

Giovanni Alfieri

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

103
papers

1,216
citations

18
h-index

32
g-index

109
ext. papers

1,370
ext. citations

1.5
avg, IF

4.52
L-index

#	Paper	IF	Citations
103	Deep levels in ion implanted n-type homoepitaxial GaN: Ion mass, tilt angle and dose dependence. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2021 , 490, 39-42	1.2	1
102	Deep level study of chlorine-based dry etched AlGa_2O_3 . <i>Journal of Applied Physics</i> , 2021 , 130, 025701	2.5	5
101	The Electronic Properties of Chlorine in GaN: An Ab Initio Study. <i>Physica Status Solidi (B): Basic Research</i> , 2021 , 258, 2000303	1.3	
100	Current-Mode Deep Level Spectroscopy of Vanadium-Doped HPSI 4H-SiC. <i>Materials Science Forum</i> , 2020 , 1004, 331-336	0.4	
99	Isothermal annealing study of the EH1 and EH3 levels in n-type 4H-SiC. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 465703	1.8	12
98	Minority Carrier Traps in Ion-Implanted n-Type Homoepitaxial GaN. <i>Physica Status Solidi (B): Basic Research</i> , 2020 , 257, 1900506	1.3	1
97	Vertical Power SiC MOSFETs with High-k Gate Dielectrics and Superior Threshold Voltage Stability 2020 ,		1
96	$3 \times 10^{18} - 1 \times 10^{19} \text{ cm}^{-3} \text{ Al}^+$ Ion Implanted 4H-SiC: Annealing Time Effect. <i>Materials Science Forum</i> , 2020 , 1004, 683-688	0.4	3
95	Evidence for carbon clusters present near thermal gate oxides affecting the electronic band structure in SiC-MOSFET. <i>Applied Physics Letters</i> , 2019 , 115, 101601	3.4	10
94	Deep level study of beryllium implanted MOCVD homoepitaxial GaN. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, SCCB04	1.4	3
93	Generation and metastability of deep level states in AlGa_2O_3 exposed to reverse bias at elevated temperatures. <i>Journal of Applied Physics</i> , 2019 , 125, 185706	2.5	9
92	Electrically active deep levels formed by thermal oxidation of n-type 4H-SiC. <i>Journal of Applied Physics</i> , 2019 , 125, 205302	2.5	2
91	Vertical 1.2kV SiC Power MOSFETs with High-k/Metal Gate Stack 2019 ,		7
90	Defect energy levels in carbon implanted n-type homoepitaxial GaN. <i>Journal of Applied Physics</i> , 2019 , 126, 125301	2.5	5
89	An Investigation into the Dynamic Behavior of 3.3kV MOSFETs Body Diode. <i>Materials Science Forum</i> , 2019 , 963, 621-624	0.4	
88	Activation Energy for the Post Implantation Annealing of 10^{19} cm^{-3} and 10^{20} cm^{-3} Ion Implanted Al in 4H SiC. <i>Materials Science Forum</i> , 2019 , 963, 416-419	0.4	3
87	Electrically Active Levels Generated by Long Oxidation Times in 4H-SiC. <i>Materials Science Forum</i> , 2019 , 963, 309-312	0.4	1

