Giovanni Alfieri

List of Publications by Citations

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	Iron and intrinsic deep level states in Ga2O3. *Applied Physics Letters*, **2018**, 112, 042104	3.4	150
102	Annealing behavior between room temperature and 2000 °C of deep level defects in electron-irradiated n-type 4H silicon carbide. *Journal of Applied Physics*, **2005**, 98, 043518	2.5	98
101	Impact of proton irradiation on conductivity and deep level defects in β-Ga2O3. *APL Materials*, **2019**, 7, 022510	5.7	92
100	Electrically active defects in irradiated 4H-SiC. *Journal of Applied Physics*, **2004**, 95, 4728-4733	2.5	68
99	Detection and depth analyses of deep levels generated by ion implantation in n- and p-type 4H-SiC. *Journal of Applied Physics*, **2009**, 106, 013719	2.5	53
98	Kinetics of divacancy annealing and divacancy-oxygen formation in oxygen-enriched high-purity silicon. *Physical Review B*, **2005**, 72,	3.3	53
97	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	1.2	50
96	Evidence for identification of the divacancy-oxygen center in Si. *Physical Review B*, **2003**, 68,	3.3	43
95	Defect energy levels in hydrogen-implanted and electron-irradiated n-type 4H silicon carbide. *Journal of Applied Physics*, **2005**, 98, 113524	2.5	42
94	Major deep levels with the same microstructures observed in n-type 4H-SiC and 6H-SiC. *Journal of Applied Physics*, **2011**, 109, 013705	2.5	34
93	Bistable defect in mega-electron-volt proton implanted 4H silicon carbide. *Applied Physics Letters*, **2004**, 84, 1704-1706	3.4	29
92	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	1.2	29
91	Engineering the band gap of SiC nanotubes with a transverse electric field. *Applied Physics Letters*, **2010**, 97, 043108	3.4	25
90	Divacancy annealing in Si: Influence of hydrogen. *Physical Review B*, **2004**, 69,	3.3	23
89	Bulk β-Ga2O3 with (010) and (201) Surface Orientation: Schottky Contacts and Point Defects. *Materials Science Forum*, **2017**, 897, 755-758	0.4	21
88	Evidence for Two Charge States of the S-Center in Ion-Implanted 4H-SiC. *Materials Science Forum*, **2003**, 433-436, 371-374	0.4	20
87	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	1.2	20

86	Resolving the EH6/7 level in 4H-SiC by Laplace-transform deep level transient spectroscopy. *Applied Physics Letters*, **2013**, 102, 152108	3.4	18
85	Capacitance spectroscopy study of deep levels in Cl-implanted 4H-SiC. *Journal of Applied Physics*, **2012**, 112, 063717	2.5	18
84	About the Electrical Activation of 1□1020 cm-3 Ion Implanted Al in 4H-SiC at Annealing Temperatures in the Range 1500 - 1950□C. *Materials Science Forum*, **2018**, 924, 333-338	0.4	17
83	The structural and electronic properties of chiral SiC nanotubes: a hybrid density functional study. *Nanotechnology*, **2009**, 20, 285703	3.4	17
82	Deep level transient spectroscopy study of defects in hydrogen implanted p-type 4H-SiC. *Journal of Applied Physics*, **2007**, 101, 103716	2.5	16
81	Detection of minority carrier traps in p-type 4H-SiC. *Applied Physics Letters*, **2014**, 104, 092105	3.4	13
80	Isothermal annealing study of the EH1 and EH3 levels in n-type 4H-SiC. *Journal of Physics Condensed Matter*, **2020**, 32, 465703	1.8	12
79	Electrically active point defects in Mg implanted n-type GaN grown by metal-organic chemical vapor deposition. *Journal of Applied Physics*, **2018**, 123, 205303	2.5	12
78	Ion Implantation Processing and Related Effects in SiC. *Materials Science Forum*, **2006**, 527-529, 781-786	0.4	11
77	Evidence for carbon clusters present near thermal gate oxides affecting the electronic band structure in SiC-MOSFET. *Applied Physics Letters*, **2019**, 115, 101601	3.4	10
76	Generation and metastability of deep level states in □Ga2O3 exposed to reverse bias at elevated temperatures. *Journal of Applied Physics*, **2019**, 125, 185706	2.5	9
75	Thermal Stability of Defect Centers in n- and p-Type 4H-SiC Epilayers Generated by Irradiation with High-Energy Electrons. *Materials Science Forum*, **2010**, 645-648, 423-426	0.4	9
74	Annealing of defects in irradiated silicon detector materials with high oxygen content. *Journal of Physics Condensed Matter*, **2005**, 17, S2247-S2253	1.8	8
73	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	2	8
72	Vertical 1.2kV SiC Power MOSFETs with High-k/Metal Gate Stack **2019**,		7
71	Oxidation-induced majority and minority carrier traps in n- and p-type 4H-SiC. *Applied Physics Express*, **2015**, 8, 111301	2.4	7
70	The current status and future prospects of SiC high voltage technology **2018**,		7
69	Ni-Al-Ti Ohmic Contacts on Al Implanted 4H-SiC. *Materials Science Forum*, **2017**, 897, 391-394	0.4	6

