

Ulrike Grossner

List of Publications by Citations

Source: <https://exaly.com/author-pdf/3590629/ulrike-grossner-publications-by-citations.pdf>

Version: 2024-04-23

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

129
papers

1,562
citations

18
h-index

35
g-index

143
ext. papers

1,743
ext. citations

2.2
avg, IF

4.6
L-index

#	Paper	IF	Citations
129	The effect of doping and growth stoichiometry on the core structure of a threading edge dislocation in GaN. <i>Applied Physics Letters</i> , 1998 , 73, 2751-2753	3.4	181
128	Structural and morphological properties of ZnO:Ga thin films. <i>Thin Solid Films</i> , 2006 , 515, 472-476	2.2	101
127	Dynamics and polarization of group-III nitride lattices: A first-principles study. <i>Physical Review B</i> , 2000 , 62, 8003-8011	3.3	98
126	Coulomb correlation effects in zinc monochalcogenides. <i>Journal of Applied Physics</i> , 2006 , 100, 043709	2.5	80
125	Palladium Schottky barrier contacts to hydrothermally grown n-ZnO and shallow electron states. <i>Applied Physics Letters</i> , 2004 , 85, 2259-2261	3.4	71
124	Electrical characteristics of palladium Schottky contacts to hydrogen peroxide treated hydrothermally grown ZnO. <i>Applied Physics Letters</i> , 2007 , 91, 193507	3.4	64
123	Bond-rotation versus bond-contraction relaxation of (110) surfaces of group-III nitrides. <i>Physical Review B</i> , 1998 , 58, R1722-R1725	3.3	64
122	Electronic structure and band parameters for Zn (, S, Se, Te). <i>Journal of Crystal Growth</i> , 2006 , 287, 162-168	6.6	56
121	PEMOCVD of ZnO thin films, doped by Ga and some of their properties. <i>Superlattices and Microstructures</i> , 2006 , 39, 275-281	2.8	54
120	Electrical charge state identification and control for the silicon vacancy in 4H-SiC. <i>Npj Quantum Information</i> , 2019 , 5,	8.6	38
119	Electrical properties of Al ₂ O ₃ /4H-SiC structures grown by atomic layer chemical vapor deposition. <i>Journal of Applied Physics</i> , 2007 , 102, 054513	2.5	37
118	Conductivity increase of ZnO:Ga films by rapid thermal annealing. <i>Superlattices and Microstructures</i> , 2007 , 42, 379-386	2.8	32
117	Improvement of ZnO thin film properties by application of ZnO buffer layers. <i>Journal of Crystal Growth</i> , 2007 , 308, 93-98	1.6	31
116	First-principles based kinetic modeling of effect of hydrogen on growth of carbon nanotubes. <i>Carbon</i> , 2011 , 49, 2508-2521	10.4	26
115	Comparison of near-interface traps in Al ₂ O ₃ /4H-SiC and Al ₂ O ₃ /BiO ₂ /4H-SiC structures. <i>Applied Physics Letters</i> , 2006 , 89, 222103	3.4	25
114	Epitaxial growth of CuGaS ₂ on Si(111). <i>Applied Physics Letters</i> , 2002 , 81, 156-158	3.4	25
113	Accurate Temperature Estimation of SiC Power mosfets Under Extreme Operating Conditions. <i>IEEE Transactions on Power Electronics</i> , 2020 , 35, 1855-1865	7.2	25