86	Improved SiO ₂ / 4H-SiC Interface Defect Density Using Forming Gas Annealing. <i>Materials Science Forum</i> , 2019 , 963, 465-468	0.4	1
85	Microstructural Analysis of Ti/Ni Bilayer Ohmic Contacts on 4H-SiC Layers. <i>Materials Science Forum</i> , 2019 , 963, 494-497	0.4	
84	Impact of proton irradiation on conductivity and deep level defects in EGa ₂ O ₃ . <i>APL Materials</i> , 2019 , 7, 022510	5.7	92
83	Iron and intrinsic deep level states in Ga ₂ O ₃ . <i>Applied Physics Letters</i> , 2018 , 112, 042104	3.4	150
82	Phosphorus-Related Complexes and Shallow Doping in Diamond. <i>Physica Status Solidi - Rapid Research Letters</i> , 2018 , 12, 1700409	2.5	5
81	About the Electrical Activation of 1 \times 10 ²⁰ cm ⁻³ Ion Implanted Al in 4H-SiC at Annealing Temperatures in the Range 1500 - 1950°C. <i>Materials Science Forum</i> , 2018 , 924, 333-338	0.4	17
80	The Effects of Illumination on Point Defects Detected in High Purity Semi-Insulating 4H-SiC. <i>Materials Science Forum</i> , 2018 , 924, 253-256	0.4	1
79	Performance Evaluation of SiC JBS Diodes Rated for 6.5kV Applications. <i>Materials Science Forum</i> , 2018 , 924, 597-600	0.4	1
78	The current status and future prospects of SiC high voltage technology 2018 ,		7
77	The Effects of Radial Compression on the Electronic Properties and Hydrogen Adsorption of SiC Nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2018 , 255, 1800180	1.3	1
76	The effects of illumination on deep levels observed in as-grown and low-energy electron irradiated high-purity semi-insulating 4H-SiC. <i>Journal of Applied Physics</i> , 2018 , 123, 175304	2.5	3
75	Electrically active point defects in Mg implanted n-type GaN grown by metal-organic chemical vapor deposition. <i>Journal of Applied Physics</i> , 2018 , 123, 205303	2.5	12
74	Formation of Ohmic Contacts to n-Type 4H-SiC at Low Annealing Temperatures. <i>Materials Science Forum</i> , 2018 , 924, 413-416	0.4	3
73	On the Influence of Active Area Design on the Performance of SiC JBS Diodes. <i>Materials Science Forum</i> , 2017 , 897, 471-474	0.4	0
72	Experimental investigation of SiC 6.5kV JBS diodes safe operating area 2017 ,		3
71	Point defects in Ga-implanted SiC: Experiment and theory. <i>Journal of Applied Physics</i> , 2017 , 121, 245703	2.5	2
70	Point Defects Investigation of High Energy Proton Irradiated SiC p+-i-n Diodes. <i>Materials Science Forum</i> , 2017 , 897, 246-249	0.4	3
69	Bulk EGa ₂ O ₃ with (010) and (201) Surface Orientation: Schottky Contacts and Point Defects. <i>Materials Science Forum</i> , 2017 , 897, 755-758	0.4	21

68	Ni-Al-Ti Ohmic Contacts on Al Implanted 4H-SiC. <i>Materials Science Forum</i> , 2017 , 897, 391-394	0.4	6
67	The relation between photoluminescence properties and gas pressure with [0001] InGaN single quantum well systems. <i>Applied Surface Science</i> , 2017 , 392, 256-259	6.7	4
66	High Channel Mobility 4H-SiC MOSFETs by As and P Implantation Prior to Thermal Oxidation in N ₂ O Atmosphere. <i>Materials Science Forum</i> , 2016 , 858, 651-654	0.4	3
65	1950°C Annealing of Al ⁺ Implanted 4H-SiC: Sheet Resistance Dependence on the Annealing Time. <i>Materials Science Forum</i> , 2016 , 858, 523-526	0.4	1
64	Tailoring the 4H-SiC/SiO ₂ MOS-interface for SiC-based power switches. <i>Japanese Journal of Applied Physics</i> , 2016 , 55, 08PC04	1.4	2
63	1950°C Post Implantation Annealing of Al ⁺ Implanted 4H-SiC: Relevance of the Annealing Time. <i>ECS Journal of Solid State Science and Technology</i> , 2016 , 5, P534-P539	2	8
62	A novel edge termination for high voltage SiC devices 2016 ,		4
61	Deep Level Characterization of 5 MeV Proton Irradiated SiC PiN Diodes. <i>Materials Science Forum</i> , 2016 , 858, 308-311	0.4	3
60	Electronic properties of substitutional impurities in InGaN monolayer quantum wells. <i>Applied Physics Letters</i> , 2015 , 106, 192102	3.4	1
59	Passivation of 4H-SiC/SiO ₂ Interface Traps by Oxidation of a Thin Silicon Nitride Layer. <i>Materials Science Forum</i> , 2015 , 821-823, 508-511	0.4	2
58	SiC Device Manufacturing: How Processing Impacts the Material and Device Properties. <i>Materials Science Forum</i> , 2015 , 821-823, 381-386	0.4	1
57	Inversion-Channel MOS Devices for Characterization of 4H-SiC/SiO ₂ Interfaces. <i>Materials Science Forum</i> , 2015 , 821-823, 480-483	0.4	3
56	Oxidation-induced majority and minority carrier traps in n- and p-type 4H-SiC. <i>Applied Physics Express</i> , 2015 , 8, 111301	2.4	7
55	Ab initio prediction of SiC nanotubes with negative strain energy. <i>Applied Physics Letters</i> , 2014 , 104, 033107	3.4	4
54	Detection of minority carrier traps in p-type 4H-SiC. <i>Applied Physics Letters</i> , 2014 , 104, 092105	3.4	13
53	Minority Carrier Transient Spectroscopy of As-Grown, Electron Irradiated and Thermally Oxidized p-Type 4H-SiC. <i>Materials Science Forum</i> , 2014 , 778-780, 269-272	0.4	5
52	First-principles study of Cl diffusion in cubic SiC. <i>Journal of Applied Physics</i> , 2013 , 113, 133706	2.5	0
51	Diffusion Study of Chlorine in SiC by First Principles Calculations. <i>Materials Science Forum</i> , 2013 , 740-742, 381-384	0.4	

