David Gonzalez

List of Publications by Year
in descending order

135 papers	1,532 citations	331670 21 h-index	434195 31 g-index
140 all docs	140 docs citations	140 times ranked	1577 citing authors

#	Article	IF	Citations
1	Effect of the AlAs capping layer thickness on the structure of InAs/GaAs QD. Applied Surface Science, 2022, 573, 151572.	6.1	7
2	Suppressing the Effect of the Wetting Layer through AlAs Capping in InAs/GaAs QD Structures for Solar Cells Applications. Nanomaterials, 2022, 12, 1368.	4.1	8
3	Evaluation of different capping strategies in the InAs/GaAs QD system: Composition, size and QD density features. Applied Surface Science, 2021, 537, 148062.	6.1	10
4	Formation mechanisms of agglomerations in high-density InAs/GaAs quantum dot multi-layer structures. Applied Surface Science, 2020, 508, 145218.	6.1	5
5	CDrift: An Algorithm to Correct Linear Drift From A Single High-Resolution STEM Image. Microscopy and Microanalysis, 2020, 26, 913-920.	0.4	5
6	Role of Sb on the vertical-alignment of type-II strain-coupled InAs/GaAsSb multi quantum dots structures. Journal of Alloys and Compounds, 2020, 832, 154914.	5.5	3
7	Diluted nitride type-II superlattices: Overcoming the difficulties of bulk GaAsSbN in solar cells. Solar Energy Materials and Solar Cells, 2020, 210, 110500.	6.2	9
8	Control of Nitrogen Inhomogeneities in Type-I and Type-II GaAsSbN Superlattices for Solar Cell Devices. Nanomaterials, 2019, 9, 623.	4.1	3
9	Open circuit voltage recovery in GaAsSbN-based solar cells: Role of deep N-related radiative states. Solar Energy Materials and Solar Cells, 2019, 200, 109949.	6.2	14
10	Modelling of bismuth segregation in InAsBi/InAs superlattices: Determination of the exchange energies. Applied Surface Science, 2019, 485, 29-34.	6.1	10
11	Topological Homogeneity for Electron Microscopy Images. Lecture Notes in Computer Science, 2019, , 166-178.	1.3	0
12	Nitrogen mapping from ADF imaging analysis in quaternary dilute nitride superlattices. Applied Surface Science, 2019, 475, 473-478.	6.1	5
13	Effect of capping rate on InAs/GaAs quantum dot solar cells. , 2019, , .		1
14	Modelling of the Sb and N distribution in type II GaAsSb/GaAsN superlattices for solar cell applications. Applied Surface Science, 2018, 442, 664-672.	6.1	20
15	Correcting sample drift using Fourier harmonics. Micron, 2018, 110, 18-27.	2.2	1
16	Size and shape tunability of self-assembled InAs/GaAs nanostructures through the capping rate. Applied Surface Science, 2018, 444, 260-266.	6.1	26
17	GaAsN/GaAsSb superlattices as 1 eV layers for efficient multi-junction solar cells. , 2018, , .		0
18	Compositional inhomogeneities in type-I and type-II superlattices for GaAsSbN-based solar cells: Effect of thermal annealing. Applied Surface Science, 2018, 459, 1-8.	6.1	11