68	Deep Levels Observed in High-Purity Semi-Insulating 4H-SiC. *Materials Science Forum*, **2010**, 645-648, 455-458	0.4	6
67	Structural stability and electronic properties of SiC nanocones: First-principles calculations and symmetry considerations. *Applied Physics Letters*, **2011**, 98, 123102	3.4	6
66	Electronic properties of finite-length silicon carbide nanotubes. *Physica Status Solidi (B): Basic Research*, **2009**, 246, 407-410	1.3	6
65	Theoretical study of Cl-related defect complexes in cubic SiC. *Journal of Applied Physics*, **2012**, 111, 103705	2.5	6
64	Evidence for a Deep Two Charge State Defect in High Energy Electron Irradiated 4H-SiC. *Materials Science Forum*, **2004**, 457-460, 481-484	0.4	6
63	Phosphorus-Related Complexes and Shallow Doping in Diamond. *Physica Status Solidi - Rapid Research Letters*, **2018**, 12, 1700409	2.5	5
62	Defect energy levels in carbon implanted n-type homoepitaxial GaN. *Journal of Applied Physics*, **2019**, 126, 125301	2.5	5
61	Minority Carrier Transient Spectroscopy of As-Grown, Electron Irradiated and Thermally Oxidized p-Type 4H-SiC. *Materials Science Forum*, **2014**, 778-780, 269-272	0.4	5
60	High-temperature annealing behavior of deep levels in 1MeV electron irradiated p-type 6H-SiC. *Applied Physics Letters*, **2008**, 93, 032108	3.4	5
59	Laplace transform transient spectroscopy study of a divacancy-related double acceptor centre in Si. *Journal of Physics Condensed Matter*, **2003**, 15, S2771-S2777	1.8	5
58	Deep level study of chlorine-based dry etched □Ga2O3. *Journal of Applied Physics*, **2021**, 130, 025701	2.5	5
57	The relation between photoluminescence properties and gas pressure with [0001] InGaN single quantum well systems. *Applied Surface Science*, **2017**, 392, 256-259	6.7	4
56	Ab initio prediction of SiC nanotubes with negative strain energy. *Applied Physics Letters*, **2014**, 104, 033107	3.4	4
55	Capacitance Spectroscopy Study of Midgap Levels in n-Type SiC Polytypes. *Materials Science Forum*, **2009**, 615-617, 389-392	0.4	4
54	Ab initio study of isolated chlorine defects in cubic SiC. *Journal of Physics Condensed Matter*, **2011**, 23, 415802	1.8	4
53	Evidence for a hydrogen-related defect in implanted p-type 4H-SiC. *New Journal of Physics*, **2008**, 10, 073017	2.9	4
52	Thermal stability of defects in p-type as-grown 6H-SiC. *Journal of Physics Condensed Matter*, **2007**, 19, 306204	1.8	4
51	Capacitance Spectroscopy Study of High Energy Electron Irradiated and Annealed 4H-SiC. *Materials Science Forum*, **2005**, 483-485, 365-368	0.4	4

