

Phil Dawson

List of Publications by Year in descending order

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94
papers

2,923
citations

279798

23
h-index

168389

53
g-index

95
all docs

95
docs citations

95
times ranked

2620
citing authors

#	ARTICLE	IF	CITATIONS
1	Linewidth dependence of radiative exciton lifetimes in quantum wells. Physical Review Letters, 1987, 59, 2337-2340.	7.8	1,035
2	Optical and microstructural studies of InGa \hat{N} -GaN single-quantum-well structures. Journal of Applied Physics, 2005, 97, 103508.	2.5	200
3	Carrier localisation mechanisms in InxGa$1-x$ quantum wells. Physical Review B, 1998, 58, 155401.	3.2	165
4	The consequences of high injected carrier densities on carrier localization and efficiency droop in InGaN/GaN quantum well structures. Journal of Applied Physics, 2012, 111, .	2.5	105
5	Photoluminescence decay time measurements from self-organized InAs/GaAs quantum dots. Journal of Applied Physics, 1999, 86, 2555-2561.	2.5	73
6	The nature of carrier localisation in polar and nonpolar InGaN/GaN quantum wells. Journal of Applied Physics, 2016, 119, .	2.5	66
7	Effects of quantum well growth temperature on the recombination efficiency of InGaN/GaN multiple quantum wells that emit in the green and blue spectral regions. Applied Physics Letters, 2015, 107, .	3.3	58
8	Structural, electronic, and optical properties of m-plane InGaN/GaN quantum wells: Insights from experiment and atomistic theory. Physical Review B, 2015, 92, .	3.2	57
9	Photoluminescence studies of InGaN/GaN multi-quantum wells. Semiconductor Science and Technology, 2000, 15, 497-505.	2.0	55
10	The impact of trench defects in InGaN/GaN light emitting diodes and implications for the "green gap" problem. Applied Physics Letters, 2014, 105, .	3.3	54
11	Temperature-dependent optical properties of InAs/GaAs quantum dots: Independent carrier versus exciton relaxation. Physical Review B, 2005, 72, .	3.2	53
12	The impact of gross well width fluctuations on the efficiency of GaN-based light emitting diodes. Applied Physics Letters, 2013, 103, .	3.3	50
13	Misfit dislocations in In-rich InGaN/GaN quantum well structures. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1729-1732.	1.8	48
14	Efficiency measurement of GaN-based quantum well and light-emitting diode structures grown on silicon substrates. Journal of Applied Physics, 2011, 109, .	2.5	45
15	Shift currents from symmetry reduction and Coulomb effects in (110)-orientated GaAs/AlGaAs quantum wells. Physical Review B, 2007, 76, .	3.2	40
16	Electronic and optical properties of nonpolar a-plane GaN quantum wells. Physical Review B, 2010, 82, .	3.2	36
17	Effects of disorder on electron spin dynamics in a semiconductor quantum well. Nature Physics, 2007, 3, 265-269.	3.8	36
18	Effects of disorder on electron spin dynamics in a semiconductor quantum well. Nature Physics, 2007, 3, 265-269.	16.7	35

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19	Optical properties of GaN/AlGaIn quantum wells grown on nonpolar substrates. Applied Physics Letters, 2008, 93, 101901.	3.3	34
20	Spatially resolved measurements of depletion properties of large gate two-dimensional electron gas semiconductor terahertz modulators. Journal of Applied Physics, 2009, 105, .	2.5	34
21	High excitation carrier density recombination dynamics of InGaIn/GaN quantum well structures: Possible relevance to efficiency droop. Applied Physics Letters, 2013, 102, 022106.	3.3	29
22	Optical polarization anisotropy of a-plane GaN/AlGaIn multiple quantum well structures grown on r-plane sapphire substrates. Journal of Applied Physics, 2009, 105, 123112.	2.5	24
23	The atomic structure of polar and non-polar InGaIn quantum wells and the green gap problem. Ultramicroscopy, 2017, 176, 93-98.	1.9	24
24	Determination of relative internal quantum efficiency in InGaIn•GaN quantum wells. Journal of Applied Physics, 2005, 98, 053509.	2.5	22
25	The microstructure of non-polar a-plane (112̂0) InGaIn quantum wells. Journal of Applied Physics, 2016, 119, .	2.5	22
26	Low temperature photoluminescence and cathodoluminescence studies of nonpolar GaN grown using epitaxial lateral overgrowth. Journal of Applied Physics, 2010, 108, 033523.	2.5	21
27	The effects of Si-doped prelayers on the optical properties of InGaIn/GaN single quantum well structures. Applied Physics Letters, 2014, 105, .	3.3	20
28	Terahertz spectroscopy of shift currents resulting from asymmetric (110)-oriented GaAs/AlGaAs quantum wells. Applied Physics Letters, 2009, 95, .	3.3	18
29	Comparative studies of efficiency droop in polar and non-polar InGaIn quantum wells. Applied Physics Letters, 2016, 108, .	3.3	18
30	Low temperature carrier redistribution dynamics in InGaIn/GaN quantum wells. Journal of Applied Physics, 2014, 115, .	2.5	17
31	Resonant excitation photoluminescence studies of InGaIn•GaN single quantum well structures. Applied Physics Letters, 2006, 89, 211901.	3.3	16
32	Study of efficiency droop and carrier localisation in an InGaIn/GaN quantum well structure. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2194-2196.	0.8	16
33	A study of the inclusion of prelayers in InGaIn/GaN single•and multiple•quantum•well structures. Physica Status Solidi (B): Basic Research, 2015, 252, 866-872.	1.5	16
34	Photoluminescence studies of cubic GaN epilayers. Physica Status Solidi (B): Basic Research, 2017, 254, 1600733.	1.5	16
35	Optical and microstructural properties of semi-polar (11-22) InGaIn/GaN quantum well structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S727-S730.	0.8	15
36	An investigation into defect reduction techniques for growth of non-polar GaN on sapphire. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 541-544.	0.8	15