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19	Strain relaxation behaviour in InxGa1-xAs quantum wells on misorientated GaAs (111)B substrates. , 2018, , 137-140.		0
20	Characterization of InGaAs (N)/GaAsN multi-quantum wells using transmission electron microscopy. , 2018, , 143-146.		0
21	Barrier thickness influence on plastic relaxation in (111)B misoriented InGaAs/GaAs double quantum wells. , 2018, , 133-136.		0
22	Strain-balanced type-II superlattices for efficient multi-junction solar cells. Scientific Reports, 2017, 7, 4012.	3.3	22
23	Sb and N Incorporation Interplay in GaAsSbN/GaAs Epilayers near Lattice-Matching Condition for 1.0â€"1.16-eV Photonic Applications. Nanoscale Research Letters, 2017, 12, 356.	5.7	18
24	Evaluation of high-quality image reconstruction techniques applied to high-resolution Z-contrast imaging. Ultramicroscopy, 2017, 182, 283-291.	1.9	6
25	Quantitative analysis of the interplay between InAs quantum dots and wetting layer during the GaAs capping process. Nanotechnology, 2017, 28, 425702.	2.6	18
26	Thin GaAsSb capping layers for improved performance of InAs/GaAs quantum dot solar cells. Solar Energy Materials and Solar Cells, 2017, 159, 282-289.	6.2	20
27	General route for the decomposition of InAs quantum dots during the capping process. Nanotechnology, 2016, 27, 125703.	2.6	19
28	(S)TEM Analysis of the Strain and Morphology of InAs Quantum Dots using GaAs(Sb)(N) Capping Layers for Solar Cell Applications. Microscopy and Microanalysis, 2016, 22, 46-47.	0.4	0
29	Strain mapping accuracy improvement using superâ€resolution techniques. Journal of Microscopy, 2016, 262, 50-58.	1.8	9
30	Influence of Sb/N contents during the capping process on the morphology of InAs/GaAs quantum dots. Solar Energy Materials and Solar Cells, 2016, 145, 154-161.	6.2	17
31	Impact of alloyed capping layers on the performance of InAs quantum dot solar cells. Solar Energy Materials and Solar Cells, 2016, 144, 128-135.	6.2	11
32	Bismuth concentration inhomogeneity in GaAsBi bulk and quantum well structures. Semiconductor Science and Technology, 2015, 30, 094018.	2.0	16
33	Onset of puberty and near adult height in short children born small for gestational age and treated with GH: Interim analysis of up to 10 years of treatment in Japan. Clinical Pediatric Endocrinology, 2015, 24, 15-25.	0.8	11
34	Effect of annealing in the Sb and In distribution of type II GaAsSb-capped InAs quantum dots. Semiconductor Science and Technology, 2015, 30, 114006.	2.0	12
35	Effect of N2 and H2 plasma treatments on band edge emission of ZnO microrods. Scientific Reports, 2015, 5, 10783.	3.3	43
36	Stacked GaAs(Sb)(N)-capped InAs/GaAs quantum dots for enhanced solar cell efficiency. Proceedings of SPIE, 2015, , .	0.8	2

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37	GaAsSb/GaAsN short-period superlattices as a capping layer for improved InAs quantum dot-based optoelectronics. Applied Physics Letters, 2014, 105, .	3.3	14
38	Capping layer growth rate and the optical and structural properties of GaAsSbN-capped InAs/GaAs quantum dots. Journal of Applied Physics, 2014, 116, .	2.5	12
39	ZnO micro/nanocrystals grown by laser assisted flow deposition. , 2014, , .		1
40	Bismuth incorporation and the role of ordering in GaAsBi/GaAs structures. Nanoscale Research Letters, 2014, 9, 23.	5.7	56
41	Structural and Chemical Evolution of the Spontaneous Core-Shell Structures of AlxGa1-xN/GaN Nanowires. Microscopy and Microanalysis, 2014, 20, 1254-1261.	0.4	2
42	Transmission Electron Microscopy of 1D-Nanostructures. , 2014, , 657-701.		0
43	Modification of the optical and structural properties of ZnO nanowires by low-energy Ar+ ion sputtering. Nanoscale Research Letters, 2013, 8, 162.	5.7	13
44	Formation of Tetragonal InBi Clusters in InAsBi/InAs(100) Heterostructures Grown by Molecular Beam Epitaxy. Applied Physics Express, 2013, 6, 112601.	2.4	22
45	Photoluminescence Enhancement of InAs(Bi) Quantum Dots by Bi Clustering. Applied Physics Express, 2013, 6, 042103.	2.4	15
46	Imaging and Analysis by Transmission Electron Microscopy of the Spontaneous Formation of Al-Rich Shell Structure in Al$_{x}$Ga$_{1-x}$N/GaN Nanowires. Applied Physics Express, 2012, 5, 045002.	2.4	16
47	Independent tuning of electron and hole confinement in InAs/GaAs quantum dots through a thin GaAsSbN capping layer. Applied Physics Letters, 2012, 100, .	3.3	22
48	High efficient luminescence in type-II GaAsSb-capped InAs quantum dots upon annealing. Applied Physics Letters, 2012, 101, .	3.3	25
49	Impact of N on the atomic-scale Sb distribution in quaternary GaAsSbN-capped InAs quantum dots. Nanoscale Research Letters, 2012, 7, 653.	5.7	18
50	High-Resolution Electron Microscopy of Semiconductor Heterostructures and Nanostructures. Springer Series in Materials Science, 2012, , 23-62.	0.6	2
51	Study of Morphological and Related Properties of Aligned Zinc Oxide Nanorods Grown by Vapor Phase Transport on Chemical Bath Deposited Buffer Layers. Crystal Growth and Design, 2011, 11, 5378-5386.	3.0	29
52	Influence of substrate crystallography on the room temperature synthesis of AlN thin films by reactive sputtering. Applied Surface Science, 2011, 257, 9306-9313.	6.1	16
53	Growth of ZnO nanowires through thermal oxidation of metallic zinc films on CdTe substrates. Journal of Alloys and Compounds, 2011, 509, 5400-5407.	5.5	15
54	Evaluation of the In desorption during the capping process of diluted nitride In(Ga)As quantum dots. Journal of Physics: Conference Series, 2011, 326, 012049.	0.4	0