112	Optical properties of epitaxial CuGaS ₂ layers on Si(111). <i>Journal of Physics and Chemistry of Solids</i> , 2003 , 64, 1781-1785	3.9	22
111	Native defects and complexes in SiC. <i>Journal of Physics Condensed Matter</i> , 2001 , 13, 9027-9037	1.8	17
110	Current Transport Mechanism for Heavy-Ion Degraded SiC MOSFETs. <i>IEEE Transactions on Nuclear Science</i> , 2019 , 66, 1702-1709	1.7	15
109	Heavy-Ion Microbeam Studies of Single-Event Leakage Current Mechanism in SiC VD-MOSFETs. <i>IEEE Transactions on Nuclear Science</i> , 2020 , 67, 1381-1389	1.7	15
108	Electronic properties of the Sm ²⁺ -SiC surface alloy. <i>Journal of Applied Physics</i> , 2006 , 99, 013703	2.5	13
107	Strong Coulomb correlation effects in ZnO. <i>Solid State Communications</i> , 2006 , 139, 391-396	1.6	13
106	Towards Quantum Structures in SiC. <i>Materials Science Forum</i> , 2002 , 389-393, 737-742	0.4	13
105	Rearrangement of the oxide-semiconductor interface in annealed Al ₂ O ₃ /H-SiC structures. <i>Applied Physics Letters</i> , 2007 , 91, 052907	3.4	12
104	Stability, reconstruction, and surface electronic states of group-III atoms on SiC(111). <i>Physical Review B</i> , 2001 , 64,	3.3	12
103	Power Cycling of Commercial SiC MOSFETs 2018 ,		12
102	Influence of growth conditions on irradiation induced defects in low doped 4H-SiC epitaxial layers. <i>Applied Physics Letters</i> , 2007 , 90, 062113	3.4	11
101	Ion Implantation Processing and Related Effects in SiC. <i>Materials Science Forum</i> , 2006 , 527-529, 781-786	0.4	11
100	Study of annealing influence on electrical and morphological properties of ZnO:Ga thin films. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006 , 3, 780-784		11
99	Erbium-related band gap states in 4H- and 6H-silicon carbide. <i>Journal of Applied Physics</i> , 2003 , 93, 2289-2294	3.4	11
98	Planar to Trench: Short Circuit Capability Analysis of 1.2 kV SiC MOSFETs. <i>Materials Science Forum</i> , 2018 , 924, 782-785	0.4	10
97	Structural and optical properties of epitaxial CuGaS ₂ films on Si substrates. <i>Thin Solid Films</i> , 2003 , 431-432, 219-222	2.2	10
96	Ab initio calculation of the reflectance anisotropy of surfaces: The triangle method. <i>Physical Review B</i> , 1998 , 58, 4721-4727	3.3	10
95	Surface Energies and Surface Dipoles at III-Nitride(111) Surfaces in Dependence on Stoichiometry. <i>Physica Status Solidi (B): Basic Research</i> , 1999 , 216, 675-678	1.3	10

94	Interaction of low-energy muons with defect profiles in proton-irradiated Si and 4H-SiC. <i>Physical Review B</i> , 2019 , 100,	3.3	9
93	Trade-off analysis of the p-base doping on ruggedness of SiC MOSFETs. <i>Microelectronics Reliability</i> , 2017 , 76-77, 267-271	1.2	9
92	As on InP(110) studied within density-functional theory. <i>Physical Review B</i> , 1997 , 56, 6719-6726	3.3	9
91	Carrier Removal in Electron Irradiated 4H and 6H SiC. <i>Materials Science Forum</i> , 2008 , 600-603, 425-428	0.4	9
90	Two-dimensional defect mapping of the SiO ₂ /4H-SiC interface. <i>Physical Review Materials</i> , 2019 , 3,	3.2	9
89	Lateral straggling of implanted aluminum in 4H-SiC. <i>Applied Physics Letters</i> , 2020 , 116, 012101	3.4	9
88	High-Temperature Impact-Ionization Model for 4H-SiC. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 1899-1904	2.9	8
87	First-principles study on electronic structure, phase stability, and optical properties of In ₂ X ₂ O ₇ (X=C, Si, Ge or Sn). <i>Thin Solid Films</i> , 2011 , 519, 6561-6567	2.2	8
86	Interfacial studies of Al ₂ O ₃ deposited on 4H-SiC(0001). <i>Surface and Interface Analysis</i> , 2008 , 40, 822-825	1.5	8
85	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
84	Accuracy of Three Interterminal Capacitance Models for SiC Power MOSFETs Under Fast Switching. <i>IEEE Transactions on Power Electronics</i> , 2021 , 36, 9398-9410	7.2	8
83	High Temperature Annealing Study of Al ₂ O ₃ Deposited by ALCVD on n-Type 4H-SiC. <i>Materials Science Forum</i> , 2006 , 527-529, 1067-1070	0.4	7
82	Oxidation of 4H-SiC covered with a SmSix surface alloy. <i>Surface Science</i> , 2006 , 600, 1300-1307	1.8	7
81	Zero- and Two-Dimensional Native Defects. <i>Advanced Texts in Physics</i> , 2004 , 3-25		7
80	Electrical Properties of Aluminium Oxide Films Grown by Atomic Layer Deposition on n-Type 4H-SiC. <i>Materials Science Forum</i> , 2005 , 483-485, 705-708	0.4	7
79	Silicon carbide X-ray beam position monitors for synchrotron applications. <i>Journal of Synchrotron Radiation</i> , 2019 , 26, 28-35	2.4	7
78	Impact of Terrestrial Neutrons on the Reliability of SiC VD-MOSFET Technologies. <i>IEEE Transactions on Nuclear Science</i> , 2021 , 68, 634-641	1.7	7
77	Exploring the behavior of parallel connected SiC power MOSFETs influenced by performance spread in circuit simulations 2018 ,		6

