Katharina Lorenz

List of Publications by Year
in descending order

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245	4,119	126858	182361
papers	citations	33	51
		h-index	g-index

248	248	248	2914
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Anomalous Ion Channeling inAlInN/GaNBilayers: Determination of the Strain State. Physical Review Letters, 2006, 97, 085501.	2.9	125
2	Metal-organic vapor phase epitaxy and properties of AlInN in the whole compositional range. Applied Physics Letters, 2007, 90, 022105.	1.5	119
3	Damage formation and annealing at low temperatures in ion implanted ZnO. Applied Physics Letters, 2005, 87, 191904.	1.5	100
4	Comparative study of GaN and AlN nucleation layers and their role in growth of GaN on sapphire by metalorganic chemical vapor deposition. Applied Physics Letters, 2000, 77, 3391-3393.	1.5	95
5	Photoluminescence and lattice location of Eu and Pr implanted GaN samples. Physica B: Condensed Matter, 2001, 308-310, 22-25.	1.3	91
6	Identification of the prime optical center in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>GaN</mml:mtext><mml:mo>:</mml:mo><mml:msup><mml:mrow><mml:mtext>Eu</mml:m Physical Review B, 2010, 81, .	1.1	90
7	Origins of threading dislocations in GaN epitaxial layers grown on sapphire by metalorganic chemical vapor deposition. Applied Physics Letters, 2001, 78, 1544-1546.	1.5	87
8	Selectively excited photoluminescence from Eu-implanted GaN. Applied Physics Letters, 2005, 87, 112107.	1.5	85
9	Implantation damage formation in a-, c- and m-plane GaN. Acta Materialia, 2017, 123, 177-187.	3.8	73
10	High-temperature annealing and optical activation of Eu-implanted GaN. Applied Physics Letters, 2004, 85, 2712-2714.	1.5	67
11	Radiation damage in ZnO ion implanted at 15K. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 2708-2711.	0.6	64
12	High optical and structural quality of GaN epilayers grown on (2Â¯01) Î²-Ga2O3. Applied Physics Letters, 2014, 105, .	1.5	60
13	Transmission electron microscopy investigation of the structural damage formed in GaN by medium range energy rare earth ion implantation. Journal of Applied Physics, 2006, 100, 073520.	1.1	58
14	Optical energies of AlInN epilayers. Journal of Applied Physics, 2008, 103, .	1.1	58
15	Suitability of 3D printed pieces of nanocrystalline zirconia for dental applications. Dental Materials, 2020, 36, 442-455.	1.6	57
16	It's not easy being green: Strategies for allâ€nitrides, allâ€colour solid state lighting. Physica Status Solidi - Rapid Research Letters, 2012, 6, 49-52.	1.2	56
17	Radiation damage formation and annealing in GaN and ZnO. Proceedings of SPIE, 2011, , .	0.8	54
18	Identifying the influence of the intrinsic defects in Gd-doped ZnO thin-films. Journal of Applied Physics, 2016, 119, .	1.1	52

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19	Relaxation of compressively strained AlInN on GaN. Journal of Crystal Growth, 2008, 310, 4058-4064.	0.7	50
20	Structural and optical characterization of Eu-implanted GaN. Journal Physics D: Applied Physics, 2009, 42, 165103.	1.3	48
21	High temperature annealing of rare earth implanted GaN films: Structural and optical properties. Optical Materials, 2006, 28, 750-758.	1.7	47
22	A mechanism for damage formation in GaN during rare earth ion implantation at medium range energy and room temperature. Journal of Applied Physics, 2011, 109, .	1.1	47
23	Lattice location and optical activation of rare earth implanted GaN. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 105, 132-140.	1.7	44
24	GaN/AlGaN multiple quantum wells grown on transparent and conductive (-201)-oriented Î²-Ga2O3 substrate for UV vertical light emitting devices. Applied Physics Letters, 2018, 113, .	1.5	44
25	Gallium nitride epitaxy on (0001) sapphire. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 885-912.	0.7	42
26	Cathodoluminescence of rare earth implanted Ga2O3and GeO2nanostructures. Nanotechnology, 2011, 22, 285706.	1.3	39
27	Mechanisms of damage formation in Eu-implanted GaN probed by X-ray diffraction. Europhysics Letters, 2011, 96, 46002.	0.7	39
28	Optically active centers in Eu implanted, Euin situdoped GaN, and Eu doped GaN quantum dots. Journal of Applied Physics, 2009, 105, 043104.	1.1	38
29	Optical doping and damage formation in AlN by Eu implantation. Journal of Applied Physics, 2010, 107, 023525.	1.1	38
30	Structural and luminescence properties of Eu and Er implanted Bi2O3 nanowires for optoelectronic applications. Journal of Materials Chemistry C, 2013, 1, 7920.	2.7	38
31	Hydrogen in InN: A ubiquitous phenomenon in molecular beam epitaxy grown material. Applied Physics Letters, 2010, 96, .	1.5	36
32	High In-content InGaN layers synthesized by plasma-assisted molecular-beam epitaxy: Growth conditions, strain relaxation, and In incorporation kinetics. Journal of Applied Physics, 2014, 116, .	1.1	36
33	Comparison of low- and room-temperature damage formation in Ar ion implanted GaN and ZnO. Nuclear Instruments & Methods in Physics Research B, 2013, 307, 394-398.	0.6	34
34	OPTICAL DOPING OF NITRIDES BY ION IMPLANTATION. Modern Physics Letters B, 2001, 15, 1281-1287.	1.0	33
35	Depth-resolved analysis of spontaneous phase separation in the growth of lattice-matched AlInN. Journal Physics D: Applied Physics, 2010, 43, 055406.	1.3	33
36	Rapid thermal annealing of rare earth implanted ZnO epitaxial layers. Optical Materials, 2011, 33, 1139-1142.	1.7	33