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55	Strong suppression of internal electric field in GaN/AlGaN multi-layer quantum dots in nanowires. Applied Physics Letters, 2011, 99, .	3.3	20
56	Inhibition of In desorption in diluted nitride InAsN quantum dots. Applied Physics Letters, 2011, 98, 071910.	3.3	4
57	Structural and compositional homogeneity of InAlN epitaxial layers nearly lattice-matched to GaN. Acta Materialia, 2010, 58, 4120-4125.	7.9	26
58	Natural oxidation of InN quantum dots: the role of cubic InN. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 9-12.	0.8	1
59	Identification of IIIâ€“N nanowire growth kinetics via a marker technique. Nanotechnology, 2010, 21, 295605.	2.6	57
60	Phase mapping of aging process in InN nanostructures: oxygen incorporation and the role of the zinc blende phase. Nanotechnology, 2010, 21, 185706.	2.6	5
61	Atomic scale high-angle annular dark field STEM analysis of the N configuration in dilute nitrides of GaAs. Physical Review B, 2009, 80, .	3.2	22
62	Determination of the composition of InxGa1â^’xN from strain measurements. Acta Materialia, 2009, 57, 5681-5692.	7.9	65
63	Structural changes during the natural aging process of InN quantum dots. Journal of Applied Physics, 2009, 105, 013527.	2.5	8
64	Electron transport properties of indium oxide â€“ indium nitride metalâ€oxideâ€semiconductor heterostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 495-498.	0.8	6
65	Structure of cubic polytype indium nitride layers on top of modified sapphire substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 514-517.	0.8	4
66	InN/In₂O₃ heterostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1627-1629.	0.8	9
67	High Resolution HAADF-STEM Imaging Analysis of N related defects in GaNAs Quantum Wells. Microscopy and Microanalysis, 2008, 14, 318-319.	0.4	4
68	Electronic and photoconductive properties of ultrathin InGaN photodetectors. Journal of Applied Physics, 2008, 103, 073715.	2.5	10
69	Influence of the Growth Temperature on the Composition Fluctuations of GaInNAs/GaAs Quantum Wells. , 2008, , 199-221.		0
70	Study of microstructure and strain relaxation on thin InXGa1â^’xN epilayers with medium and high In contents. , 2008, , 77-78.		0
71	Cubic InN growth on sapphire (0001) using cubic indium oxide as buffer layer. Applied Physics Letters, 2007, 90, 091901.	3.3	37
72	Configuration of the misfit dislocation networks in uncapped and capped InN quantum dots. Applied Physics Letters, 2007, 91, 071915.	3.3	12