50	A novel edge termination for high voltage SiC devices **2016**,		4
49	Experimental investigation of SiC 6.5kV JBS diodes safe operating area **2017**,		3
48	Deep level study of beryllium implanted MOCVD homoepitaxial GaN. *Japanese Journal of Applied Physics*, **2019**, 58, SCCB04	1.4	3
47	Inversion-Channel MOS Devices for Characterization of 4H-SiC/SiO2 Interfaces. *Materials Science Forum*, **2015**, 821-823, 480-483	0.4	3
46	High Channel Mobility 4H-SiC MOSFETs by As and P Implantation Prior to Thermal Oxidation in N2O Atmosphere. *Materials Science Forum*, **2016**, 858, 651-654	0.4	3
45	Point Defects Investigation of High Energy Proton Irradiated SiC p+-i-n Diodes. *Materials Science Forum*, **2017**, 897, 246-249	0.4	3
44	Thermal stability of deep levels between room temperature and 1500 °C in as-grown 3C-SiC. *Journal of Applied Physics*, **2009**, 106, 073721	2.5	3
43	Single versus double ion implantation: a deep level study. *Physica Status Solidi (B): Basic Research*, **2009**, 246, 402-406	1.3	3
42	The Effects of Transverse Electric Fields on the Electronic Properties of SiC Nanostructures. *Journal of Computational and Theoretical Nanoscience*, **2012**, 9, 1850-1859	0.3	3
41	3□1018 - 1 □1019 cm -3 Al+ Ion Implanted 4H-SiC: Annealing Time Effect. *Materials Science Forum*, **2020**, 1004, 683-688	0.4	3
40	Deep Level Characterization of 5 MeV Proton Irradiated SiC PiN Diodes. *Materials Science Forum*, **2016**, 858, 308-311	0.4	3
39	Activation Energy for the Post Implantation Annealing of 1019 cm-3 and 1020 cm-3 Ion Implanted Al in 4H SiC. *Materials Science Forum*, **2019**, 963, 416-419	0.4	3
38	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, 175304	2.5	3
37	Formation of Ohmic Contacts to n-Type 4H-SiC at Low Annealing Temperatures. *Materials Science Forum*, **2018**, 924, 413-416	0.4	3
36	Point defects in Ga-implanted SiC: Experiment and theory. *Journal of Applied Physics*, **2017**, 121, 245703	2.5	2
35	Passivation of 4H-SiC/SiO2 Interface Traps by Oxidation of a Thin Silicon Nitride Layer. *Materials Science Forum*, **2015**, 821-823, 508-511	0.4	2
34	Electrically active deep levels formed by thermal oxidation of n-type 4H-SiC. *Journal of Applied Physics*, **2019**, 125, 205302	2.5	2
33	Laplace Transform Deep Level Transient Spectroscopy Study of the EH6/7 Center. *Materials Science Forum*, **2013**, 740-742, 645-648	0.4	2

