Xu-Qiang Shen

List of Publications by Year
in descending order

92 papers	1,493 citations	346980 22 h-index	425179 34 g-index
94 all docs	94 docs citations	94 times ranked	1184 citing authors

#	Article	IF	Citations
1	Heteroepitaxial AlN growth on c-plane sapphire substrates by ammonia-free high temperature metalorganic chemical vapor deposition. Journal of Crystal Growth, 2022, 581, 126496.	0.7	3
2	Single-phase high-quality semipolar (10â€“13) AlN epilayers on m-plane (10â€“10) sapphire substrates. Applied Physics Express, 2020, 13, 035502.	1.1	10
3	Impact of strain state on the ultrathin AlN/GaN superlattice growth on Si(110) substrates by metalorganic chemical vapor deposition. Japanese Journal of Applied Physics, 2018, 57, 010306.	0.8	2
4	Ammonia-free high temperature metalorganic vapor phase epitaxy (AFHT-MOVPE): a new approach to high quality AlN growth. CrystEngComm, 2018, 20, 7364-7370.	1.3	10
5	High quality thin AlN epilayers grown on Si(110) substrates by metal-organic chemical vapor deposition. CrystEngComm, 2017, 19, 1204-1209.	1.3	12
6	High accuracy equivalent circuit model for GaN GIT biâ€directional switch. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 378-381.	0.8	2
7	Effect of double superlattice interlayers on growth of thick GaN epilayers on Si(110) substrates by metalorganic chemical vapor deposition. Japanese Journal of Applied Physics, 2016, 55, 05FB02.	0.8	3
8	Mechanisms of the micro-crack generation in an ultra-thin AlN/GaN superlattice structure grown on Si(110) substrates by metalorganic chemical vapor deposition. Journal of Applied Physics, 2015, 118, .	1.1	5
9	Highâ€quality GaN film and AlGaN/GaN HEMT grown on 4â€inch Si(110) substrates by MOCVD using an ultraâ€thin AlN/GaN superlattice interlayer. Physica Status Solidi (B): Basic Research, 2015, 252, 1075-1078.	0.7	8
10	Self-generated microcracks in an ultra-thin AlN/GaN superlattice interlayer and their influences on the GaN epilayer grown on Si(110) substrates by metalâ€“organic chemical vapor deposition. CrystEngComm, 2015, 17, 5014-5018.	1.3	9
11	Strain states in GaN films grown on Si(111) and Si(110) substrates using a thin AlN/GaN superlattice interlayer. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 473-476.	0.8	4
12	Magnetotransport properties of high equivalent Al composition AlGaN/GaN heterostructures using AlN/GaN superlattice as a barrier. Journal of Applied Physics, 2013, 114, .	1.1	0
13	Role of an ultra-thin AlN/GaN superlattice interlayer on the strain engineering of GaN films grown on Si(110) and Si(111) substrates by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2013, 103, 231908.	1.5	14
14	Modulation of Strain States in GaN Films by a Thin AlN/GaN Superlattice Interlayer Grown on Si(110) Substrates. Japanese Journal of Applied Physics, 2013, 52, 08JB05.	0.8	8
15	Realization of compressively strained GaN films grown on Si(110) substrates by inserting a thin AlN/GaN superlattice interlayer. Applied Physics Letters, 2012, 101, .	1.5	19
16	Equivalent Circuit Model for a GaN Gate Injection Transistor Bidirectional Switch. IEEE Transactions on Electron Devices, 2012, 59, 2643-2649.	1.6	9
17	Direct measurement of lateral macrostep velocity on an AlN vicinal surface by transmission electron microscopy. Journal of Applied Physics, 2012, 111, .	1.1	8
18	Epitaxial growth of GaN films on Si(110) substrates by rfâ€MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 503-506.	0.8	4

