

Kevin O'Donnell

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8651750/publications.pdf>

Version: 2024-02-01

143
papers

5,672
citations

87723

38
h-index

85405

71
g-index

145
all docs

145
docs citations

145
times ranked

4915
citing authors

#	ARTICLE	IF	CITATIONS
1	Temperature dependence of semiconductor band gaps. Applied Physics Letters, 1991, 58, 2924-2926.	1.5	960
2	Origin of Luminescence from InGaN Diodes. Physical Review Letters, 1999, 82, 237-240.	2.9	468
3	Exciton localization and the Stokes shift in InGaN epilayers. Applied Physics Letters, 1999, 74, 263-265.	1.5	269
4	Strain and composition distributions in wurtzite InGaN/GaN layers extracted from x-ray reciprocal space mapping. Applied Physics Letters, 2002, 80, 3913-3915.	1.5	209
5	Origin of the Stokes shift: A geometrical model of exciton spectra in 2D semiconductors. Physical Review Letters, 1993, 70, 323-326.	2.9	195
6	Luminescence decay in disordered low-dimensional semiconductors. Applied Physics Letters, 1992, 60, 2672-2674.	1.5	127
7	Anomalous Ion Channeling in AlInN/GaN Bilayers: Determination of the Strain State. Physical Review Letters, 2006, 97, 085501.	2.9	125
8	Structural and optical properties of InGaN/GaN layers close to the critical layer thickness. Applied Physics Letters, 2002, 81, 1207-1209.	1.5	94
9	Identification of the prime optical center in GaN . Physical Review B, 2010, 81, ...	1.1	90
10	Disorder and the optical spectroscopy of Cr ³⁺ -doped glasses: I. Silicate glasses. Journal of Physics Condensed Matter, 1991, 3, 1915-1930.	0.7	87
11	Selectively excited photoluminescence from Eu-implanted GaN. Applied Physics Letters, 2005, 87, 112107.	1.5	85
12	Structural analysis of InGaN epilayers. Journal of Physics Condensed Matter, 2001, 13, 6977-6991.	0.7	75
13	Optical linewidths of InGaN light emitting diodes and epilayers. Applied Physics Letters, 1997, 70, 1843-1845.	1.5	70
14	High-temperature annealing and optical activation of Eu-implanted GaN. Applied Physics Letters, 2004, 85, 2712-2714.	1.5	67
15	The MOCVD growth without prereaction of ZnSe and ZnS layers. Journal of Crystal Growth, 1989, 94, 441-447.	0.7	63
16	Role of Nanoscale Strain Inhomogeneity on the Light Emission from InGaN Epilayers. Advanced Functional Materials, 2007, 17, 37-42.	7.8	60
17	Disorder and nonradiative decay of Cr ³⁺ -doped glasses. Physical Review B, 1992, 46, 652-661.	1.1	59
18	Rare earth doped III-nitrides for optoelectronics. EPJ Applied Physics, 2006, 36, 91-103.	0.3	59