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37	Mechanisms of Implantation Damage Formation in Al_xGa_{1â€“x}N Compounds. Journal of Physical Chemistry C, 2016, 120, 7277-7283.	1.5	33
38	Luminescence of Eu ions in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Al</mml:mtext></mml:mrow><mml:mi>x</mml:mi></mml:msub> the entire alloy composition range. Physical Review B, 2009, 80, .	1.1	31
39	Effect of annealing temperature on luminescence in Eu implanted GaN. Optical Materials, 2006, 28, 780-784.	1.7	29
40	Visible and infrared luminescence study of Er doped Î²-Ga₂O₃and Er₃Ga₅O₁₂. Journal Physics D: Applied Physics, 2008, 41, 065406.	1.3	29
41	Lattice site location of optical centers in GaN:Eu light emitting diode material grown by organometallic vapor phase epitaxy. Applied Physics Letters, 2010, 97, 111911.	1.5	29
42	Single phase a-plane MgZnO epilayers for UV optoelectronics: substitutional behaviour of Mg at large contents. CrystEngComm, 2012, 14, 1637-1640.	1.3	29
43	Study of the relationship between crystal structure and luminescence in rare-earth-implanted Ga2O3 nanowires during annealing treatments. Journal of Materials Science, 2014, 49, 1279-1285.	1.7	29
44	Utilization of native oxygen in Eu(RE)-doped GaN for enabling device compatibility in optoelectronic applications. Scientific Reports, 2016, 6, 18808.	1.6	29
45	Intense luminescence emission from rare-earth-doped MoO3nanoplates and lamellar crystals for optoelectronic applications. Journal Physics D: Applied Physics, 2014, 47, 355105.	1.3	28
46	Crystalfield symmetries of luminescent Eu3+ centers in GaN: The importance of the 5D to 7F1 transition. Applied Physics Letters, 2016, 108, .	1.5	28
47	Amorphisation of GaN during processing with rare earth ion beams. Superlattices and Microstructures, 2004, 36, 737-745.	1.4	27
48	Defect production in neutron irradiated GaN. Nuclear Instruments & Methods in Physics Research B, 2006, 249, 358-361.	0.6	27
49	Indium kinetics during the plasma-assisted molecular beam epitaxy of semipolar (11â^’22) InGaN layers. Applied Physics Letters, 2010, 96, 181907.	1.5	27
50	The photoluminescence/excitation (PL/E) spectroscopy of Eu-implanted GaN. Optical Materials, 2011, 33, 1063-1065.	1.7	27
51	Mechanisms of damage formation in Eu-implanted AlN. Journal of Applied Physics, 2012, 112, .	1.1	27
52	Doping Î²-Ga₂O₃ with europium: influence of the implantation and annealing temperature. Journal Physics D: Applied Physics, 2017, 50, 325101.	1.3	26
53	Unravelling the secrets of the resistance of GaN to strongly ionising radiation. Communications Physics, 2021, 4, .	2.0	26
54	Direct Measurement of Polarization-Induced Fields in GaN/AlN by Nano-Beam Electron Diffraction. Scientific Reports, 2016, 6, 28459.	1.6	25

