Miguel Ãngel SÃ¡nchez GarcÃa

List of Publications by Year
in descending order

94 papers	3,511 citations	136740 32 h-index	138251 58 g-index
96 all docs	96 docs citations	96 times ranked	2279 citing authors

#	Article	IF	Citations
1	Luminescence properties and defects in GaN nanocolumns grown by molecular beam epitaxy. Physical Review B, 2000, 62, 16826-16834.	1.1	345
2	The effect of the III/V ratio and substrate temperature on the morphology and properties of GaN- and AlN-layers grown by molecular beam epitaxy on Si(1 1 1). Journal of Crystal Growth, 1998, 183, 23-30.	0.7	303
3	Yellow luminescence and related deep states in undoped GaN. Physical Review B, 1997, 55, 4689-4694.	1.1	203
4	Growth of III-nitrides on Si(111) by molecular beam epitaxy Doping, optical, and electrical properties. Journal of Crystal Growth, 1999, 201-202, 296-317.	0.7	189
5	Growth, morphology, and structural properties of group-III-nitride nanocolumns and nanodisks. Physica Status Solidi (B): Basic Research, 2007, 244, 2816-2837.	0.7	148
6	Wet etching of GaN grown by molecular beam epitaxy on Si(111). Semiconductor Science and Technology, 2000, 15, 996-1000.	1.0	120
7	Characterization of GaN quantum discs embedded inAlxGa1â^'xNnanocolumns grown by molecular beam epitaxy. Physical Review B, 2003, 68, .	1.1	112
8	A growth diagram for plasma-assisted molecular beam epitaxy of GaN nanocolumns on Si(111). Journal of Applied Physics, 2009, 106, .	1.1	110
9	Understanding the selective area growth of GaN nanocolumns by MBE using Ti nanomasks. Journal of Crystal Growth, 2011, 325, 89-92.	0.7	97
10	Effect of Ga/Si interdiffusion on optical and transport properties of GaN layers grown on Si(111) by molecular-beam epitaxy. Physical Review B, 1998, 58, 1550-1559.	1.1	92
11	Evidence of electron accumulation at nonpolar surfaces of InN nanocolumns. Applied Physics Letters, 2007, 90, 262110.	1.5	81
12	Strong localization in InGaN layers with high In content grown by molecular-beam epitaxy. Applied Physics Letters, 2002, 80, 231-233.	1.5	72
13	Accommodation mechanism of InN nanocolumns grown on Si(111) substrates by molecular beam epitaxy. Applied Physics Letters, 2007, 91, 021902.	1.5	66
14	Growth kinetics and morphology of high quality AlN grown on Si(111) by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 1997, 82, 4681-4683.	1.1	62
15	The effect of Si doping on the defect structure of GaN/AlN/Si(111). Applied Physics Letters, 1999, 74, 3362-3364.	1.5	55
16	AlGaN Nanocolumns Grown by Molecular Beam Epitaxy: Optical and Structural Characterization. Physica Status Solidi A, 2002, 192, 60-66.	1.7	55
17	Selective area growth of In(Ga)N/GaN nanocolumns by molecular beam epitaxy on GaN-buffered Si(111): from ultraviolet to infrared emission. Nanotechnology, 2013, 24, 175303.	1.3	54
18	Exciton and donor - acceptor recombination in undoped GaN on Si(111). Semiconductor Science and Technology, 1997, 12, 1396-1403.	1.0	53