#	ARTICLE	IF	CITATIONS
19	Vibronic structure in the photoluminescence spectrum of Cr ³⁺ ions in garnets. Journal of Luminescence, 1989, 42, 365-373.	1.5	58
20	Optical Detection of Magnetic Resonance for a Deep-Level Defect in Silicon. Physical Review Letters, 1982, 48, 37-40.	2.9	57
21	It's not easy being green: Strategies for all-colour solid state lighting. Physica Status Solidi - Rapid Research Letters, 2012, 6, 49-52.	1.2	56
22	Interpretation of double x-ray diffraction peaks from InGaN layers. Applied Physics Letters, 2001, 79, 1432-1434.	1.5	55
23	The temperature dependence of Cr ³⁺ photoluminescence in some garnet crystals. Journal of Physics C: Solid State Physics, 1988, 21, 6187-6198.	1.5	51
24	Electronic states and optical gain in strained CdS/ZnS quantum structures. Physical Review B, 1997, 55, 1364-1367.	1.1	51
25	Relaxation of compressively strained AlInN on GaN. Journal of Crystal Growth, 2008, 310, 4058-4064.	0.7	50
26	Line shape and lifetimes of Cr ³⁺ luminescence in silicate glasses. Physical Review B, 1991, 44, 4853-4861.	1.1	49
27	Disorder and the optical spectroscopy of Cr ³⁺ -doped glasses. II. Glasses with high and low ligand fields. Journal of Physics Condensed Matter, 1991, 3, 3825-3840.	0.7	49
28	Structural and optical characterization of Eu-implanted GaN. Journal Physics D: Applied Physics, 2009, 42, 165103.	1.3	48
29	Temperature dependence of the lifetime of Cr ³⁺ luminescence in garnet crystals I. Applied Physics B, Photophysics and Laser Chemistry, 1990, 50, 425-431.	1.5	47
30	Direct evidence of spontaneous quantum dot formation in a thick InGaN epilayer. Applied Physics Letters, 2000, 77, 507-509.	1.5	47
31	High temperature annealing of rare earth implanted GaN films: Structural and optical properties. Optical Materials, 2006, 28, 750-758.	1.7	47
32	Temperature dependence of the lifetime of Cr ³⁺ luminescence in garnet crystals. Applied Physics B, Photophysics and Laser Chemistry, 1990, 51, 132-136.	1.5	46
33	The composition dependence of the In _x Ga _{1-x} N bandgap. Journal of Crystal Growth, 2004, 269, 100-105.	0.7	45
34	The TR12 vibronic band in diamond. Journal of Physics C: Solid State Physics, 1981, 14, 4153-4165.	1.5	43
35	Cathodoluminescence spectral mapping of III-nitride structures. Physica Status Solidi A, 2004, 201, 665-672.	1.7	42
36	ODMR studies of antisite-related luminescence in GaP. Solid State Communications, 1982, 44, 1015-1018.	0.9	41

#	ARTICLE	IF	CITATIONS
37	The growth of ZnSe / CdSe and ZnS / CdS strained layer superlattices by MOVPE. Journal of Crystal Growth, 1990, 106, 503-509.	0.7	41
38	Tunnelling between excited $4T_2$ and $2E$ states of Cr^{3+} ions with small energy separation-the case of GSGG. Journal of Physics Condensed Matter, 1989, 1, 9175-9182.	0.7	40
39	Optically detected magnetic resonance of the zinc vacancy in ZnS. Solid State Communications, 1982, 41, 881-883.	0.9	39
40	Photoluminescence of wide bandgap II-VI superlattices. Journal of Crystal Growth, 1990, 101, 554-558.	0.7	39
41	Band alignments in Zn(Cd)S(Se) strained layer superlattices. Semiconductor Science and Technology, 1992, 7, 536-541.	1.0	39
42	Line shape of the Cr^{3+} luminescence in garnet crystals. Physical Review B, 1992, 46, 3273-3282.	1.1	38
43	Critical thickness of common-anion II-VI strained layer superlattices (SLSs). Journal of Crystal Growth, 1992, 117, 492-496.	0.7	38
44	Morphology of luminescent GaN films grown by molecular beam epitaxy. Applied Physics Letters, 1996, 68, 355-357.	1.5	38
45	Light emission ranging from blue to red from a series of InGaN/GaN single quantum wells. Journal Physics D: Applied Physics, 2002, 35, 604-608.	1.3	36
46	Induced magnetic moment of Eu^{3+} ions in GaN. Scientific Reports, 2012, 2, 969.	1.6	35
47	Electro paramagnetic resonance and optical spectra of Ti^{3+} -doped $YAlO_3$. Journal of Physics Condensed Matter, 1992, 4, 7285-7294.	0.7	34
48	Luminescence from porous silicon. Semiconductor Science and Technology, 1993, 8, 92-96.	1.0	33
49	The dependence of the optical energies on InGaN composition. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 82, 194-196.	1.7	33
50	Microcomposition and Luminescence of InGaN Emitters. Physica Status Solidi A, 2002, 192, 117-123.	1.7	32
51	Polarized photoluminescence from Cr^{3+} ions in laser host crystals III. $ZnWO_4$. Journal of Luminescence, 1990, 47, 65-70.	1.5	31
52	Photoluminescence and phonon satellites of single InGaN/GaN quantum wells with varying GaN cap thickness. Applied Physics Letters, 2006, 89, 101910.	1.5	31
53	An ODMR study of a luminescence excitation process in ZnSe:Fe. Journal of Physics C: Solid State Physics, 1983, 16, L723-L728.	1.5	30
54	Radiative and non-radiative decays from the excited state of Ti^{3+} ions in oxide crystals. Applied Physics B, Photophysics and Laser Chemistry, 1990, 51, 329-335.	1.5	30