32	Effects of Thermal Oxidation on Deep Levels Generated by Ion Implantation into n-Type and p-Type 4H-SiC. *Materials Science Forum*, **2010**, 645-648, 651-654	0.4	2
31	Energy use efficiency of livestock farms in a mountain area of Sicily. *Italian Journal of Animal Science*, **2009**, 8, 307-309	2.2	2
30	Long Distance Point Defect Migration in Irradiated SiC Observed by Deep Level Transient Spectroscopy. *Materials Science Forum*, **2006**, 527-529, 485-488	0.4	2
29	Tailoring the 4H-SiC/SiO2MOS-interface for SiC-based power switches. *Japanese Journal of Applied Physics*, **2016**, 55, 08PC04	1.4	2
28	Electronic properties of substitutional impurities in InGaN monolayer quantum wells. *Applied Physics Letters*, **2015**, 106, 192102	3.4	1
27	SiC Device Manufacturing: How Processing Impacts the Material and Device Properties. *Materials Science Forum*, **2015**, 821-823, 381-386	0.4	1
26	1950°C Annealing of Al+ Implanted 4H-SiC: Sheet Resistance Dependence on the Annealing Time. *Materials Science Forum*, **2016**, 858, 523-526	0.4	1
25	The Effects of Illumination on Point Defects Detected in High Purity Semi-Insulating 4H-SiC. *Materials Science Forum*, **2018**, 924, 253-256	0.4	1
24	Performance Evaluation of SiC JBS Diodes Rated for 6.5kV Applications. *Materials Science Forum*, **2018**, 924, 597-600	0.4	1
23	Deep Levels Generated by Ion-Implantation in n- and p-Type 4H-SiC. *Materials Science Forum*, **2009**, 615-617, 365-368	0.4	1
22	Electrically Active Defects in Electron Irradiated P-Type 6H-SiC. *Materials Science Forum*, **2011**, 679-680, 253-256	0.4	1
21	Defects and diffusion in high purity silicon for detector applications. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2004**, 1, 2250-2257		1
20	Minority Carrier Traps in Ion-Implanted n-Type Homoepitaxial GaN. *Physica Status Solidi (B): Basic Research*, **2020**, 257, 1900506	1.3	1
19	Vertical Power SiC MOSFETs with High-k Gate Dielectrics and Superior Threshold Voltage Stability **2020**,		1
18	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	1.2	1
17	Electrically Active Levels Generated by Long Oxidation Times in 4H-SiC. *Materials Science Forum*, **2019**, 963, 309-312	0.4	1
16	Improved SiO2/ 4H-SiC Interface Defect Density Using Forming Gas Annealing. *Materials Science Forum*, **2019**, 963, 465-468	0.4	1
15	The Effects of Radial Compression on the Electronic Properties and Hydrogen Adsorption of SiC Nanotubes. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1800180	1.3	1

14	On the Influence of Active Area Design on the Performance of SiC JBS Diodes. *Materials Science Forum*, **2017**, 897, 471-474	0.4	0
13	First-principles study of Cl diffusion in cubic SiC. *Journal of Applied Physics*, **2013**, 113, 133706	2.5	0
12	Current-Mode Deep Level Spectroscopy of Vanadium-Doped HPSI 4H-SiC. *Materials Science Forum*, **2020**, 1004, 331-336	0.4	
11	An Investigation into the Dynamic Behavior of 3.3kV MOSFETs Body Diode. *Materials Science Forum* , **2019**, 963, 621-624	0.4	
10	Diffusion Study of Chlorine in SiC by First Principles Calculations. *Materials Science Forum*, **2013**, 740-742, 381-384	0.4	
9	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	0.4	
8	Reactive-Ion-Etching Induced Deep Levels Observed in n-Type and p-Type 4H-SiC. *Materials Science Forum*, **2010**, 645-648, 759-762	0.4	
7	The effects of displacement threshold irradiation energy on deep levels in p-type 6H-SiC. *Journal of Physics Condensed Matter*, **2011**, 23, 065803	1.8	
6	Chlorine in SiC: Experiment and Theory. *Materials Science Forum*, **2012**, 717-720, 229-232	0.4	
5	Search for Hydrogen Related Defects in p-Type 6H and 4H-SiC. *Materials Science Forum*, **2008**, 600-603, 421-424	0.4	
4	Isochronal Annealing Study of Deep Levels in Hydrogen Implanted p-Type 4H-SiC. *Materials Science Forum*, **2007**, 556-557, 591-594	0.4	
3	Microstructural Analysis of Ti/Ni Bilayer Ohmic Contacts on 4H-SiC Layers. *Materials Science Forum*, **2019**, 963, 494-497	0.4	
2	The Electronic Properties of Chlorine in GaN: An Ab Initio Study. *Physica Status Solidi (B): Basic Research*, **2021**, 258, 2000303	1.3	
1	Latest Advances in the Implementation and Characterization of High-K Gate Dielectrics in SiC Power MOSFETs. *Materials Science Forum*,1062, 383-388	0.4	