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55	Optical doping of AlN by rare earth implantation. Nuclear Instruments & Methods in Physics Research B, 2006, 242, 307-310.	0.6	23
56	High pressure annealing of Europium implanted GaN. Proceedings of SPIE, 2012, , .	0.8	23
57	RBS/Channeling study of Er doped GaN films grown by MBE on Si substrates. Nuclear Instruments & Methods in Physics Research B, 2000, 161-163, 946-951.	0.6	22
58	Enhanced red emission from praseodymium-doped GaN nanowires by defect engineering. Acta Materialia, 2013, 61, 3278-3284.	3.8	22
59	Reversible changes in the lattice site structure for In implanted into GaN. Applied Physics Letters, 2002, 80, 4531-4533.	1.5	21
60	Determination of Ga auto-incorporation in nominal InAlN epilayers grown by MOCVD. Journal of Materials Chemistry C, 2014, 2, 5787.	2.7	21
61	Monte Carlo simulations of ion channeling in crystals containing dislocations and randomly displaced atoms. Journal of Applied Physics, 2019, 126, .	1.1	21
62	Defect studies on fast and thermal neutron irradiated GaN. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 2780-2783.	0.6	20
63	Structural and optical properties of Ga auto-incorporated InAlN epilayers. Journal of Crystal Growth, 2014, 408, 97-101.	0.7	19
64	Luminescence studies on green emitting InGaN/GaN MQWs implanted with nitrogen. Scientific Reports, 2015, 5, 9703.	1.6	19
65	Photoluminescence studies of a perceived white light emission from a monolithic InGaN/GaN quantum well structure. Scientific Reports, 2015, 5, 13739.	1.6	19
66	Quantitative x-ray diffraction analysis of bimodal damage distributions in Tm implanted Al_{0.15}Ga_{0.85}N. Journal Physics D: Applied Physics, 2016, 49, 135308.	1.3	19
67	Engineering strain and conductivity of MoO3 by ion implantation. Acta Materialia, 2019, 169, 15-27.	3.8	19
68	Failure mechanism of AlN nanocaps used to protect rare earth-implanted GaN during high temperature annealing. Applied Physics Letters, 2006, 88, 031902.	1.5	18
69	Thin film depth profiling using simultaneous particle backscattering and nuclear resonance profiling. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 1829-1832.	0.6	18
70	Band gap engineering approaches to increase InGaN/GaN LED efficiency. Optical and Quantum Electronics, 2012, 44, 83-88.	1.5	17
71	Europiumâ€doped GaN(Mg): beyond the limits of the lightâ€emitting diode. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 662-665.	0.8	17
72	Study of damage formation and annealing of implanted III-nitride semiconductors for optoelectronic devices. Nuclear Instruments & Methods in Physics Research B, 2016, 379, 251-254.	0.6	17

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73	RBS/C, XRR, and XRD Studies of Damage Buildup in Erâ€Implanted ZnO. Physica Status Solidi (B): Basic Research, 2019, 256, 1800364.	0.7	17
74	TEM investigation of Tm implanted GaN, the influence of high temperature annealing. Optical Materials, 2006, 28, 738-741.	1.7	16
75	Functionalizing self-assembled GaN quantum dot superlattices by Eu-implantation. Journal of Applied Physics, 2010, 108, 084306.	1.1	16
76	Rare earth co-doping nitride layers for visible light. Materials Chemistry and Physics, 2012, 134, 716-720.	2.0	16
77	Cathodoluminescence of rare earth implanted AlInN. Applied Physics Letters, 2006, 89, 131912.	1.5	15
78	Investigation of different mechanisms of GaN growth induced on AlN and GaN nucleation layers. Journal of Applied Physics, 2009, 105, .	1.1	15
79	Role of impurities and dislocations for the unintentional n-type conductivity in InN. Physica B: Condensed Matter, 2009, 404, 4476-4481.	1.3	15
80	Influence of the AlN molar fraction on the structural and optical properties of praseodymium-doped AlxGa1â^'xN (0â©½xâ©½1) alloys. Microelectronics Journal, 2009, 40, 377-380.	1.1	15
81	Enhanced dynamic annealing and optical activation of Eu implanted a-plane GaN. Europhysics Letters, 2012, 97, 68004.	0.7	15
82	Raman and cathodoluminescence analysis of transition metal ion implanted Ga2O3 nanowires. Journal of Luminescence, 2017, 191, 56-60.	1.5	15
83	Measuring strain caused by ion implantation in GaN. Materials Science in Semiconductor Processing, 2019, 98, 95-99.	1.9	15
84	Eu Activation inÎ²-Ga2O3MOVPE Thin Films by Ion Implantation. ECS Journal of Solid State Science and Technology, 2019, 8, Q3097-Q3102.	0.9	15
85	An insider view of the Portuguese ion beam laboratory. European Physical Journal Plus, 2021, 136, 1.	1.2	15
86	Optical and structural studies in Eu-implanted AlN films. Superlattices and Microstructures, 2006, 40, 537-544.	1.4	14
87	Selective ion-induced intermixing and damage in low-dimensional GaN/AlN quantum structures. Nanotechnology, 2013, 24, 505717.	1.3	14
88	Mechanisms of Damage Formation during Rare Earth Ion Implantation in Nitride Semiconductors. Japanese Journal of Applied Physics, 2013, 52, 11NH02.	0.8	14
89	Infrared dielectric functions, phonon modes, and free-charge carrier properties of high-Al-content AlxGa1â^'xN alloys determined by mid infrared spectroscopic ellipsometry and optical Hall effect. Journal of Applied Physics, 2017, 121, .	1.1	14
90	Eu-Doped AlGaN/GaN Superlattice-Based Diode Structure for Red Lighting: Excitation Mechanisms and Active Sites. ACS Applied Nano Materials, 2018, 1, 3845-3858.	2.4	14