#	ARTICLE	IF	CITATIONS
55	Polarization spectroscopy of Cr ³⁺ ions in laser host crystals. <i>Journal of Luminescence</i> , 1990, 46, 397-418.	1.5	29
56	Lattice site location of optical centers in GaN:Eu light emitting diode material grown by organometallic vapor phase epitaxy. <i>Applied Physics Letters</i> , 2010, 97, 111911.	1.5	29
57	A statistical topographic model for exciton luminescence spectra. <i>Journal of Physics Condensed Matter</i> , 1992, 4, 8863-8878.	0.7	28
58	Excitation dynamics of luminescence from porous silicon. <i>Journal of Applied Physics</i> , 1995, 77, 323-326.	1.1	28
59	Photoluminescence of localized excitons in pulsed-laser-deposited GaN. <i>Applied Physics Letters</i> , 1998, 73, 3390-3392.	1.5	28
60	Crystalfield symmetries of luminescent Eu ³⁺ centers in GaN: The importance of the 5D to 7F1 transition. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	28
61	The Zn(Cd)S(Se) family of superlattices. <i>Journal of Luminescence</i> , 1992, 52, 133-146.	1.5	26
62	Disorder and the shape of the R-lines in Cr ³⁺ -doped garnets. <i>Applied Physics A: Solids and Surfaces</i> , 1990, 50, 565-572.	1.4	25
63	The optical properties of wide bandgap binary II-VI superlattices. <i>Journal of Crystal Growth</i> , 1992, 117, 497-500.	0.7	25
64	Simultaneous composition mapping and hyperspectral cathodoluminescence imaging of InGaN epilayers. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2003, 0, 2474-2477.	0.8	24
65	Interdiffusion in wide-bandgap Zn(Cd)S(Se) strained layer superlattices. <i>Semiconductor Science and Technology</i> , 1991, 6, 818-821.	1.0	23
66	Optical absorption of ZnSe/ZnS strained layer superlattices. <i>Applied Physics Letters</i> , 1991, 59, 2142-2144.	1.5	23
67	Optical properties of Si nanocrystals prepared by magnetron sputtering. <i>Applied Physics Letters</i> , 1996, 69, 4148-4150.	1.5	23
68	High pressure annealing of Europium implanted GaN. <i>Proceedings of SPIE</i> , 2012, , .	0.8	23
69	Local structure of luminescent InGaN alloys. <i>Applied Physics Letters</i> , 2006, 89, 101908.	1.5	22
70	EPR and optical absorption studies of radiation-produced defects in sodium beta -alumina. <i>Journal of Physics C: Solid State Physics</i> , 1978, 11, 3871-3879.	1.5	21
71	Photoluminescence of Cr ³⁺ ions in RF-sputtered YGG thin films. <i>Journal of Luminescence</i> , 1988, 39, 335-341.	1.5	21
72	Photoluminescence from GaN films grown by MBE on an substrate. <i>Semiconductor Science and Technology</i> , 1997, 12, 59-63.	1.0	20