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37	Investigation of unintentional indium incorporation into GaN barriers of InGaN/GaN quantum well structures. <i>Physica Status Solidi (B): Basic Research</i> , 2015, 252, 928-935.	1.5	15
38	Optical studies of non-polar ϵ -plane (ϵ) InGaN/GaN multi-quantum wells grown on freestanding bulk GaN. <i>Physica Status Solidi (B): Basic Research</i> , 2015, 252, 965-970.	1.5	14
39	A comparison of the optical properties of InGaN/GaN multiple quantum well structures grown with and without Si-doped InGaN prelayers. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	13
40	Recombination from polar InGaN/GaN quantum well structures at high excitation carrier densities. <i>Physical Review B</i> , 2018, 98, .	3.2	13
41	Carrier dynamics at trench defects in InGaN/GaN quantum wells revealed by time-resolved cathodoluminescence. <i>Nanoscale</i> , 2022, 14, 402-409.	5.6	13
42	High quantum efficiency InGaN/GaN structures emitting at 540 nm. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 1970-1973.	0.8	12
43	High photoluminescence quantum efficiency InGaN multiple quantum well structures emitting at 380nm. <i>Journal of Applied Physics</i> , 2007, 101, 033516.	2.5	12
44	A comparative study of near-UV emitting InGaN quantum wells with AlGaN and AlInGaN barriers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 1819-1823.	1.8	11
45	High-efficiency InGaN/GaN quantum well structures on large area silicon substrates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2012, 209, 13-16.	1.8	11
46	Polarized photoluminescence excitation spectroscopy of a -plane InGaN/GaN multiple quantum wells grown on r -plane sapphire. <i>Journal of Applied Physics</i> , 2014, 115, 113106.	2.5	11
47	Optical and structural properties of dislocations in InGaN. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	11
48	Impact of alloy fluctuations and Coulomb effects on the electronic and optical properties of c -plane GaN/AlGaN quantum wells. <i>Scientific Reports</i> , 2019, 9, 18862.	3.3	11
49	Nature and dynamics of carrier escape from InAs/GaAs quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 2397-2401.	0.8	10
50	Electric fields in AlGaIn/GaN quantum well structures. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 1551-1559.	1.5	10
51	Effects of an InGaN prelayer on the properties of InGaN/GaN quantum well structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 710-713.	0.8	10
52	The effects of varying threading dislocation density on the optical properties of InGaN/GaN quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 750-753.	0.8	10
53	Effect of stacking faults on the photoluminescence spectrum of zincblende GaN. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	10
54	Local carrier recombination and associated dynamics in m -plane InGaN/GaN quantum wells probed by picosecond cathodoluminescence. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	9