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91	Implantation and annealing studies of Tm-implanted GaN. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 105, 97-100.	1.7	13
92	The high sensitivity of InN under rare earth ion implantation at medium range energy. Journal Physics D: Applied Physics, 2011, 44, 295402.	1.3	13
93	Composition and luminescence studies of InGaN epilayers grown at different hydrogen flow rates. Semiconductor Science and Technology, 2013, 28, 065011.	1.0	13
94	Disorder induced violet/blue luminescence in rfâ€deposited ZnO films. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 662-666.	0.8	13
95	Ion damage overrides structural disorder in silicon surface nanopatterning by low-energy ion beam sputtering. Europhysics Letters, 2015, 109, 48003.	0.7	13
96	Spectroscopic Analysis of Eu³⁺ Implanted and Annealed GaN Layers and Nanowires. Journal of Physical Chemistry C, 2015, 119, 17954-17964.	1.5	13
97	Microprobe analysis, iono- and photo-luminescence of Mn2+ activated ZnGa2O4 fibres. Nuclear Instruments & Methods in Physics Research B, 2013, 306, 195-200.	0.6	12
98	Doping of Ga₂O₃bulk crystals and NWs by ion implantation. Proceedings of SPIE, 2014, , .	0.8	12
99	Self-organised silicide nanodot patterning by medium-energy ion beam sputtering of Si(100): local correlation between the morphology and metal content. Nanotechnology, 2016, 27, 444001.	1.3	12
100	Luminescence of Eu3+ in GaN(Mg, Eu): Transitions from the 5D1 level. Applied Physics Letters, 2017, 111, .	1.5	12
101	Incorporation of Europium into GaN Nanowires by Ion Implantation. Journal of Physical Chemistry C, 2019, 123, 11874-11887.	1.5	12
102	Tribological performance of the pair human teeth vs 3D printed zirconia: An in vitro chewing simulation study. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 110, 103900.	1.5	12
103	Molybdenum Oxide Thin Films Grown on Flexible ITO-Coated PET Substrates. Materials, 2021, 14, 821.	1.3	12
104	Effect of AlN content on the lattice site location of terbium ions in Al_xGa_{1â^'x}N compounds. Semiconductor Science and Technology, 2016, 31, 035026.	1.0	12
105	Structural and optical properties of Er implanted AlN thin films: Green and infrared photoluminescence at room temperature. Optical Materials, 2011, 33, 1055-1058.	1.7	11
106	Hysteretic photochromic switching of Eu-Mg defects in GaN links the shallow transient and deep ground states of the Mg acceptor. Scientific Reports, 2017, 7, 41982.	1.6	11
107	Europium-Implanted AlN Nanowires for Red Light-Emitting Diodes. ACS Applied Nano Materials, 2022, 5, 972-984.	2.4	11
108	Annealing Behaviour of GaN after Implantation with Hafnium and Indium. Physica Status Solidi (B): Basic Research, 2001, 228, 331-335.	0.7	10