#	ARTICLE	IF	CITATIONS
73	Infrared spectroscopy of confined optical and folded acoustical phonons in strained CdSe/CdS superlattices. <i>Physical Review B</i> , 1998, 57, 13068-13071.	1.1	20
74	Splitting of X-ray diffraction and photoluminescence peaks in InGaN/GaN layers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2002, 93, 163-167.	1.7	20
75	ESR of Mn ²⁺ in sodium $\hat{\Gamma}^2$ -alumina. <i>Journal of Physics C: Solid State Physics</i> , 1977, 10, 4127-4135.	1.5	19
76	Intrinsic Infrared Luminescence from InGaN Epilayers. <i>Physica Status Solidi (B): Basic Research</i> , 1999, 216, 141-144.	0.7	19
77	A Mystery Wrapped in an Enigma: Optical Properties of InGaN Alloys. <i>Physica Status Solidi A</i> , 2001, 183, 117-120.	1.7	19
78	Luminescence studies on green emitting InGaN/GaN MQWs implanted with nitrogen. <i>Scientific Reports</i> , 2015, 5, 9703.	1.6	19
79	Photoluminescence studies of a perceived white light emission from a monolithic InGaN/GaN quantum well structure. <i>Scientific Reports</i> , 2015, 5, 13739.	1.6	19
80	Axial Cr ³⁺ centres in MgO: EPR and fluorescence studies. <i>Journal of Physics C: Solid State Physics</i> , 1977, 10, 3877-3884.	1.5	18
81	Europium-doped GaN(Mg): beyond the limits of the light-emitting diode. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 662-665.	0.8	17
82	Electron beam pumping of CdZnSe quantum well laser structures using a variable energy electron beam. <i>Journal of Crystal Growth</i> , 1996, 159, 618-622.	0.7	16
83	Exciton dynamics in a CdSe/ZnSe multiple quantum well. <i>Physical Review B</i> , 1996, 53, R1697-R1700.	1.1	16
84	Cathodoluminescence of rare earth implanted AlInN. <i>Applied Physics Letters</i> , 2006, 89, 131912.	1.5	15
85	Polarization of emission spectra from Ti ³⁺ -Doped oxide crystals. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1991, 52, 122-131.	1.5	14
86	Photoluminescence excitation spectroscopy of InGaN epilayers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2002, 93, 147-149.	1.7	14
87	Time-resolved optical studies of piezoelectric effects in wurtzite strained-layer superlattices. <i>Semiconductor Science and Technology</i> , 1990, 5, 997-1000.	1.0	13
88	The growth of ZnSe and other wide-bandgap II-VI semiconductors by MOCVD. <i>Semiconductor Science and Technology</i> , 1991, 6, A29-A35.	1.0	13
89	The Morphology and Cathodoluminescence of GaN Thin Films. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , 1996, 1, 1.	1.0	13
90	Implantation and annealing studies of Tm-implanted GaN. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2003, 105, 97-100.	1.7	13