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19	Effect of hole injection in AlGaN/GaN HEMT with GIT structure by numerical simulation. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 847-850.	0.8	6
20	Equivalent-circuit-model for GaN-GIT bi-directional switch including influence of gate resistance. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 887-890.	0.8	1
21	The influence of indium surfactant on the electrical properties of GaN epilayers grown by metal-organic chemical vapour deposition. Journal Physics D: Applied Physics, 2010, 43, 145402.	1.3	0
22	Different origins of the yellow luminescence in as-grown high-resistance GaN and unintentional-doped GaN films. Journal of Applied Physics, 2010, 107, .	1.1	45
23	Demonstration of Quasi-AlGaN/GaN HFET Using Ultrathin GaN/AlN Superlattices as a Barrier Layer. IEEE Electron Device Letters, 2010, 31, 945-947.	2.2	12
24	Comparison of surface morphologies in GaN films grown by rf-MBE and MOCVD on vicinal sapphire (0001) substrates. Journal of Crystal Growth, 2009, 311, 2049-2053.	0.7	5
25	Characterizations of GaN films and AlGaN/GaN heterostructures on vicinal sapphire (0001) substrates grown by MOCVD. Journal of Crystal Growth, 2009, 311, 2853-2856.	0.7	1
26	rfâ€MBE growth and characterizations of AlGaN/GaN HEMTs on vicinal sapphire (0001) substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1995-1997.	0.8	2
27	Improved electrical properties in AlGaNâˆ•GaN heterostructures using AlNâˆ•GaN superlattice as a quasi-AlGaN barrier. Applied Physics Letters, 2007, 90, 242112.	1.5	35
28	Surface step morphologies of GaN films grown on vicinal sapphire (0001) substrates by rf-MBE. Journal of Crystal Growth, 2007, 300, 75-78.	0.7	25
29	Improvements of surface morphology and sheet resistance of AlGaN/GaN HEMT structures using quasi AlGaN barrier layers. Journal of Crystal Growth, 2007, 300, 168-171.	0.7	22
30	Quality improvement of III-nitride epilayers and their heterostructures grown on vicinal substrates by rf-MBE. Journal of Crystal Growth, 2007, 301-302, 404-409.	0.7	21
31	Electrical properties of MBE-grown AlGaN/GaN HEMT structures by using 4H-SiC (0001) vicinal substrates. Journal of Crystal Growth, 2007, 301-302, 452-456.	0.7	19
32	Growth of GaN-HEMT structures using super lattice quasi-AlGaN alloy barriers on vicinal SiC substrates by rf-MBE. Journal of Crystal Growth, 2007, 301-302, 437-441.	0.7	4
33	Characterization of electrical properties of AlGaN/GaN heterostructures grown on vicinal substrates by rf-MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2395-2398.	0.8	1
34	Dislocation behaviour in III-nitride epitaxial films grown on vicinal sapphire (0001) substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1566-1569.	0.8	4
35	Generation of Cubic Phase in Molecular-Beam-Epitaxy-Grown Hexagonal InGaN Epilayers on InN. Japanese Journal of Applied Physics, 2006, 45, 57-60.	0.8	5
36	Electrical properties of AlGaNâˆ•GaN heterostructures grown on vicinal sapphire (0001) substrates by molecular beam epitaxy. Applied Physics Letters, 2006, 89, 171906.	1.5	19

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37	Characterizations of GaN films and GaN/AlN super-lattice structures grown on vicinal sapphire (0001) substrates by RF-MBE. Journal of Crystal Growth, 2005, 278, 378-382.	0.7	14
38	GaN/AlN super-lattice structures on vicinal sapphire (0001) substrates grown by rf-MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2385-2388.	0.8	2
39	Studies of the annihilation mechanism of threading dislocation in AlN films grown on vicinal sapphire (0001) substrates using transmission electron microscopy. Applied Physics Letters, 2005, 87, 101910.	1.5	29
40	Reduction of the threading dislocation density in GaN films grown on vicinal sapphire (0001) substrates. Applied Physics Letters, 2005, 86, 021912.	1.5	96
41	Plasma-Assisted Molecular Beam Epitaxial Growth of AlN Films on Vicinal Sapphire (0001) Substrates. Materials Science Forum, 2004, 457-460, 1553-1556.	0.3	1
42	Growth of Droplet-Free AlGaN Buffer Layer with +c Polarity by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2004, 43, 952-957.	0.8	11
43	Surface morphology of GaN layer grown by plasma-assisted molecular beam epitaxy on MOCVD-grown GaN template. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2549-2552.	0.8	4
44	Ultra-flat and high-quality AlN thin films on sapphire (0001) substrates grown by rf-MBE. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2511-2514.	0.8	10
45	Impact of Vicinal Sapphire (0001) Substrates on the High-Quality AlN Films by Plasma-Assisted Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2003, 42, L1293-L1295.	0.8	66
46	Termination mechanism of inversion domains by stacking faults in GaN. Journal of Applied Physics, 2003, 93, 3264-3269.	1.1	14
47	Improvement of DC Characteristics in AlGaN/GaN Heterojunction Field-Effect Transistors Employing AlN Spacer Layer. Japanese Journal of Applied Physics, 2002, 41, 5563-5564.	0.8	8
48	High-Quality GaN Layers on c-Plane Sapphire Substrates by Plasma-Assisted Molecular-Beam Epitaxy Using Double-Step AlN Buffer Process. Japanese Journal of Applied Physics, 2002, 41, 4454-4457.	0.8	16
49	Temperature Dependence of DC Characteristics in AlN/GaN Metal Insulator Semiconductor Field Effect Transistor. Materials Science Forum, 2002, 389-393, 1519-1522.	0.3	0
50	Roles of Si Irradiation during the Growth Interruption on GaN Film Qualities in Plasma-Assisted Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2002, 41, L1428-L1430.	0.8	7
51	Indium Roles on the GaN Surface Studied Directly by Reflection High-Energy Electron Diffraction Observations. Japanese Journal of Applied Physics, 2002, 41, L873-L875.	0.8	1
52	RHEED Studies of In Effect on the N-Polarity GaN Surface Kinetics Modulation in Plasma-Assisted Molecular-Beam Epitaxy. Materials Science Forum, 2002, 389-393, 1461-1464.	0.3	0
53	Structure Analysis of GaN Thin Film with Inversion Domains by High Voltage Atomic Resolution Microscopy. Materials Transactions, 2002, 43, 1542-1546.	0.4	9
54	Polarity control in MBE growth of III-nitrides, and its device application. Current Applied Physics, 2002, 2, 305-310.	1.1	14