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109	Blue cathodoluminescence from thulium implanted AlxGa1â^'xN and InxAl1â^'xN. Superlattices and Microstructures, 2006, 40, 445-451.	1.4	10
110	Structural and optical characterisation of Eu implanted AlxGa1â^'xN. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 307-310.	0.6	10
111	Al1â^'xInxN/GaN bilayers: Structure, morphology, and optical properties. Physica Status Solidi (B): Basic Research, 2010, 247, 1740-1746.	0.7	10
112	Doped gallium oxide nanowires for photonics. Proceedings of SPIE, 2012, , .	0.8	10
113	Impact of implantation geometry and fluence on structural properties of AlxGa1-xN implanted with thulium. Journal of Applied Physics, 2016, 120, .	1.1	10
114	Validity of Vegardâ€™s rule for Al1â^'xInxN (0.08â€‰â€‰<â€‰â€‰xâ€‰â€‰<â€‰â€‰0.28) thin films grown on GaN templates. Physics D: Applied Physics, 2017, 50, 205107.	1.3	10
115	Extended X-ray absorption fine structure studies of thulium doped GaN epilayers. Superlattices and Microstructures, 2004, 36, 729-736.	1.4	9
116	A comparative structural investigation of GaN implanted with rare earth ions at room temperature and 500Â°C. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2008, 146, 204-207.	1.7	9
117	Free electron properties and hydrogen in InN grown by MOVPE. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1179-1182.	0.8	9
118	Ternary AlGaN Alloys with High Al Content and Enhanced Compositional Homogeneity Grown by Plasma-Assisted Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2011, 50, 031001.	0.8	9
119	Ion implantation of Cd and Ag into AlN and GaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1060-1064.	0.8	9
120	Sequential multiple-step europium ion implantation and annealing of GaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 253-257.	0.8	9
121	Rare earth ion implantation and optical activation in nitride semiconductors for multicolor emission. Semiconductor Science and Technology, 2015, 30, 044004.	1.0	9
122	Spectroscopic analysis of the NIR emission in Tm implanted AlxGa1-xN layers. Journal of Applied Physics, 2016, 120, 081701.	1.1	9
123	Defect formation and optical activation of Tb implanted AlxGa1â^'xN films using channeled implantation at different temperatures. Surface and Coatings Technology, 2018, 355, 29-39.	2.2	9
124	Optical investigations of europium ion implanted in nitride-based diode structures. Surface and Coatings Technology, 2018, 355, 40-44.	2.2	9
125	Crystal damage analysis of implanted AlxGa1-xN (0â€¯â€‰â€¯xâ€¯â€‰â€¯1) by ion beam techniques. Surface and Coatings Technology, 2018, 355, 55-60.	2.2	9
126	Defect Trapping and Annealing for Transition Metal Implants in Group III Nitrides. MRS Internet Journal of Nitride Semiconductor Research, 2000, 5, 1.	1.0	9

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127	Depth profiling of ion-implanted AlInN using time-of-flight secondary ion mass spectrometry and cathodoluminescence. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1927-1930.	0.8	8
128	Behaviour of the AlN cap during GaN implantation of rare earths and annealing. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2172-2175.	0.8	8
129	Optical properties of high-temperature annealed Eu-implanted GaN. Optical Materials, 2006, 28, 797-801.	1.7	8
130	Mechanisms of AlInN growth by MOVPE: modeling and experimental study. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1688-1690.	0.8	8
131	Rare earth doping of IIIâ€nitride alloys by ion implantation. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 34-37.	0.8	8
132	Europium doping of zincblende GaN by ion implantation. Journal of Applied Physics, 2009, 105, 113507.	1.1	8
133	An In-defect complex as a possible explanation for high luminous efficacy of InGaN and AlInN based devices. Hyperfine Interactions, 2010, 197, 187-191.	0.2	8
134	Implanted Impurities in Wide Band Gap Semiconductors. Defect and Diffusion Forum, 0, 311, 167-179.	0.4	8
135	High precision determination of the InN content of Al1â^'xInxN thin films by Rutherford backscattering spectrometry. Nuclear Instruments & Methods in Physics Research B, 2012, 273, 105-108.	0.6	8
136	A comparative study of photo-, cathodo- and ionoluminescence of GaN nanowires implanted with rare earth ions. Nuclear Instruments & Methods in Physics Research B, 2013, 306, 201-206.	0.6	8
137	Towards the understanding of the intentionally induced yellow luminescence in GaN nanowires. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 667-672.	0.8	8
138	Effect of buried extended defects on the radiation tolerance of ZnO. Applied Physics Letters, 2017, 110, 172103.	1.5	8
139	Radiation sensors based on GaN microwires. Journal Physics D: Applied Physics, 2018, 51, 175105.	1.3	8
140	Multiple optical centers in Eu-implanted AlN nanowires for solid-state lighting applications. Applied Physics Letters, 2018, 113, 201905.	1.5	8
141	Crystal mosaicity determined by a novel layer deconvolution Williamsonâ€“Hall method. CrystEngComm, 2021, 23, 2048-2062.	1.3	8
142	Surface nanopatterning by ion beam irradiation: compositional effects. Journal of Physics Condensed Matter, 2022, 34, 333002.	0.7	8
143	Enhancing the luminescence yield of Cr3+ in Î² -Ga2O3 by proton irradiation. Applied Physics Letters, 2022, 120, .	1.5	8
144	The Characterization of N Interstitials and Dangling Bond Point Defects on Ionâ€Implanted GaN Nanowires Studied by Photoluminescence and Xâ€Ray Absorption Spectroscopy. Journal of the American Ceramic Society, 2010, 93, 3531-3534.	1.9	7