76	Ni-Al-Ti Ohmic Contacts on Al Implanted 4H-SiC. <i>Materials Science Forum</i> , 2017 , 897, 391-394	0.4	6
75	Highly accurate virtual dynamic characterization of discrete SiC power devices 2017 ,		6
74	Deep acceptor states of platinum and iridium in 4H-silicon carbide. <i>Physical Review B</i> , 2004 , 70,	3.3	6
73	Electronic band structure of the buried SiO ₂ /SiC interface investigated by soft x-ray ARPES. <i>Applied Physics Letters</i> , 2017 , 110, 132101	3.4	5
72	Comprehensive and Detailed Study on the Modeling of Commercial SiC Power MOSFET Devices Using TCAD. <i>Materials Science Forum</i> , 2017 , 897, 553-556	0.4	5
71	A more accurate electromagnetic modeling of WBG power modules 2018 ,		5
70	Hydrothermally Grown Single-Crystalline Zinc Oxide; Characterization and Modification. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1035, 1		5
69	Carrier concentration and shallow electron states in In-doped hydrothermally grown ZnO. <i>Superlattices and Microstructures</i> , 2005 , 38, 364-368	2.8	5
68	Interplay of Surface Structure, Bond Stacking and Heteropolytypic Growth of SiC. <i>Materials Science Forum</i> , 2001 , 353-356, 211-214	0.4	5
67	Accurate Calculation of Partial Inductances for the Orthogonal PEEC Formulation. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2021 , 63, 82-92	2	5
66	Simulation-Based Sensitivity Analysis of Conduction and Switching Losses for Silicon Carbide Power MOSFETs. <i>Materials Science Forum</i> , 2018 , 924, 693-696	0.4	5
65	Circuit synthesis techniques of rational models of electromagnetic systems: A tutorial paper. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2019 , 32, e2612	1	4
64	Time-Resolved Short Circuit Failure Analysis of SiC MOSFETs 2019 ,		4
63	Al+ Implanted 4H-SiC p+-i-n Diodes: Evidence for Post-Implantation-Annealing Dependent Defect Activation. <i>Materials Science Forum</i> , 2014 , 778-780, 657-660	0.4	4
62	Carrier concentration and shallow electron states in Sb-doped hydrothermally grown ZnO. <i>Superlattices and Microstructures</i> , 2007 , 42, 294-298	2.8	4
61	Electronic properties of the Ce/H-SiC interface studied by x-ray photoemission spectroscopy. <i>Journal of Applied Physics</i> , 2006 , 100, 053706	2.5	4
60	X-Ray and AFM Analysis of Al ₂ O ₃ Deposited by ALCVD on n-Type 4H-SiC. <i>Materials Science Forum</i> , 2007 , 556-557, 683-686	0.4	4
59	Annealing study of H ₂ O and O ₃ grown Al ₂ O ₃ deposited by atomic layer chemical vapour deposition on n-type 4H-SiC. <i>Physica Scripta</i> , 2006 , T126, 6-9	2.6	4

