology, 2020, 35, 124003.	2.0	0
111	(Invited) Metallic Impurity Control in Silicon Processing. ECS Transactions, 2022, 108, 45-60.	0.5	0
112	(Invited) Metallic Impurity Control in Silicon Processing. ECS Meeting Abstracts, 2022, MA2022-01, 1248-1248.	0.0	0