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145	Composition, structure and morphology of Al_{1â^'x}In_xN thin films grown on Al_{1â^'y}Ga_yN templates with different GaN contents. Journal Physics D: Applied Physics, 2015, 48, 015103.	1.3	7
146	Analysis of the Tb3+ recombination in ion implanted Al Ga1â^'N (0â‰¤xâ‰¤1) layers. Journal of Luminescence, 2016, 178, 249-258.	1.5	7
147	In Situ Characterization and Modification of Î²â€Ga₂O₃ Flakes Using an Ion Microâ€Probe. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800190.	0.8	7
148	Concurrent segregation and erosion effects in medium-energy iron beam patterning of silicon surfaces. Journal of Physics Condensed Matter, 2018, 30, 274001.	0.7	7
149	RE Implantation and Annealing of III-Nitrides. Topics in Applied Physics, 2010, , 25-54.	0.4	7
150	Gallium nitride epitaxy on (0001) sapphire. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 885-912.	0.7	7
151	Defect Recovery in AlN and InN after Heavy Ion Implantation. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 413-416.	0.8	6
152	High Temperature Implantation of Tm in GaN. Materials Research Society Symposia Proceedings, 2003, 798, 548.	0.1	6
153	Characterisation of defects in rare earth implanted GaN by deep level transient spectroscopy. Superlattices and Microstructures, 2004, 36, 713-719.	1.4	6
154	Lattice order in thulium-doped GaN epilayers: In situ doping versus ion implantation. Optical Materials, 2006, 28, 771-774.	1.7	6
155	Two colour experiments in Eu3+ implanted GaN. Journal of Alloys and Compounds, 2008, 451, 140-142.	2.8	6
156	Influence of steering effects on strain detection in AlGaInN/GaN heterostructures by ion channelling. Journal Physics D: Applied Physics, 2009, 42, 065420.	1.3	6
157	Effect of annealing on AlN/GaN quantum dot heterostructures: advanced ion beam characterization and Xâ€ray study of lowâ€dimensional structures. Surface and Interface Analysis, 2010, 42, 1552-1555.	0.8	6
158	Effect of Eu-implantation and annealing on the GaN quantum dots excitonic recombination. Nanoscale Research Letters, 2011, 6, 378.	3.1	6
159	Zeeman splittings of the ⁵D₀â€“⁷F₂ transitions of Eu³⁺ ions implanted into GaN. Materials Research Society Symposia Proceedings, 2011, 1290, 1.	0.1	6
160	Cd ion implantation in AlN. Nuclear Instruments & Methods in Physics Research B, 2012, 289, 43-46.	0.6	6
161	Lattice site location and luminescence studies of AlxGa1â^'xN alloys doped with thulium ions. Nuclear Instruments & Methods in Physics Research B, 2013, 307, 495-498.	0.6	6
162	Analysis of the stability of InGaN/GaN multiquantum wells against ion beam intermixing. Nanotechnology, 2015, 26, 425703.	1.3	6

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163	Effects of thermal annealing on the structural and electronic properties of rare earth-implanted MoO₃ nanoplates. CrystEngComm, 2017, 19, 2339-2348.	1.3	6
164	Role of the metal supply pathway on silicon patterning by oblique ion beam sputtering. Applied Surface Science, 2022, 580, 152267.	3.1	6
165	Processing of rare earth doped GaN with ion beams. Materials Research Society Symposia Proceedings, 2003, 798, 569.	0.1	5
166	Anomalous Temperature Dependence of the EFG in AlN Measured with the PAC-Probes 181Hf and 111In. Hyperfine Interactions, 2004, 158, 273-279.	0.2	5
167	The atomic structure of defects formed during doping of GaN with rare earth ions. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1081-1084.	0.8	5
168	Temperature dependence of the electric field gradient in GaN measured with the PAC-probe 181Hf. Hyperfine Interactions, 2007, 177, 89-95.	0.2	5
169	Breakdown of anomalous channeling with ion energy for accurate strain determination in GaN-based heterostructures. Applied Physics Letters, 2009, 95, 051921.	1.5	5
170	Influence of thermal annealing on the structural and optical properties of GaN/AlN quantum dots. Physica Status Solidi (B): Basic Research, 2010, 247, 1675-1678.	0.7	5
171	Optical doping of Al[sub x]Ga[sub 1â^'x]N compounds by ion implantation of Tm ions. AIP Conference Proceedings, 2012, , .	0.3	5
172	Characterisation of IIIâ€nitride materials by synchrotron Xâ€ray microdiffraction reciprocal space mapping. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 481-485.	0.8	5
173	Temperature-dependent hysteresis of the emission spectrum of Eu-implanted, Mg-doped HVPE GaN. AIP Conference Proceedings, 2013, , .	0.3	5
174	GaN:Pr³⁺ nanostructures for red solid state light emission. RSC Advances, 2014, 4, 62869-62877.	1.7	5
175	Correction to â€œSpectroscopic Analysis of Eu³⁺ Implanted and Annealed GaN Layers and Nanowiresâ€• Journal of Physical Chemistry C, 2016, 120, 6907-6908.	1.5	5
176	Electrical characterization of molybdenum oxide lamellar crystals irradiated with UV light and proton beams. Surface and Coatings Technology, 2018, 355, 50-54.	2.2	5
177	Euâ€“Mg defects and donorâ€“acceptor pairs in GaN: photodissociation and the excitation transfer problem. Journal Physics D: Applied Physics, 2018, 51, 065106.	1.3	5
178	Hysteretic Photochromic Switching (HPS) in Doubly Doped GaN(Mg):Euâ€”A Summary of Recent Results. Materials, 2018, 11, 1800.	1.3	5
179	XANES/EXAFS study of the Lu and Y incorporation in the single crystal Tb3Sc2Al3O12 Faraday rotator. Journal of Applied Physics, 2020, 127, 115106.	1.1	5
180	Exploring swift-heavy ion irradiation of InGaN/GaN multiple quantum wells for green-emitters: the use of Raman and photoluminescence to assess the irradiation effects on the optical and structural properties. Journal of Materials Chemistry C, 2021, 9, 8809-8818.	2.7	5