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19	InN layers grown on silicon substrates: effect of substrate temperature and buffer layers. Journal of Crystal Growth, 2005, 278, 373-377.	0.7	48
20	Selective area growth of a- and c-plane GaN nanocolumns by molecular beam epitaxy using colloidal nanolithography. Journal of Crystal Growth, 2012, 353, 1-4.	0.7	44
21	Experimental evidence for a Be shallow acceptor in GaN grown on Si(111) by molecular beam epitaxy. Semiconductor Science and Technology, 1998, 13, 1130-1133.	1.0	43
22	Resonant-cavity InGaN multiple-quantum-well green light-emitting diode grown by molecular-beam epitaxy. Applied Physics Letters, 2002, 80, 2198-2200.	1.5	43
23	High visible rejection AlGaN photodetectors on Si(111) substrates. Applied Physics Letters, 2000, 76, 2785-2787.	1.5	42
24	Phonon-plasmon coupling in electron surface accumulation layers in InN nanocolumns. Physical Review B, 2007, 76, .	1.1	41
25	Molecular beam epitaxy growth and doping of III-nitrides on Si(111): layer morphology and doping efficiency. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 82, 2-8.	1.7	40
26	AlGaN ultraviolet photodetectors grown by molecular beam epitaxy on Si(111) substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 159-162.	1.7	39
27	Monolithic integration of InGaN segments emitting in the blue, green, and red spectral range in single ordered nanocolumns. Applied Physics Letters, 2013, 102, 181103.	1.5	39
28	Reactive ion etching of GaN layers using. Semiconductor Science and Technology, 1997, 12, 1654-1657.	1.0	37
29	Growth optimization and doping with Si and Be of high quality GaN on Si(111) by molecular beam epitaxy. Journal of Electronic Materials, 1998, 27, 276-281.	1.0	37
30	Radiative defects in GaN nanocolumns: Correlation with growth conditions and sample morphology. Applied Physics Letters, 2011, 98, 083104.	1.5	34
31	Selective area growth and characterization of InGaN nano-disks implemented in GaN nanocolumns with different top morphologies. Applied Physics Letters, 2012, 100, .	1.5	34
32	Band bending at the surfaces of In-rich InGaN alloys. Journal of Applied Physics, 2008, 104, .	1.1	33
33	Selective area growth and characterization of InGaN nanocolumns for phosphor-free white light emission. Journal of Applied Physics, 2013, 113, .	1.1	33
34	Plasmon excitation in electron energy-loss spectroscopy for determination of indium concentration in (In,Ga)N/GaN nanowires. Nanotechnology, 2012, 23, 485701.	1.3	32
35	Structural and optical characterization of intrinsic GaN nanocolumns. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 13, 1070-1073.	1.3	31
36	Epitaxial growth and characterization of InN nanorods and compact layers on silicon substrates. Physica Status Solidi (B): Basic Research, 2006, 243, 1490-1493.	0.7	30

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37	Polarity determination by electron energy-loss spectroscopy: application to ultra-small III-nitride semiconductor nanocolumns. Nanotechnology, 2011, 22, 415701.	1.3	29
38	Emission control of InGaN nanocolumns grown by molecular-beam epitaxy on Si(111) substrates. Applied Physics Letters, 2011, 99, .	1.5	29
39	AlGaN Nanocolumns and AlGaN/GaN/AlGaN Nanostructures Grown by Molecular Beam Epitaxy. Physica Status Solidi (B): Basic Research, 2002, 234, 717-721.	0.7	27
40	Ultrathin GaN/AlN/GaN solution-gate field effect transistor with enhanced resolution at low source-gate voltage. Sensors and Actuators B: Chemical, 2009, 142, 304-307.	4.0	25
41	InN/InGaN multiple quantum wells emitting at 1.5â€Î¼m grown by molecular beam epitaxy. Applied Physics Letters, 2011, 98, .	1.5	24
42	Structural and optical characterization of thick InGaN layers and InGaN/GaN MQW grown by molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 131-134.	1.7	22
43	Morphology and optical properties of InN layers grown by molecular beam epitaxy on silicon substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2289-2292.	0.8	22
44	Investigation of AlInN barrier ISFET structures with GaN capping for pH detection. Sensors and Actuators B: Chemical, 2013, 176, 704-707.	4.0	22
45	MBE growth of GaN and AlGaN layers on Si(111) substrates: doping effects. Journal of Crystal Growth, 1999, 201-202, 415-418.	0.7	20
46	AlGaN photodetectors grown on Si(111) by molecular beam epitaxy. Journal of Crystal Growth, 2001, 230, 544-548.	0.7	20
47	Light-Emitting-Diodes based on ordered InGaN nanocolumns emitting in the blue, green and yellow spectral range. Nanotechnology, 2014, 25, 435203.	1.3	18
48	GaN and InN nanocolumns as electrochemical sensing elements: Potentiometric response to KCl, pH and urea. Materials Letters, 2010, 64, 1332-1335.	1.3	17
49	Correlation among Growth Conditions, Morphology, and Optical Properties of Nanocolumnar InGaN/GaN Heterostructures Selectively Grown by Molecular Beam Epitaxy. Crystal Growth and Design, 2015, 15, 2661-2666.	1.4	17
50	Demonstration of (In, Ga)N/GaN Coreâ€“Shell Micro Light-Emitting Diodes Grown by Molecular Beam Epitaxy on Ordered MOVPE GaN Pillars. Crystal Growth and Design, 2015, 15, 3661-3665.	1.4	17
51	MBE-grown high-quality (Al,Ga)N/GaN distributed Bragg reflectors for resonant cavity LEDs. Semiconductor Science and Technology, 2001, 16, 913-917.	1.0	16
52	Nitride RCLEDs Grown by MBE for POF Applications. Physica Status Solidi A, 2002, 192, 277-285.	1.7	16
53	Growth of GaN layers on SiC/Si(111) substrate by molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 172-176.	1.7	16
54	Optical properties of InN grown on Si(111) substrate. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1066-1069.	0.8	16

