

Giovanni Alfieri

List of Publications by Year in descending order

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106
papers

1,522
citations

430442

18
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360668

35
g-index

109
all docs

109
docs citations

109
times ranked

1185
citing authors

#	ARTICLE	IF	CITATIONS
1	Iron and intrinsic deep level states in Ga ₂ O ₃ . Applied Physics Letters, 2018, 112, .	1.5	196
2	Impact of proton irradiation on conductivity and deep level defects in \hat{I}^2 -Ga ₂ O ₃ . APL Materials, 2019, 7, .	2.2	143
3	Annealing behavior between room temperature and 2000 \hat{A}° C of deep level defects in electron-irradiated n-type 4H silicon carbide. Journal of Applied Physics, 2005, 98, 043518.	1.1	109
4	Electrically active defects in irradiated 4H-SiC. Journal of Applied Physics, 2004, 95, 4728-4733.	1.1	77
5	Detection and depth analyses of deep levels generated by ion implantation in n- and p-type 4H-SiC. Journal of Applied Physics, 2009, 106, .	1.1	64
6	Kinetics of divacancy annealing and divacancy-oxygen formation in oxygen-enriched high-purity silicon. Physical Review B, 2005, 72, .	1.1	61
7	Radiation-hard semiconductor detectors for SuperLHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 541, 189-201.	0.7	55
8	Defect energy levels in hydrogen-implanted and electron-irradiated n-type 4H silicon carbide. Journal of Applied Physics, 2005, 98, 113524.	1.1	51
9	Evidence for identification of the divacancy-oxygen center in Si. Physical Review B, 2003, 68, .	1.1	47
10	Major deep levels with the same microstructures observed in n-type 4H \hat{A} SiC and 6H \hat{A} SiC. Journal of Applied Physics, 2011, 109, 013705.	1.1	39
11	Bistable defect in mega-electron-volt proton implanted 4H silicon carbide. Applied Physics Letters, 2004, 84, 1704-1706.	1.5	36
12	Recent advancements in the development of radiation hard semiconductor detectors for S-LHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 552, 7-19.	0.7	33
13	Development of radiation tolerant semiconductor detectors for the Super-LHC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 546, 99-107.	0.7	29
14	Engineering the band gap of SiC nanotubes with a transverse electric field. Applied Physics Letters, 2010, 97, .	1.5	27
15	Capacitance spectroscopy study of deep levels in Cl-implanted 4H-SiC. Journal of Applied Physics, 2012, 112, .	1.1	27
16	Bulk \hat{I}^2 -Ga₂</sub>O₃ with (010) and (201) Surface Orientation: Schottky Contacts and Point Defects. Materials Science Forum, 0, 897, 755-758.	0.3	27
17	Divacancy annealing in Si: Influence of hydrogen. Physical Review B, 2004, 69, .	1.1	26
18	Resolving the EH6/7 level in 4H-SiC by Laplace-transform deep level transient spectroscopy. Applied Physics Letters, 2013, 102, .	1.5	25