#	Article	IF	Citations
181	The structure of crystallographic damage in GaN formed during rare earth ion implantation with and without an ultrathin AlN capping layer. Superlattices and Microstructures, 2006, 40, 300-305.	1.4	4
182	Temperature dependent site change of In in AlN and GaN. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 93-95.	0.8	4
183	Stable In-defect complexes in GaN and AlN. Physica B: Condensed Matter, 2009, 404, 4866-4869.	1.3	4
184	High temperature annealing of Europium implanted AlN. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 2907-2910.	0.6	4
185	Damage formation and recovery in Fe implanted 6Hâ€“SiC. Nuclear Instruments & Methods in Physics Research B, 2012, 286, 89-92.	0.6	4
186	Unintentional incorporation of H and related structural and freeâ€electron properties of câ€•and aâ€plane InN. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 91-94.	0.8	4
187	Influence of neutron irradiation and annealing on the optical properties of GaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1016-1020.	0.8	4
188	Cd doping of AlN via ion implantation studied with perturbed angular correlation. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1032-1035.	0.8	4
189	AlN content influence on the properties of AlxGa1â^'xN doped with Pr ions. Nuclear Instruments & Methods in Physics Research B, 2012, 273, 149-152.	0.6	4
190	Nanostructures and thin films of transparent conductive oxides studied by perturbed angular correlations. Physica Status Solidi (B): Basic Research, 2013, 250, 801-808.	0.7	4
191	Lattice location of Hf and its interaction with other impurities in LiNbO3: a review. Optical Engineering, 2014, 53, 060901.	0.5	4
192	Spatially resolved optical activation of Eu ions by laser irradiation in implanted hexagonal MoO3 microrods. Applied Physics Letters, 2018, 113, 031902.	1.5	4
193	Studying electronic properties in GaN without electrical contacts using Î³-Î³ vs eâ^'-Î³ Perturbed Angular Correlations. Scientific Reports, 2019, 9, 15734.	1.6	4
194	Modelling of Optical Damage in Nanorippled ZnO Produced by Ion Irradiation. Crystals, 2019, 9, 453.	1.0	4
195	Size control of GaN nanocrystals formed by ion implantation in thermally grown silicon dioxide. Journal of Applied Physics, 2020, 127, 034302.	1.1	4
196	Eu3+ optical activation engineering in Al Ga1-N nanowires for red solid-state nano-emitters. Applied Materials Today, 2021, 22, 100893.	2.3	4
197	Characterization of the blue emission of Tm/Er co-implanted GaN. Materials Research Society Symposia Proceedings, 2005, 892, 544.	0.1	3
198	Spectroscopic investigation of implanted epilayers of Tm3+:GaN. Journal of Luminescence, 2007, 122-123, 131-133.	1.5	3