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73	Z-contrast Imaging Analysis of Semiconductor Epitaxies: Application to GaNAs Quantum Wells and InAs/GaInAs/GaAs Dot in Well Structures. Microscopy and Microanalysis, 2007, 13, .	0.4	0
74	Coalescence aspects of III-nitride epitaxy. Journal of Applied Physics, 2007, 101, 054906.	2.5	27
75	Strain Mapping at the Atomic Scale in Highly Mismatched Heterointerfaces. Advanced Functional Materials, 2007, 17, 2588-2593.	14.9	12
76	Effect of island coalescence on structural and electrical properties of InN thin films. Journal of Crystal Growth, 2007, 300, 50-56.	1.5	3
77	Kinetic considerations on the phase separation of GaInNAs quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1477-1480.	0.8	0
78	Evaluation of the influence of GaN and AlN as pseudosubstrates on the crystalline quality of InN layers. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1454-1457.	0.8	1
79	Strain Relief Analysis of InN Quantum Dots Grown on GaN. Nanoscale Research Letters, 2007, 2, 442-6.	5.7	14
80	Misfit relaxation of InN quantum dots: Effect of the GaN capping layer. Applied Physics Letters, 2006, 88, 151913.	3.3	35
81	Effect of the Growth Temperature in the Composition Fluctuation of GaInNAs/GaAs Quantum Wells. Microscopy and Microanalysis, 2006, 12, 754-755.	0.4	0
82	Effect of dislocations on electrical and electron transport properties of InN thin films. II. Density and mobility of the carriers. Journal of Applied Physics, 2006, 100, 094903.	2.5	74
83	Structural characterization of InN quantum dots grown by Metalorganic Vapour Phase Epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1687-1690.	0.8	8
84	Correlation between structural and electrical properties of InN thin films prepared by molecular beam epitaxy. Superlattices and Microstructures, 2006, 40, 289-294.	3.1	9
85	Effect of dislocations on electrical and electron transport properties of InN thin films. I. Strain relief and formation of a dislocation network. Journal of Applied Physics, 2006, 100, 094902.	2.5	44
86	Role of elastic anisotropy in the vertical alignment of In(Ga)As quantum dot superlattices. Applied Physics Letters, 2006, 88, 193118.	3.3	18
87	Influence of structure and defects on the performance of dot-in-well laser structures. , 2005, , .		1
88	Effect of the growth parameters on the structure and morphology of InAs/InGaAs/GaAs DWELL quantum dot structures. Journal of Crystal Growth, 2005, 278, 151-155.	1.5	11
89	Strain interactions and defect formation in stacked InGaAs quantum dot and dot-in-well structures. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 26, 245-251.	2.7	10
90	Structural and optical properties of high In and N content GaInNAs quantum wells. Thin Solid Films, 2005, 483, 185-190.	1.8	6

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91	Critical barrier thickness for the formation of InGaAs/GaAs quantum dots. Materials Science and Engineering C, 2005, 25, 798-803.	7.3	5
92	Characterization of structure and defects in dot-in-well laser structures. Materials Science and Engineering C, 2005, 25, 793-797.	7.3	1
93	Spinodal decomposition in GaInNAs/GaAs multi-quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1292-1297.	0.8	0
94	Composition modulation in GaInNAs quantum wells: Comparison of experiment and theory. Journal of Applied Physics, 2005, 97, 073705.	2.5	14
95	The effect of estuarine fisheries on juvenile fish observed within the Guadalquivir Estuary (SW Spain). Fisheries Research, 2005, 76, 229-242.	1.7	24
96	Nucleation of InN quantum dots on GaN by metalorganic vapor phase epitaxy. Applied Physics Letters, 2005, 87, 263104.	3.3	28
97	An approach to the formation mechanism of the composition fluctuation in GaInNAs quantum wells. Semiconductor Science and Technology, 2005, 20, 1096-1102.	2.0	5
98	Unfaulting of dislocation loops in the GaInNAs alloy: An estimation of the stacking fault energy. Journal of Applied Physics, 2005, 98, 023521.	2.5	6
99	Defect generation in high In and N content GaInNAs quantum wells: unfaulting of Frank dislocation loops. , 2005, , 139-142.		0
100	Influence of growth temperature on the structural and optical quality of GaInNAs/GaAs multi-quantum wells. Semiconductor Science and Technology, 2004, 19, 813-818.	2.0	20
101	Structural defects characterisation of GaInNAs MQWs by TEM and PL. IEE Proceedings: Optoelectronics, 2004, 151, 385-388.	0.8	3
102	Composition fluctuations in GaInNAs multi-quantum wells. IEE Proceedings: Optoelectronics, 2004, 151, 271-274.	0.8	0
103	Improvement in the optical quality of GaInNAs/GaInAs quantum well structures by interfacial strain reduction. IEE Proceedings: Optoelectronics, 2004, 151, 301-304.	0.8	2
104	Composition Modulation in Low Temperature Growth of InGaAs/GaAs System: Influence on Plastic Relaxation. Mikrochimica Acta, 2004, 145, 63-66.	5.0	2
105	Estudio de capas de desacoplo de InGaAs/GaAs(001) por crecimiento combinado de MBE-ALMBE en forma dinÃ¡mica y escalonada. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 373-375.	1.9	0
106	InhibiciÃ³n de la relajaciÃ³n plÃ¡stica en heteroestructuras InGaAs/GaAs(001) crecidas a baja temperatura. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 376-378.	1.9	0
107	Strain relaxation behavior of InxGa1â^'xAs quantum wells on vicinal GaAs (111)B substrates. Applied Physics Letters, 2002, 80, 1541-1543.	3.3	7
108	Relaxation study of AlGaAs cladding layers in InGaAs/GaAs (111)B lasers designed for 1.0â€“1.1Î¼m operation. Microelectronics Journal, 2002, 33, 553-557.	2.0	2