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19	Evidence for Two Charge States of the S-Center in Ion-Implanted 4H-SiC. Materials Science Forum, 2003, 433-436, 371-374.	0.3	21
20	The structural and electronic properties of chiral SiC nanotubes: a hybrid density functional study. Nanotechnology, 2009, 20, 285703.	1.3	20
21	Evidence for carbon clusters present near thermal gate oxides affecting the electronic band structure in SiC-MOSFET. Applied Physics Letters, 2019, 115, .	1.5	19
22	Deep level transient spectroscopy study of defects in hydrogen implanted p-type 4H-SiC. Journal of Applied Physics, 2007, 101, 103716.	1.1	18
23	Electrically active point defects in Mg implanted n-type GaN grown by metal-organic chemical vapor deposition. Journal of Applied Physics, 2018, 123, .	1.1	18
24	About the Electrical Activation of 10^{20} cm ⁻³ Ion Implanted Al in 4H-SiC at Annealing Temperatures in the Range 1500 - 1950°C. Materials Science Forum, 0, 924, 333-338.	0.3	18
25	Isothermal annealing study of the EH1 and EH3 levels in n-type 4H-SiC. Journal of Physics Condensed Matter, 2020, 32, 465703.	0.7	16
26	Detection of minority carrier traps in p-type 4H-SiC. Applied Physics Letters, 2014, 104, 092105.	1.5	13
27	The current status and future prospects of SiC high voltage technology. , 2018, , .		13
28	Generation and metastability of deep level states in \hat{I}^2 -Ga2O3 exposed to reverse bias at elevated temperatures. Journal of Applied Physics, 2019, 125, 185706.	1.1	13
29	Vertical 1.2kV SiC Power MOSFETs with High-k/Metal Gate Stack. , 2019, , .		13
30	Oxidation-induced majority and minority carrier traps in n- and p-type 4H-SiC. Applied Physics Express, 2015, 8, 111301.	1.1	12
31	Ion Implantation Processing and Related Effects in SiC. Materials Science Forum, 2006, 527-529, 781-786.	0.3	11
32	Thermal Stability of Defect Centers in n- and p-Type 4H-SiC Epilayers Generated by Irradiation with High-Energy Electrons. Materials Science Forum, 0, 645-648, 423-426.	0.3	11
33	1950°C Post Implantation Annealing of Al ⁺ Implanted 4H-SiC: Relevance of the Annealing Time. ECS Journal of Solid State Science and Technology, 2016, 5, P534-P539.	0.9	10
34	Annealing of defects in irradiated silicon detector materials with high oxygen content. Journal of Physics Condensed Matter, 2005, 17, S2247-S2253.	0.7	8
35	Electronic properties of finite-length silicon carbide nanotubes. Physica Status Solidi (B): Basic Research, 2009, 246, 407-410.	0.7	8
36	A novel edge termination for high voltage SiC devices. , 2016, , .		8

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37	Ni-Al-Ti Ohmic Contacts on Al Implanted 4H-SiC. Materials Science Forum, 2017, 897, 391-394.	0.3	8
38	Phosphorus-Related Complexes and Shallow Doping in Diamond. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1700409.	1.2	8
39	Deep level study of chlorine-based dry etched $\text{SiC}/\text{Ga}_2\text{O}_3$. Journal of Applied Physics, 2021, 130, .1.1	1.1	8
40	Structural stability and electronic properties of SiC nanocones: First-principles calculations and symmetry considerations. Applied Physics Letters, 2011, 98, 123102.	1.5	7
41	Theoretical study of Cl-related defect complexes in cubic SiC. Journal of Applied Physics, 2012, 111, 103705.	1.1	7
42	Evidence for a Deep Two Charge State Defect in High Energy Electron Irradiated 4H-SiC. Materials Science Forum, 2004, 457-460, 481-484.	0.3	6
43	Deep Levels Observed in High-Purity Semi-Insulating 4H-SiC. Materials Science Forum, 0, 645-648, 455-458.	0.3	6
44	The relation between photoluminescence properties and gas pressure with [0001] InGaN single quantum well systems. Applied Surface Science, 2017, 392, 256-259.	3.1	6
45	Defect energy levels in carbon implanted n-type homoepitaxial GaN. Journal of Applied Physics, 2019, 126, .	1.1	6
46	Vertical Power SiC MOSFETs with High-k Gate Dielectrics and Superior Threshold Voltage Stability. , 2020, , .		6
47	Laplace transform transient spectroscopy study of a divacancy-related double acceptor centre in Si. Journal of Physics Condensed Matter, 2003, 15, S2771-S2777.	0.7	5
48	High-temperature annealing behavior of deep levels in 1MeV electron irradiated p-type 6H-SiC. Applied Physics Letters, 2008, 93, 032108.	1.5	5
49	Capacitance Spectroscopy Study of Midgap Levels in n-Type SiC Polytypes. Materials Science Forum, 0, 615-617, 389-392.	0.3	5
50	<i>Ab initio</i> study of isolated chlorine defects in cubic SiC. Journal of Physics Condensed Matter, 2011, 23, 415802.	0.7	5
51	Minority Carrier Transient Spectroscopy of As-Grown, Electron Irradiated and Thermally Oxidized p-Type 4H-SiC. Materials Science Forum, 0, 778-780, 269-272.	0.3	5
52	Experimental investigation of SiC 6.5kV JBS diodes safe operating area. , 2017, , .		5
53	Point Defects Investigation of High Energy Proton Irradiated SiC p ⁺ & n Diodes. Materials Science Forum, 0, 897, 246-249.	0.3	5
54	Capacitance Spectroscopy Study of High Energy Electron Irradiated and Annealed 4H-SiC. Materials Science Forum, 2005, 483-485, 365-368.	0.3	4