#	Article	IF	Citations
199	A comparative investigation of the damage buildâ€up in GaN and Si during rare earth ion implantation. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 68-70.	0.8	3
200	Luminescence spectroscopy of Euâ€implanted zincblende GaN. Physica Status Solidi (B): Basic Research, 2008, 245, 170-173.	0.7	3
201	Optical and structural properties of Eu-implanted InxAl1â^'xN. Journal of Applied Physics, 2009, 106, .	1.1	3
202	Optical and Structural Properties of an Eu Implanted Gallium Nitride Quantum Dots/Aluminium Nitride Superlattice. Journal of Nanoscience and Nanotechnology, 2010, 10, 2473-2478.	0.9	3
203	The role of the annealing temperature on the optical and structural properties of Eu doped GaN/AlN QD. Optical Materials, 2011, 33, 1045-1049.	1.7	3
204	Unintentional incorporation of hydrogen in wurtzite InN with different surface orientations. Journal of Applied Physics, 2011, 110, .	1.1	3
205	Quantitative Chemical Mapping of InGaN Quantum Wells from Calibrated High-Angle Annular Dark Field Micrographs. Microscopy and Microanalysis, 2015, 21, 994-1005.	0.2	3
206	Ionâ€beam induced effects in multiâ€layered semiconductor systems. Physica Status Solidi (B): Basic Research, 2016, 253, 2099-2109.	0.7	3
207	Strain detection in crystalline heterostructures using bidimensional blocking patterns of channelled particles. Journal Physics D: Applied Physics, 2018, 51, 115304.	1.3	3
208	Micro-Opto-Electro-Mechanical Device Based on Flexible Î²-Ga₂O₃ÂMicro-Lamellas. ECS Journal of Solid State Science and Technology, 2019, 8, Q3235-Q3241.	0.9	3
209	Self-powered proton detectors based on GaN coreâ€“shell pâ€“n microwires. Applied Physics Letters, 2021, 118, .	1.5	3
210	Advanced Monte Carlo Simulations for Ion-Channeling Studies of Complex Defects in Crystals. Springer Series in Materials Science, 2020, , 133-160.	0.4	3
211	Rare Earth Ion Implantation in GaN: Damage Formation and Recovery. Acta Physica Polonica A, 2006, 110, 125-137.	0.2	3
212	Extended x-ray absorption fine structure and photoluminescence study of Er-implanted GaN films. Semiconductor Science and Technology, 2001, 16, L77-L80.	1.0	2
213	Influence of the Annealing Ambient on Structural and Optical Properties of Rare Earth Implanted GaN. Materials Research Society Symposia Proceedings, 2005, 892, 556.	0.1	2
214	Implantation of nanoporous GaN with Eu ions. Nuclear Instruments & Methods in Physics Research B, 2007, 257, 328-331.	0.6	2
215	Defect studies and optical activation of Yb doped GaN. Journal of Physics: Conference Series, 2010, 249, 012053.	0.3	2
216	Implantation Damage Formation in GaN and ZnO. , 2012, , .		2

#	Article	IF	Citations
217	The influence of photon excitation and proton irradiation on the luminescence properties of yttria stabilized zirconia doped with praseodymium ions. Nuclear Instruments & Methods in Physics Research B, 2013, 306, 207-211.	0.6	2
218	Indirect excitation of Eu³⁺in GaN codoped with Mg and Eu. Journal of Physics: Conference Series, 2015, 619, 012025.	0.3	2
219	Acceptor state anchoring in gallium nitride. Applied Physics Letters, 2020, 116, .	1.5	2
220	Electron micro-probe analysis and cathodoluminescence spectroscopy of rare earth - implanted GaN. Materials Research Society Symposia Proceedings, 2003, 798, 466.	0.1	1
221	Structure and role of ultrathin AlN layers for improving optical activation of rare earth implanted GaN. Physica Status Solidi (B): Basic Research, 2006, 243, 1541-1544.	0.7	1
222	UV-Raman scattering study of lattice recovery by thermal annealing of Eu+ -implanted GaN layers. Superlattices and Microstructures, 2006, 40, 440-444.	1.4	1
223	Lattice location and annealing studies of Hf implanted CaF2. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 1472-1475.	0.6	1
224	Alloy and lattice disorder in Hf implanted <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0020.gif" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Al</mml:mi></mml:mrow><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub><mml:msub><mml:mrow><mml:mi mathvariant="normal">N</mml:mi><mml:mspace width="0.33em" /><mml:mo		

#	Article	IF	Citations
235	Ion Implantation into Nonconventional GaN Structures. Physics, 2022, 4, 548-564.	0.5	1
236	A microspectroscopic study of cap damage in annealed RE-doped AlN-capped GaN. Materials Research Society Symposia Proceedings, 2005, 892, 568.	0.1	0
237	Total reflectance and Raman studies in Al_yIn_xGa_{1â€xâ€y}N epitaxial layers. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 56-59.	0.8	0
238	Band gap engineering approaches to increase InGaN/GaN LED efficiency. , 2011, , .		0
239	Damage formation in GaN under medium energy range implantation of rare earth ions: a combined TEM, XRD and RBS/C investigation. Materials Research Society Symposia Proceedings, 2011, 1342, 35.	0.1	0
240	Characterization of InGaN and InAlN Epilayers by Microdiffraction X-Ray Reciprocal Space Mapping. Materials Research Society Symposia Proceedings, 2012, 1396, .	0.1	0
241	On the origin of strain relaxation in epitaxial CdZnO layers. , 2013, , .		0
242	Functional Nanowires: Synthesis, Characterization and Applications. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 313-314.	0.8	0
243	Temperature dependence of the electric field gradient in GaN measured with the PAC-probe 181Hf. , 2008, , 217-223.		0
244	An In-defect complex as a possible explanation for high luminous efficacy of InGaN and AlInN based devices. , 2010, , 187-191.		0
245	Anomalous Temperature Dependence of the EFG in AlN Measured with the PAC-Probes 181Hf and 111In. , 2005, , 273-279.		0