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55	Resonant photoluminescence studies of carrier localisation in c-plane InGaN/GaN quantum well structures. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 175303.	1.8	9
56	Electric field dependent photoluminescence studies of nanoparticle sensitized photorefractive polymers. <i>Journal of Applied Physics</i> , 2008, 103, 093702.	2.5	8
57	All-optical generation of coherent in-plane charge oscillations in GaAs quantum wells. <i>Physical Review B</i> , 2011, 83, .	3.2	8
58	Terahertz cyclotron resonance spectroscopy of an AlGaN/GaN heterostructure using a high-field pulsed magnet and an asynchronous optical sampling technique. <i>Applied Physics Letters</i> , 2016, 108, 212101.	3.3	8
59	Energy landscape and carrier wavefunctions in InGaN/GaN quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 2255-2258.	0.8	7
60	Theoretical and experimental analysis of the photoluminescence and photoluminescence excitation spectroscopy spectra of m-plane InGaN/GaN quantum wells. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	7
61	Room temperature PL efficiency of InGaN/GaN quantum well structures with prelayers as a function of number of quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 248-251.	0.8	7
62	Carrier distributions in InGaN/GaN light-emitting diodes. <i>Physica Status Solidi (B): Basic Research</i> , 2015, 252, 890-894.	1.5	6
63	Effects of a Si-doped InGaN Underlayer on the Optical Properties of InGaN/GaN Quantum Well Structures with Different Numbers of Quantum Wells. <i>Materials</i> , 2018, 11, 1736.	2.9	6
64	Modification of carrier localization in basal-plane stacking faults: The effect of Si-doping in a-plane GaN. <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 498-502.	1.5	5
65	Effect of QW growth temperature on the optical properties of blue and green InGaN/GaN QW structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 209-213.	0.8	5
66	A study of the optical and polarisation properties of InGaN/GaN multiple quantum wells grown on a-plane and m-plane GaN substrates. <i>Science and Technology of Advanced Materials</i> , 2016, 17, 736-743.	6.1	5
67	Insight into the impact of atomic- and nano-scale indium distributions on the optical properties of InGaN/GaN quantum well structures grown on m-plane freestanding GaN substrates. <i>Journal of Applied Physics</i> , 2019, 125, 225704.	2.5	5
68	Optical properties of c-Plane InGaN/GaN single quantum wells as a function of total electric field strength. <i>Japanese Journal of Applied Physics</i> , 2019, 58, SCCB09.	1.5	5
69	Optical pumping of nuclear spin magnetization in GaAs/AlAs quantum wells of variable electron density. <i>Solid State Communications</i> , 2010, 150, 450-453.	1.9	4
70	Recombination mechanisms in heteroepitaxial non-polar InGaN/GaN quantum wells. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	4
71	On the origin of blue-green emission from heteroepitaxial nonpolar a-plane InGaN quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012, 9, 465-468.	0.8	4
72	Observation of resonant exciton cooling in GaAs/AlGaAs multiple quantum well structures. <i>Solid State Communications</i> , 1997, 101, 477-482.	1.9	3

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73	Carrier dynamics in non-polar GaN/AlGaIn quantum wells intersected by basal-plane stacking faults. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 1894-1896.	0.8	3
74	Characterising the degree of polarisation anisotropy in an <i>a</i> -plane GaN film. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 1897-1899.	0.8	3
75	The effect of a Mg-doped GaN cap layer on the optical properties of InGaIn/AlGaIn multiple quantum well structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 2005-2008.	0.8	2
76	Excitation energy dependence of the photoluminescence spectrum of an $\text{In}_x\text{Ga}_{1-x}\text{N}$ single quantum well structure. <i>Physical Review B</i> , 2007, 76, .	3.2	2
77	Optical polarisation anisotropy in <i>a</i> -plane GaN/AlGaIn multiple quantum well structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, S523.	0.8	2
78	Effect of overgrowth conditions on the optical properties of lateral epitaxially overgrown <i>a</i> -plane GaN. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 2088-2090.	0.8	2
79	Dynamics of carrier redistribution processes in InGaIn/GaN quantum well structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 738-741.	0.8	2
80	High excitation density recombination dynamics in InGaIn/GaN quantum well structures in the droop regime. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 694-697.	0.8	2
81	Resonant photoluminescence excitation studies of InGaIn/GaN single quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 2001-2004.	0.8	1
82	Coulomb-enhanced shift currents from symmetry reduction in GaAs/AlGaAs quantum wells. , 2007, , .		1
83	Exciton confinement in narrow non-polar InGaIn/GaN quantum wells grown on <i>r</i> -plane sapphire. <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 494-497.	1.5	1
84	Investigating efficiency droop in InGaIn/GaN quantum well structures using ultrafast time-resolved terahertz and photoluminescence spectroscopy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 252-255.	0.8	1
85	Effect of electron blocking layers on the conduction and valence band profiles of InGaIn/GaN LEDs. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2016, 13, 262-265.	0.8	1
86	Quantum interference currents by excitation of heavy and light hole excitons in GaAs quantum wells. , 2006, , .		0
87	Effects of disorder on electron spin dynamics in GaAs quantum wells. , 2007, , .		0
88	Resonant Photoluminescence Spectroscopy of InGaIn/GaN Single Quantum Well Structures. AIP Conference Proceedings, 2007, , .	0.4	0
89	Effects of resonant LO phonon assisted excitation on the photoluminescence spectra of InGaIn/GaN quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 2270-2273.	0.8	0
90	Measurement of higher-order exciton resonances in GaAs quantum wells via shift-current-THz-spectroscopy at room temperature. , 2010, , .		0

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91	Influence of intersubband scattering on shift currents in GaAs quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1133-1136.	0.8	0
92	Properties of surface-pit related emission in a -plane InGaN/GaN quantum wells grown on r -plane sapphire. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2179-2181.	0.8	0
93	Coherent in-plane charge oscillations in GaAs quantum wells. , 2011, , .		0
94	Terahertz magnetospectroscopy studies of an AlGaIn/GaN heterostructure. , 2016, , .		0