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109	The role of climb and glide in misfit relief of InGaAs/GaAs(111)B heterostructures. Microelectronics Journal, 2002, 33, 559-563.	2.0	0
110	Effect of graded buffer design on the defect structure in InGaAs/GaAs (111)B heterostructures. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 80, 27-31.	3.5	5
111	Effect of indium content on the normal-incident photoresponse of InGaAs/GaAs quantum-well infrared photodetectors. Applied Physics Letters, 2001, 78, 2390-2392.	3.3	6
112	Control of phase modulation in InGaAs epilayers. Applied Physics Letters, 2000, 76, 3236-3238.	3.3	8
113	Espesores crÃticos de relajaciÃ³n en pozos cuÃ¡nticos de InGaAs/ GaAs sobre sustratos de GaAs (001) y (111)B. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2000, 39, 482-486.	1.9	0
114	Influence of substrate misorientation on the optical and structural properties of InGaAs/GaAs single strained quantum wells grown on (111)B GaAs by molecular beam epitaxy. Microelectronics Journal, 1999, 30, 373-378.	2.0	1
115	Cathodoluminescence study of pyramidal facets in piezoelectric InGaAs/GaAs multiple quantum well pin photodiodes. Microelectronics Journal, 1999, 30, 427-431.	2.0	3
116	New relaxation mechanisms in InGaAs/GaAs (111) multiple quantum well. Microelectronics Journal, 1999, 30, 467-470.	2.0	4
117	Optical properties of InxGa1â^’xAs/GaAs MQW structures on (111)B GaAs grown by MBE: dependence on substrate miscut. Journal of Crystal Growth, 1999, 201-202, 1085-1088.	1.5	3
118	Relaxation study of InxGa1â^’xAs/GaAs quantum-well structures grown by MBE on (001) and (111)B GaAs for long wavelength applications. Journal of Crystal Growth, 1999, 206, 287-293.	1.5	4
119	Effect of In-content on the misfit dislocation interaction in InGaAs/GaAs layers. Thin Solid Films, 1999, 343-344, 302-304.	1.8	0
120	Influence of substrate misorientation on the structural characteristics of InGaAs/GaAs MQW on (111)B GaAs grown by MBE. Thin Solid Films, 1999, 343-344, 558-561.	1.8	3
121	Growth rate and critical temperatures to avoid the modulation of composition of InGaAs epitaxial layers. Applied Physics Letters, 1999, 74, 2649-2651.	3.3	11
122	Influence of interface dislocations on surface kinetics during epitaxial growth of InGaAs. Applied Surface Science, 1998, 123-124, 303-307.	6.1	6
123	Critical thickness for the saturation state of strain relaxation in the InGaAs/GaAs systems. Applied Physics Letters, 1998, 72, 1875-1877.	3.3	11
124	Work-hardening effects in the lattice relaxation of single layer heterostructures. Applied Physics Letters, 1997, 71, 2475-2477.	3.3	10
125	A work-hardening based model of the strain relief in multilayer graded-buffer structures. Applied Physics Letters, 1997, 71, 3099-3101.	3.3	11
126	Advantages of thin interfaces in step-graded buffer structures. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 44, 41-45.	3.5	1

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127	Comparison of the crystalline quality of step-graded and continuously graded InGaAs buffer layers. Journal of Crystal Growth, 1996, 169, 649-659.	1.5	44
128	Dislocation behavior in InGaAs stepâ€•and alternating stepâ€graded structures: Design rules for buffer fabrication. Applied Physics Letters, 1995, 67, 3632-3634.	3.3	18
129	Step-graded buffer layer study of the strain relaxation by transmission electron microscopy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 497-501.	3.5	10
130	Transmission electron microscopy study of multilayer buffer structures used as dislocation filters. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 515-519.	3.5	1
131	Determination of hypochlorite in waters by stopped-flow chemiluminescence spectrometry. Analytica Chimica Acta, 1990, 228, 123-128.	5.4	20
132	Performance of the stopped-flow technique in chemiluminescence spectrometry based on direct rate measurements. Analytica Chimica Acta, 1989, 217, 239-247.	5.4	30
133	Vertical correlation-anticorrelation transition in InAs/GaAs quantum dot structures grown by molecular beam epitaxy. , 0, , 251-254.		0
134	Effect of annealing on anticorrelated InGaAs/GaAs quantum dots. , 0, , 255-258.		0
135	Activation energy for surface diffusion in GaInNAs quantum wells. , 0, , 279-282.		0