50	Laplace Transform Deep Level Transient Spectroscopy Study of the EH6/7 Center. <i>Materials Science Forum</i> , 2013 , 740-742, 645-648	0.4	2
49	Resolving the EH6/7 level in 4H-SiC by Laplace-transform deep level transient spectroscopy. <i>Applied Physics Letters</i> , 2013 , 102, 152108	3.4	18
48	Chlorine in SiC: Experiment and Theory. <i>Materials Science Forum</i> , 2012 , 717-720, 229-232	0.4	
47	Capacitance spectroscopy study of deep levels in Cl-implanted 4H-SiC. <i>Journal of Applied Physics</i> , 2012 , 112, 063717	2.5	18
46	Theoretical study of Cl-related defect complexes in cubic SiC. <i>Journal of Applied Physics</i> , 2012 , 111, 103705	0.5	6
45	The Effects of Transverse Electric Fields on the Electronic Properties of SiC Nanostructures. <i>Journal of Computational and Theoretical Nanoscience</i> , 2012 , 9, 1850-1859	0.3	3
44	Major deep levels with the same microstructures observed in n-type 4H-SiC and 6H-SiC. <i>Journal of Applied Physics</i> , 2011 , 109, 013705	2.5	34
43	Structural stability and electronic properties of SiC nanocones: First-principles calculations and symmetry considerations. <i>Applied Physics Letters</i> , 2011 , 98, 123102	3.4	6
42	The effects of displacement threshold irradiation energy on deep levels in p-type 6H-SiC. <i>Journal of Physics Condensed Matter</i> , 2011 , 23, 065803	1.8	
41	Ab initio study of isolated chlorine defects in cubic SiC. <i>Journal of Physics Condensed Matter</i> , 2011 , 23, 415802	1.8	4
40	Electrically Active Defects in Electron Irradiated P-Type 6H-SiC. <i>Materials Science Forum</i> , 2011 , 679-680, 253-256	0.4	1
39	Deep Levels Observed in High-Purity Semi-Insulating 4H-SiC. <i>Materials Science Forum</i> , 2010 , 645-648, 455-458	0.4	6
38	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. <i>Materials Science Forum</i> , 2010 , 645-648, 419-422	0.4	
37	Thermal Stability of Defect Centers in n- and p-Type 4H-SiC Epilayers Generated by Irradiation with High-Energy Electrons. <i>Materials Science Forum</i> , 2010 , 645-648, 423-426	0.4	9
36	Reactive-Ion-Etching Induced Deep Levels Observed in n-Type and p-Type 4H-SiC. <i>Materials Science Forum</i> , 2010 , 645-648, 759-762	0.4	
35	Effects of Thermal Oxidation on Deep Levels Generated by Ion Implantation into n-Type and p-Type 4H-SiC. <i>Materials Science Forum</i> , 2010 , 645-648, 651-654	0.4	2
34	Engineering the band gap of SiC nanotubes with a transverse electric field. <i>Applied Physics Letters</i> , 2010 , 97, 043108	3.4	25
33	Deep Levels Generated by Ion-Implantation in n- and p-Type 4H-SiC. <i>Materials Science Forum</i> , 2009 , 615-617, 365-368	0.4	1