58	A Deep Erbium-Related Bandgap State in 4H Silicon Carbide. <i>Materials Science Forum</i> , 2003 , 433-436, 487-490	0.4	4
57	Dielectric and lattice-dynamical properties of III-nitrides. <i>Journal of Electronic Materials</i> , 2000 , 29, 281-284	9	4
56	Muon Interaction with Negative-U and High-Spin-State Defects: Differentiating Between C and Si Vacancies in 4H-SiC. <i>Physical Review Applied</i> , 2020 , 14,	4.3	4
55	Influence of Process Variations on the Electrical Performance of SiC Power MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 230-235	2.9	4
54	Short Circuit Ruggedness of New Generation 1.2 kV SiC MOSFETs 2018 ,		4
53	Continuous Compact Model of a SiC VDMOSFET Based on Surface Potential Theory. <i>Materials Science Forum</i> , 2018 , 924, 786-789	0.4	4
52	(Invited) Requirements for Highly Accurate Multiphysics Modeling of SiC Power MOSFETs and Power Modules. <i>ECS Transactions</i> , 2017 , 80, 89-100	1	3
51	Analysis of parameters determining nominal dynamic performance of 1.2 kV SiC power MOSFETs 2018 ,		3
50	Effect of Negative Gate Bias on Single Pulse Avalanche Ruggedness of 1.2 kV Silicon Carbide MOSFETs. <i>Materials Science Forum</i> , 2018 , 924, 735-738	0.4	3
49	SiC Vertical-Channel n- and p-JFETs Fully Fabricated by Ion Implantation. <i>Materials Science Forum</i> , 2019 , 963, 841-844	0.4	3
48	Palladium Schottky barrier contacts to the (0001)- and (101 0)-face of hydrothermally grown n-ZnO. <i>AIP Conference Proceedings</i> , 2005 ,	0	3
47	Accuracy of Thermal Analysis for SiC Power Devices 2021 ,		3
46	Designing cryo-enzymatic reactions in subzero liquid water by lipidic mesophase nanoconfinement. <i>Nature Nanotechnology</i> , 2021 , 16, 802-810	28.7	3
45	Lateral Straggling of Ion Implantation Distributions in 4H-SiC Investigated by SIMS. <i>Materials Science Forum</i> , 2019 , 963, 437-440	0.4	3
44	Rigorous dc Solution of Partial Element Equivalent Circuit Models Including Conductive, Dielectric, and Magnetic Materials. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2020 , 62, 870-879	2	3
43	Efficient Computation of Partial Elements in the Full-Wave Surface-PEEC Method. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2021 , 63, 1189-1201	2	3
42	Analysis of 4H-SiC MOS Capacitors on Macro-Stepped Surfaces. <i>Materials Science Forum</i> , 2017 , 897, 107-110	10	2
41	Low-Energy Muons as a Tool for a Depth-Resolved Analysis of the SiO ₂ /4H-SiC Interface. <i>Materials Science Forum</i> , 2020 , 1004, 581-586	0.4	2

40	Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green's Function. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2020 , 68, 3242-3254	4.1	2
39	Analytical Formulas for the Computation of the Electric Field in the Partial Element Equivalent Circuit Method With Conductive, Dielectric, and Magnetic Media. <i>IEEE Transactions on Magnetics</i> , 2019 , 55, 1-13	2	2
38	Passivation in High-Power Si Devices - An Overview. <i>ECS Transactions</i> , 2013 , 50, 267-277	1	2
37	Experimental Study of the Formation and Oxidation of the Sm/4H-SiC Surface Alloy. <i>Materials Science Forum</i> , 2006 , 527-529, 681-684	0.4	2
36	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
35	The Al ₂ O ₃ /4H-SiC Interface Investigated by Thermal Dielectric Relaxation Current Technique. <i>Materials Science Forum</i> , 2007 , 556-557, 537-540	0.4	2
34	Heavy-ion induced single event effects and latent damages in SiC power MOSFETs. <i>Microelectronics Reliability</i> , 2022 , 128, 114423	1.2	2
33	Short Circuit Robustness and Carrier Lifetime in Silicon Carbide MOSFETs 2020 ,		2
32	4H-SiC(0001) Surface Faceting during Interaction with Liquid Si. <i>Materials Science Forum</i> , 2016 , 858, 163-166	0.4	2
31	Analysis of Current Capability of SiC Power MOSFETs Under Avalanche Conditions. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 4587-4592	2.9	2
30	Characterization methods for defects and devices in silicon carbide. <i>Journal of Applied Physics</i> , 2022 , 131, 140903	2.5	2
29	Surface Morphology of 4H-SiC after Thermal Oxidation. <i>Materials Science Forum</i> , 2019 , 963, 180-183	0.4	1
28	SiC Device Manufacturing: How Processing Impacts the Material and Device Properties. <i>Materials Science Forum</i> , 2015 , 821-823, 381-386	0.4	1
27	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
26	Analysis of Thin Thermal Oxides on (0001) SiC Epitaxial Layers. <i>Materials Science Forum</i> , 2017 , 897, 119-124	0.4	1
25	Characterization of the SiO ₂ /SiC Interface with Impedance Spectroscopy. <i>Materials Science Forum</i> , 2009 , 615-617, 501-504	0.4	1
24	Interface States in 4H- and 6H-SiC MOS Capacitors: A Comparative Study between Conductance Spectroscopy and Thermal Dielectric Relaxation Current Technique. <i>Materials Science Forum</i> , 2009 , 615-617, 497-500	0.4	1
23	Theoretical study of As overlayers on InP(110) surface: optical properties. <i>Surface Science</i> , 1998 , 417, L1133-L1138	1.8	1