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55	Thermal stability of defects in p-type as-grown 6H-SiC. Journal of Physics Condensed Matter, 2007, 19, 306204.	0.7	4
56	Evidence for a hydrogen-related defect in implanted p-type 4H-SiC. New Journal of Physics, 2008, 10, 073017.	1.2	4
57	The Effects of Transverse Electric Fields on the Electronic Properties of SiC Nanostructures. Journal of Computational and Theoretical Nanoscience, 2012, 9, 1850-1859.	0.4	4
58	Ab initio prediction of SiC nanotubes with negative strain energy. Applied Physics Letters, 2014, 104, .	1.5	4
59	The effects of illumination on deep levels observed in as-grown and low-energy electron irradiated high-purity semi-insulating 4H-SiC. Journal of Applied Physics, 2018, 123, .	1.1	4
60	Formation of Ohmic Contacts to n-Type 4H-SiC at Low Annealing Temperatures. Materials Science Forum, 0, 924, 413-416.	0.3	4
61	Deep level study of beryllium implanted MOCVD homoepitaxial GaN. Japanese Journal of Applied Physics, 2019, 58, SCCB04.	0.8	4
62	$3 \times 10^{18} \text{ cm}^{-3}$ - $1 \times 10^{19} \text{ cm}^{-3}$ Al Implanted 4H-SiC: Annealing Time Effect. Materials Science Forum, 0, 1004, 683-688.	0.3	4
63	Thermal stability of deep levels between room temperature and 1500°C in as-grown 3C-SiC. Journal of Applied Physics, 2009, 106, 073721.	1.1	3
64	Single versus double ion implantation: a deep level study. Physica Status Solidi (B): Basic Research, 2009, 246, 402-406.	0.7	3
65	First-principles study of Cl diffusion in cubic SiC. Journal of Applied Physics, 2013, 113, 133706.	1.1	3
66	Electronic properties of substitutional impurities in InGaN monolayer quantum wells. Applied Physics Letters, 2015, 106, 192102.	1.5	3
67	Inversion-Channel MOS Devices for Characterization of 4H-SiC/SiO ₂ Interfaces. Materials Science Forum, 2015, 821-823, 480-483.	0.3	3
68	Deep Level Characterization of 5 MeV Proton Irradiated SiC PiN Diodes. Materials Science Forum, 0, 858, 308-311.	0.3	3
69	High Channel Mobility 4H-SiC MOSFETs by As and P Implantation Prior to Thermal Oxidation in N ₂ O Atmosphere. Materials Science Forum, 2016, 858, 651-654.	0.3	3
70	Electrically active deep levels formed by thermal oxidation of n-type 4H-SiC. Journal of Applied Physics, 2019, 125, .	1.1	3
71	Activation Energy for the Post Implantation Annealing of 10^{19} cm^{-3} and 10^{20} cm^{-3} Ion Implanted Al in 4H SiC. Materials Science Forum, 2019, 963, 416-419.	0.3	3
72	Defects and diffusion in high purity silicon for detector applications. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2250-2257.	0.8	2