#	ARTICLE	IF	CITATIONS
91	Luminescence of Eu ³⁺ in GaN(Mg, Eu): Transitions from the 5D ₁ level. Applied Physics Letters, 2017, 111, .	1.5	12
92	Polarization of emission spectra from Ti ³⁺ -doped oxide crystals. Applied Physics B: Lasers and Optics, 1991, 52, 225-229.	1.1	11
93	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
94	Photoluminescence studies of Eu-implanted GaN epilayers. Physica Status Solidi (B): Basic Research, 2005, 242, 1491-1496.	0.7	10
95	Al ¹⁺ xIn _x N/GaN bilayers: Structure, morphology, and optical properties. Physica Status Solidi (B): Basic Research, 2010, 247, 1740-1746.	0.7	10
96	(Dark Line Defects, Bright Line Lasers)â€Microscopic Studies of Singleâ€Shot Lasing in CdSe Quantum Wells. Physica Status Solidi (B): Basic Research, 1995, 187, 451-456.	0.7	9
97	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
98	The temperature dependence of the luminescence of rare-earth-doped semiconductors: 25 years after Favenec. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 466-468.	0.8	9
99	Characterization of nitride thin films by electron backscatter diffraction. Journal of Microscopy, 2002, 205, 226-230.	0.8	8
100	Hexagonal ZnCdS epilayers and CdSSe/ZnCdS QW structures on CdS(0001) and ZnCdS(0001) substrates grown by MOVPE. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 516-517.	1.3	8
101	Wishful physics â€ some common misconceptions about InGaN. Physica Status Solidi A, 2003, 195, 532-536.	1.7	8
102	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
103	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
104	Structural Dynamics of GaN Microcrystals in Evolutionary Selection Selective Area Growth probed by X-ray Microdiffraction. Scientific Reports, 2014, 4, 4651.	1.6	8
105	Fluorescence line narrowing-Zeeman spectroscopy of Cr ³⁺ -doped Gd ₃ Sc ₂ Al ₃ O ₁₂ garnet crystals. Journal of Physics Condensed Matter, 1992, 4, 7307-7316.	0.7	7
106	Fluorescence-line-narrowing Zeeman spectroscopy of Cr ³⁺ -doped silicate and Li borate glass. Journal of Physics Condensed Matter, 1992, 4, 8151-8162.	0.7	6
107	Depth-resolved cathodoluminescence of ZnSe epilayers. Advanced Materials for Optics and Electronics, 1994, 3, 295-299.	0.6	6
108	High Temperature Implantation of Tm in GaN. Materials Research Society Symposia Proceedings, 2003, 798, 548.	0.1	6

#	ARTICLE	IF	CITATIONS
109	Analysis of the stability of InGaN/GaN multiquantum wells against ion beam intermixing. Nanotechnology, 2015, 26, 425703.	1.3	6
110	Fluorescence line narrowing Zeeman spectroscopy of Cr ³⁺ -doped Gd ₃ Sc ₂ Al ₃ O ₁₂ garnet crystals. II. Calculation of the lineshape. Journal of Physics Condensed Matter, 1993, 5, 915-926.	0.7	5
111	Origin of the Stokes Shift: A Geometrical Model of Exciton Spectra in 2D Semiconductors. Physical Review Letters, 1994, 72, 1945-1945.	2.9	5
112	Properties of GaN epilayers grown on misoriented sapphire substrates. MRS Internet Journal of Nitride Semiconductor Research, 1998, 3, 1.	1.0	5
113	SITE MULTIPLICITY OF RARE EARTH IONS IN III-NITRIDES. Materials Research Society Symposia Proceedings, 2004, 831, 714.	0.1	5
114	Characterisation of III-nitride materials by synchrotron X-ray microdiffraction reciprocal space mapping. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 481-485.	0.8	5
115	Temperature-dependent hysteresis of the emission spectrum of Eu-implanted, Mg-doped HVPE GaN. AIP Conference Proceedings, 2013, , .	0.3	5
116	Eu-Mg defects and donor-acceptor pairs in GaN: photodissociation and the excitation transfer problem. Journal Physics D: Applied Physics, 2018, 51, 065106.	1.3	5
117	Hysteretic Photochromic Switching (HPS) in Doubly Doped GaN(Mg):Eu-A Summary of Recent Results. Materials, 2018, 11, 1800.	1.3	5
118	EPR and optical spectroscopy of Cr ³⁺ ions in Y ₃ Ga ₅ O ₁₂ crystalline thin films. Applied Physics A: Solids and Surfaces, 1992, 54, 470-473.	1.4	4
119	Extended X-ray Absorption Fine Structure Studies of GaN Epilayers Doped <i>in situ</i> with Er and Eu During Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 2003, 798, 45.	0.1	4
120	Optical Properties of Wide Bandgap II-VI Superlattices. , 1993, , 255-278.		3
121	Probing The Indium Mole Fraction In An Ingan Epilayer By Depth Resolved Cathodoluminescence. Materials Research Society Symposia Proceedings, 1997, 482, 738.	0.1	3
122	Electron Microprobe and Photoluminescence Analysis of Europium-Doped Gallium Nitride Light Emitters. Materials Research Society Symposia Proceedings, 2002, 743, L6.15.1.	0.1	3
123	The composition dependence of the optical properties of InN-rich InGaN grown by MBE. Materials Research Society Symposia Proceedings, 2004, 831, 479.	0.1	3
124	Luminescence spectroscopy of Eu-implanted zincblende GaN. Physica Status Solidi (B): Basic Research, 2008, 245, 170-173.	0.7	3
125	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
126	Extended X-ray absorption fine structure study of the Er bonding in AlNO:Er _x films with $x = 3.6\%$. Journal of Applied Physics, 2018, 124, 085705.	1.1	3