32	Detection and depth analyses of deep levels generated by ion implantation in n- and p-type 4H-SiC. <i>Journal of Applied Physics</i> , 2009 , 106, 013719	2.5	53
31	Thermal stability of deep levels between room temperature and 1500 °C in as-grown 3C-SiC. <i>Journal of Applied Physics</i> , 2009 , 106, 073721	2.5	3
30	Capacitance Spectroscopy Study of Midgap Levels in n-Type SiC Polytypes. <i>Materials Science Forum</i> , 2009 , 615-617, 389-392	0.4	4
29	Single versus double ion implantation: a deep level study. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 402-406	1.3	3
28	Electronic properties of finite-length silicon carbide nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 407-410	1.3	6
27	The structural and electronic properties of chiral SiC nanotubes: a hybrid density functional study. <i>Nanotechnology</i> , 2009 , 20, 285703	3.4	17
26	Energy use efficiency of livestock farms in a mountain area of Sicily. <i>Italian Journal of Animal Science</i> , 2009 , 8, 307-309	2.2	2
25	Search for Hydrogen Related Defects in p-Type 6H and 4H-SiC. <i>Materials Science Forum</i> , 2008 , 600-603, 421-424	0.4	
24	Evidence for a hydrogen-related defect in implanted p-type 4H-SiC. <i>New Journal of Physics</i> , 2008 , 10, 073017	2.9	4
23	High-temperature annealing behavior of deep levels in 1MeV electron irradiated p-type 6H-SiC. <i>Applied Physics Letters</i> , 2008 , 93, 032108	3.4	5
22	Thermal stability of defects in p-type as-grown 6H-SiC. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 306204	1.8	4
21	Deep level transient spectroscopy study of defects in hydrogen implanted p-type 4H-SiC. <i>Journal of Applied Physics</i> , 2007 , 101, 103716	2.5	16
20	Isochronal Annealing Study of Deep Levels in Hydrogen Implanted p-Type 4H-SiC. <i>Materials Science Forum</i> , 2007 , 556-557, 591-594	0.4	
19	Long Distance Point Defect Migration in Irradiated SiC Observed by Deep Level Transient Spectroscopy. <i>Materials Science Forum</i> , 2006 , 527-529, 485-488	0.4	2
18	Ion Implantation Processing and Related Effects in SiC. <i>Materials Science Forum</i> , 2006 , 527-529, 781-786	0.4	11
17	Annealing behavior between room temperature and 2000 °C of deep level defects in electron-irradiated n-type 4H silicon carbide. <i>Journal of Applied Physics</i> , 2005 , 98, 043518	2.5	98
16	Defect energy levels in hydrogen-implanted and electron-irradiated n-type 4H silicon carbide. <i>Journal of Applied Physics</i> , 2005 , 98, 113524	2.5	42
15	Annealing of defects in irradiated silicon detector materials with high oxygen content. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S2247-S2253	1.8	8

14	Development of radiation tolerant semiconductor detectors for the Super-LHC. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005 , 546, 99-107	1.2	20
13	Radiation-hard semiconductor detectors for SuperLHC. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005 , 541, 189-201 ^{1,2}		50
12	Kinetics of divacancy annealing and divacancy-oxygen formation in oxygen-enriched high-purity silicon. <i>Physical Review B</i> , 2005 , 72,	3.3	53
11	Recent advancements in the development of radiation hard semiconductor detectors for S-LHC. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005 , 552, 7-19	1.2	29
10	Capacitance Spectroscopy Study of High Energy Electron Irradiated and Annealed 4H-SiC. <i>Materials Science Forum</i> , 2005 , 483-485, 365-368	0.4	4
9	Divacancy annealing in Si: Influence of hydrogen. <i>Physical Review B</i> , 2004 , 69,	3.3	23
8	Bistable defect in mega-electron-volt proton implanted 4H silicon carbide. <i>Applied Physics Letters</i> , 2004 , 84, 1704-1706	3.4	29
7	Electrically active defects in irradiated 4H-SiC. <i>Journal of Applied Physics</i> , 2004 , 95, 4728-4733	2.5	68
6	Evidence for a Deep Two Charge State Defect in High Energy Electron Irradiated 4H-SiC. <i>Materials Science Forum</i> , 2004 , 457-460, 481-484	0.4	6
5	Defects and diffusion in high purity silicon for detector applications. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004 , 1, 2250-2257		1
4	Laplace transform transient spectroscopy study of a divacancy-related double acceptor centre in Si. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, S2771-S2777	1.8	5
3	Evidence for Two Charge States of the S-Center in Ion-Implanted 4H-SiC. <i>Materials Science Forum</i> , 2003 , 433-436, 371-374	0.4	20
2	Evidence for identification of the divacancy-oxygen center in Si. <i>Physical Review B</i> , 2003 , 68,	3.3	43
1	Latest Advances in the Implementation and Characterization of High-K Gate Dielectrics in SiC Power MOSFETs. <i>Materials Science Forum</i> , 1062, 383-388	0.4	