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55	Titanium induced polarity inversion in ordered (In,Ga)N/GaN nanocolumns. Nanotechnology, 2016, 27, 065705.	1.3	16
56	Selective area growth and characterization of GaN nanocolumns, with and without an InGaN insertion, on semi-polar (11â€“22) GaN templates. Applied Physics Letters, 2013, 103, .	1.5	15
57	Oxygen photo-adsorption related quenching of photoluminescence in group-III nitride nanocolumns. Superlattices and Microstructures, 2012, 52, 165-171.	1.4	14
58	Growth of InGaN/GaN coreâ€“shell structures on selectively etched GaN rods by molecular beam epitaxy. Journal of Crystal Growth, 2014, 392, 5-10.	0.7	13
59	Lattice pulling effect and strain relaxation in axial (In,Ga)N/GaN nanowire heterostructures grown on GaNâ€buffered Si(111) substrate. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 736-739.	0.8	12
60	Direct immobilization of enzymes in GaN and InN nanocolumns: The urease case study. Applied Physics Letters, 2009, 95, 113701.	1.5	11
61	Selective area growth of GaN nanostructures: A key to produce high quality (11â€“20) a-plane pseudo-substrates. Applied Physics Letters, 2014, 105, .	1.5	11
62	Study of the Effects of Mg and Be Co-Doping in GaN Layers. Physica Status Solidi A, 2000, 180, 97-102.	1.7	10
63	Plasma-assisted MBE growth of group-III nitrides: from basics to device applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 189-196.	1.7	10
64	InN nanocolumns grown by plasma-assisted molecular beam epitaxy on A-plane GaN templates. Applied Physics Letters, 2009, 94, 221908.	1.5	9
65	AlN buffer layer thickness influence on inversion domains in GaN/AlN/Si(111). Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 181-184.	1.7	8
66	Raman scattering by longitudinal optical phonons in InN nanocolumns grown on Si(1 1 1) and Si(0 0 1) substrates. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2087-2090.	1.3	8
67	Volume charge carrier number fluctuations probed by low frequency noise measurements in InN layers. Applied Physics Letters, 2011, 98, 252104.	1.5	8
68	Fast AlGaN metal-semiconductor-metal photodetectors grown on Si(111). Electronics Letters, 2001, 37, 239.	0.5	7
69	ORDERED GAN/INGAN NANORODS ARRAYS GROWN BY MOLECULAR BEAM EPITAXY FOR PHOSPHOR-FREE WHITE LIGHT EMISSION. International Journal of High Speed Electronics and Systems, 2012, 21, 1250010.	0.3	7
70	Properties of Homoepitaxial and Heteroepitaxial GaN Layers Grown by Plasma-Assisted MBE. Physica Status Solidi A, 1999, 176, 447-452.	1.7	6
71	Interplay between GaN and AlN sublattices in wurtzite AlxGa1â^'xN alloys revealed by Raman spectroscopy. Journal of Applied Physics, 2002, 92, 223-226.	1.1	6
72	Visible and Solar-Blind AlGaN Metal-Semiconductor-Metal Photodetectors Grown on Si(111) Substrates. Physica Status Solidi A, 2002, 192, 314-319.	1.7	6