#	ARTICLE	IF	CITATIONS
127	Comparison of Luminescence and Physical Morphologies of GaN Epilayers. MRS Internet Journal of Nitride Semiconductor Research, 1997, 2, 1.	1.0	3
128	Photochromism in irradiated diamond. Journal of Physics C: Solid State Physics, 1980, 13, L363-L367.	1.5	2
129	Optical spectroscopy of Cr ³⁺ ions in LiF single crystals. Applied Physics A: Solids and Surfaces, 1991, 53, 209-213.	1.4	2
130	Disorder in laser materials. Radiation Effects and Defects in Solids, 1991, 119-121, 209-216.	0.4	2
131	Anomalous Composition Dependence of Optical Energies of MBE-grown InGaN. Materials Research Society Symposia Proceedings, 2003, 798, 565.	0.1	2
132	Indirect excitation of Eu ³⁺ in GaN codoped with Mg and Eu. Journal of Physics: Conference Series, 2015, 619, 012025.	0.3	2
133	Acceptor state anchoring in gallium nitride. Applied Physics Letters, 2020, 116, .	1.5	2
134	Electron micro-probe analysis and cathodoluminescence spectroscopy of rare earth - implanted GaN. Materials Research Society Symposia Proceedings, 2003, 798, 466.	0.1	1
135	E-BEAM PUMPED VCSEL ON MOVPE-GROWN HEXAGONAL CdS _{Se} /CdS MQW STRUCTURE. International Journal of Nanoscience, 2004, 03, 213-221.	0.4	1
136	Structural and optical characterization of highly Er and Eu doped GaN layers grown by MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2577-2580.	0.8	1
137	Raman scattering and cathodoluminescence characterization of near lattice-matched In _x Al _{1-x} N epilayers. Semiconductor Science and Technology, 2008, 23, 105002.	1.0	1
138	Probing Nitride Thin Films in 3-Dimensions using a Variable Energy Electron Beam. Materials Research Society Symposia Proceedings, 1999, 595, 1.	0.1	0
139	Occurrence of "Accidental" Quantum Dots in Indium Gallium Nitride/Gallium Nitride Heterostructures. Materials Research Society Symposia Proceedings, 2002, 737, 195.	0.1	0
140	2D Assemblies of Silicon Nanocrystallites Prepared by sol-gel Method from Triethoxysilane.. Materials Research Society Symposia Proceedings, 2002, 737, 462.	0.1	0
141	Development of CdS _{Se} /CdS VCSELs for Application to Laser Cathode Ray Tubes. Physica Status Solidi A, 2004, 201, 673-677.	1.7	0
142	Optical Properties of Nearly Lattice-matched AlInN/GaN Single Quantum Wells with Varying Well-widths. Materials Research Society Symposia Proceedings, 2006, 955, 1.	0.1	0
143	Simultaneous composition and cathodoluminescence spectral mapping of III-nitride structures. , 2018, , 293-296.		0