22	Influence of Annealing on the Al ₂ O ₃ /4H-SiC Interface. <i>Materials Science Forum</i> , 2008 , 600-603, 767-770	0.4	1
21	XPS Study of the Electronic Properties of the Ce/4H-SiC Interface, and the Formation of the SiO ₂ /Ce ₂ Si ₂ O ₇ /4H-SiC Interface Structure upon Oxidation. <i>Materials Science Forum</i> , 2007 , 556-557, 549-554	0.4	1
20	Investigation of Electronic States of Pd in 4H-SiC by Means of Radiotracer-DLTS. <i>Materials Science Forum</i> , 2004 , 457-460, 791-796	0.4	1
19	Adsorption of group III atoms on SiC(111) surfaces. <i>Surface Science</i> , 2000 , 454-456, 127-130	1.8	1
18	Circuit-based Electrothermal Modeling of SiC Power Modules with Nonlinear Thermal Models. <i>IEEE Transactions on Power Electronics</i> , 2022 , 1-1	7.2	1
17	On the rectangular mesh and the decomposition of a Green's-function-based quadruple integral into elementary integrals. <i>Engineering Analysis With Boundary Elements</i> , 2022 , 134, 419-434	2.6	1
16	Intrinsic and Extrinsic Electrically Active Point Defects in SiC 2021 , 137-168		1
15	Tools for Broadband Electromagnetic Modeling of Power Semiconductor Packages and External Circuit Layouts 2020 ,		1
14	Broadband Circuit-Oriented Electromagnetic Modeling for Power Electronics: 3-D PEEC Solver vs. RLCG-Solver. <i>Energies</i> , 2021 , 14, 2835	3.1	1
13	Design for Reliability of SiC Multichip Power Modules: The Effect of Variability 2021 ,		1
12	Spatially Resolved Diffusion of Aluminum in 4H-SiC During Postimplantation Annealing. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 4360-4365	2.9	0
11	Phosphorus implantation into 4H-SiC at room and elevated temperature. <i>Semiconductor Science and Technology</i> , 2021 , 36, 065002	1.8	0
10	Gate Characterization of Silicon Carbide and Silicon Power MOSFETs revisited. <i>IEEE Transactions on Power Electronics</i> , 2022 , 1-1	7.2	0
9	Al ⁺ Ion Implanted On-Axis <0001> Semi-Insulating 4H-SiC. <i>Materials Science Forum</i> , 2015 , 821-823, 399-402	0.4	
8	Evaluation of 4H-SiC Carbon Face Gate Oxide Reliability. <i>Materials Science Forum</i> , 2011 , 679-680, 354-357.	0.4	
7	Influence Of Growth Conditions on Irradiation Induced Defects in 4H-SiC. <i>Materials Science Forum</i> , 2007 , 556-557, 461-464	0.4	
6	Group-III Adsorption and Bond Stacking on SiC(111) Surfaces. <i>Materials Science Forum</i> , 2000 , 338-342, 427-430	0.4	
5	Modelling Challenges towards Virtual Prototyping of SiC based Power Modules. <i>Journal of Japan Institute of Electronics Packaging</i> , 2017 , 20, 432-436	0.1	

- 4 Temperature Dependence of On-State Inter-Terminal Capacitances (C_{gs} and C_{gd}) of SiC MOSFETs and Frequency Limitations of their Measurements. *Materials Science Forum*,1062, 647-652 0.4
- 3 Stability, Evolution and Diffusion of Intrinsic Point Defects in 4H-SiC. *Materials Science Forum*,1062, 371-375 0.4
- 2 Phosphorous and Aluminum Implantation for MOSFET Manufacturing: Revisiting Implantation Dose Rate and Subsequent Surface Morphology. *Materials Science Forum*,1062, 263-267 0.4
- 1 Depth-Resolved Study of the SiO₂- SiC Interface Using Low-Energy Muon Spin Rotation Spectroscopy. *Materials Science Forum*,1062, 315-319 0.4