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73	Influence of Si Doping on the Subgrain Structure of GaN Grown on AlN/Si(111). Physica Status Solidi A, 1999, 176, 401-406.	1.7	5
74	High-Quality Distributed Bragg Reflectors for Resonant-Cavity Light-Emitting Diode Applications. Physica Status Solidi A, 2002, 192, 389-393.	1.7	5
75	Brillouin characterization of the acousticwaves phase-velocity in AlxGa1â^'xN epilayers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 93, 168-171.	1.7	5
76	GaN reactive ion etching using SiCl4:Ar:SF6 chemistry. Journal of Materials Science: Materials in Electronics, 2005, 16, 409-413.	1.1	5
77	Investigation of IIIâ€“V Nanowires by Plan-View Transmission Electron Microscopy: InN Case Study. Microscopy and Microanalysis, 2014, 20, 1471-1478.	0.2	5
78	From Ultraviolet to Green InGaN-Based Conventional and Resonant-Cavity Light-Emitting Diodes Grown by Molecular Beam Epitaxy. Physica Status Solidi A, 2002, 192, 341-347.	1.7	4
79	Inelastic light scattering spectroscopy of semiconductor nitride nanocolumns. Physica Status Solidi (B): Basic Research, 2007, 244, 2838-2846.	0.7	4
80	Non-linear properties of nitride-based nanostructures for optically controlling the speed of light at 1.5Î¼m. Microelectronics Journal, 2009, 40, 349-352.	1.1	4
81	Investigation of InN layers grown by molecular beam epitaxy on GaN templates. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1079-1082.	0.8	4
82	E-beam nano-patterning for the ordered growth of GaN/InGaN nanorods. Microelectronic Engineering, 2012, 98, 374-377.	1.1	4
83	Fabrication of GaN nanorods by focused ion beam. Microelectronic Engineering, 2012, 98, 250-253.	1.1	3
84	Optical and electrical characterization of GaN layers grown on silicon and sapphire substrates. Solid-State Electronics, 1996, 40, 81-84.	0.8	2
85	Luminescence and Morphological Properties of GaN Layers Grown on SiC/Si(111) Substrates. Physica Status Solidi A, 2002, 192, 401-406.	1.7	2
86	Raman scattering by coupled plasmon-LO phonons in InN nanocolumns. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1562-1564.	0.8	2
87	Fabrication and stress relief modelling of GaN based MEMS test structures grown by MBE on Si(111). Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1974-1976.	0.8	2
88	Selective area growth of III-nitride nanorods on polar, semi-polar, and non-polar orientations: device applications. , 2015, , .		2
89	Space charged region in GaN and InN nanocolumns investigated by atomic force microscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1609-1611.	0.8	1
90	Characterization of a pH sensor based on an AlGiaN/GaN transistor. , 2009, , .		1

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91	Selective Area Growth of III-Nitrides on Polar and Semi-Polar Orientations: from Light Emitters to Pseudo-Substrates. , 2014, , .		1
92	Electron Accumulation Layers in InN Nanocolumns Studied by Raman Scattering. , 2010, , .		0
93	Evidence of charge carrier number fluctuations in InN thin films?. , 2011, , .		0
94	Advances in MBE Selective Area Growth of III-Nitride Nanostructures: From NanoLEDs to Pseudo Substrates. , 2015, , .		0