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73	Long Distance Point Defect Migration in Irradiated SiC Observed by Deep Level Transient Spectroscopy. Materials Science Forum, 2006, 527-529, 485-488.	0.3	2
74	Energy use efficiency of livestock farms in a mountain area of Sicily. Italian Journal of Animal Science, 2009, 8, 307-309.	0.8	2
75	Effects of Thermal Oxidation on Deep Levels Generated by Ion Implantation into n-Type and p-Type 4H-SiC. Materials Science Forum, 0, 645-648, 651-654.	0.3	2
76	Laplace Transform Deep Level Transient Spectroscopy Study of the EH_{6/7} Center. Materials Science Forum, 0, 740-742, 645-648.	0.3	2
77	Passivation of 4H-SiC/SiO₂ Interface Traps by Oxidation of a Thin Silicon Nitride Layer. Materials Science Forum, 2015, 821-823, 508-511.	0.3	2
78	SiC Device Manufacturing: How Processing Impacts the Material and Device Properties. Materials Science Forum, 0, 821-823, 381-386.	0.3	2
79	Tailoring the 4H-SiC/SiO ₂ MOS-interface for SiC-based power switches. Japanese Journal of Applied Physics, 2016, 55, 08PC04.	0.8	2
80	Point defects in Ga-implanted SiC: Experiment and theory. Journal of Applied Physics, 2017, 121, 245703.	1.1	2
81	Minority Carrier Traps in Ion-Implanted n-Type Homoepitaxial GaN. Physica Status Solidi (B): Basic Research, 2020, 257, 1900506.	0.7	2
82	Deep levels in ion implanted n-type homoepitaxial GaN: Ion mass, tilt angle and dose dependence. Nuclear Instruments & Methods in Physics Research B, 2021, 490, 39-42.	0.6	2
83	Study of 1.2kV High-k SiC Power MOSFETS Under Harsh Repetitive Switching Conditions. , 2021, , .		2
84	Deep Levels Generated by Ion-Implantation in n- and p-Type 4H-SiC. Materials Science Forum, 2009, 615-617, 365-368.	0.3	1
85	Electrically Active Defects in Electron Irradiated P-Type 6H-SiC. Materials Science Forum, 2011, 679-680, 253-256.	0.3	1
86	1950Å°C Annealing of Al⁺ Implanted 4H-SiC: Sheet Resistance Dependence on the Annealing Time. Materials Science Forum, 2016, 858, 523-526.	0.3	1
87	On the Influence of Active Area Design on the Performance of SiC JBS Diodes. Materials Science Forum, 0, 897, 471-474.	0.3	1
88	The Effects of Radial Compression on the Electronic Properties and Hydrogen Adsorption of SiC Nanotubes. Physica Status Solidi (B): Basic Research, 2018, 255, 1800180.	0.7	1
89	The Effects of Illumination on Point Defects Detected in High Purity Semi-Insulating 4H-SiC. Materials Science Forum, 2018, 924, 253-256.	0.3	1
90	Performance Evaluation of SiC JBS Diodes Rated for 6.5kV Applications. Materials Science Forum, 0, 924, 597-600.	0.3	1

#	ARTICLE	IF	CITATIONS
91	Electrically Active Levels Generated by Long Oxidation Times in 4H-SiC. Materials Science Forum, 2019, 963, 309-312.	0.3	1
92	Improved SiO ₂ / 4H-SiC Interface Defect Density Using Forming Gas Annealing. Materials Science Forum, 0, 963, 465-468.	0.3	1
93	Gate Stress Study on SiN-Based SiC Power MOSFETs. , 2022, , .		1
94	Isochronal Annealing Study of Deep Levels in Hydrogen Implanted p-Type 4H-SiC. Materials Science Forum, 2007, 556-557, 591-594.	0.3	0
95	Search for Hydrogen Related Defects in p-Type 6H and 4H-SiC. Materials Science Forum, 2008, 600-603, 421-424.	0.3	0
96	Thermal Histories of Defect Centers as Measured by Low Temperature Photoluminescence in n- and p-Type 4H SiC Epilayers Generated by Irradiation with 170 keV or 1 MeV Electrons. Materials Science Forum, 2010, 645-648, 419-422.	0.3	0
97	Reactive-Ion-Etching Induced Deep Levels Observed in n-Type and p-Type 4H-SiC. Materials Science Forum, 2010, 645-648, 759-762.	0.3	0
98	The effects of displacement threshold irradiation energy on deep levels in p-type 6H-SiC. Journal of Physics Condensed Matter, 2011, 23, 065803.	0.7	0
99	Chlorine in SiC: Experiment and Theory. Materials Science Forum, 2012, 717-720, 229-232.	0.3	0
100	Diffusion Study of Chlorine in SiC by First Principles Calculations. Materials Science Forum, 0, 740-742, 381-384.	0.3	0
101	An Investigation into the Dynamic Behavior of 3.3kV MOSFETs Body Diode. Materials Science Forum, 2019, 963, 621-624.	0.3	0
102	Microstructural Analysis of Ti/Ni Bilayer Ohmic Contacts on 4H-SiC Layers. Materials Science Forum, 2019, 963, 494-497.	0.3	0
103	Current-Mode Deep Level Spectroscopy of Vanadium-Doped HPSI 4H-SiC. Materials Science Forum, 0, 1004, 331-336.	0.3	0
104	The Electronic Properties of Chlorine in GaN: An Ab Initio Study. Physica Status Solidi (B): Basic Research, 2021, 258, 2000303.	0.7	0
105	Ion Implantation Processing and Related Effects in SiC. Materials Science Forum, 0, , 781-786.	0.3	0
106	Latest Advances in the Implementation and Characterization of High-K Gate Dielectrics in SiC Power MOSFETs. Materials Science Forum, 0, 1062, 383-388.	0.3	0