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55	Growth and characterizations of InGaN on N- and Ga-polarity GaN grown by plasma-assisted molecular-beam epitaxy. Journal of Crystal Growth, 2002, 237-239, 1148-1152.	0.7	18
56	Improvement of film quality using Si-doping in AlGaN/GaN heterostructure grown by plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2002, 245, 15-20.	0.7	33
57	Stimulated-emission phenomena from InGaN/GaN multiple-quantum wells grown by plasma-assisted molecular-beam epitaxy. Applied Physics Letters, 2001, 79, 1599-1601.	1.5	4
58	Growth and characterizations of AlGaN/GaN heterostructures using multi-AlN buffer layers in plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2001, 227-228, 447-452.	0.7	4
59	Growth and characterization of cubic InGaN epilayers on 3C-SiC by RF MBE. Journal of Crystal Growth, 2001, 227-228, 471-475.	0.7	21
60	Optimization of GaN Growth with Ga-Polarity by Referring to Surface Reconstruction Reflection High-Energy Electron Diffraction Patterns. Japanese Journal of Applied Physics, 2001, 40, L23-L25.	0.8	10
61	Advantages of AlN/GaN Metal Insulator Semiconductor Field Effect Transistor using Wet Chemical Etching with Hot Phosphoric Acid. Japanese Journal of Applied Physics, 2001, 40, 4785-4788.	0.8	19
62	Nanometric inversion domains in conventional molecular-beam-epitaxy GaN thin films observed by atomic-resolution high-voltage electron microscopy. Applied Physics Letters, 2001, 79, 3941-3943.	1.5	21
63	High-quality InGaN/GaN multiple quantum wells grown on Ga-polarity GaN by plasma-assisted molecular-beam epitaxy. Journal of Applied Physics, 2001, 89, 5731-5733.	1.1	14
64	Realization of Ga-polarity GaN films in radio-frequency plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2000, 218, 155-160.	0.7	47
65	Investigations of optical and electrical properties of In-doped GaN films grown by gas-source molecular beam epitaxy. Journal of Crystal Growth, 2000, 209, 396-400.	0.7	7
66	Characterization of Polarity of Wurtzite GaN Film Grown by Molecular Beam Epitaxy Using NH3. Japanese Journal of Applied Physics, 2000, 39, L202-L204.	0.8	28
67	High-Quality InGaN Films Grown on Ga-Polarity GaN by Plasma-Assisted Molecular-Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, L1270-L1272.	0.8	10
68	Essential Change in Crystal Qualities of GaN Films by Controlling Lattice Polarity in Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, L16-L18.	0.8	56
69	Stability of N- and Ga-polarity GaN surfaces during the growth interruption studied by reflection high-energy electron diffraction. Applied Physics Letters, 2000, 77, 4013-4015.	1.5	28
70	Observation of Cubic GaN/AlN Heterointerface Formation by RHEED in Plasma-Assisted Molecular Beam Epitaxy. Materials Science Forum, 2000, 338-342, 1545-1548.	0.3	1
71	Achievement of MBE-Grown GaN Heteroepitaxial Layer with (0001) Ga-Polarity and Improved Quality by In Exposure. Materials Science Forum, 2000, 338-342, 1459-1462.	0.3	2
72	Nitride Semiconductor Surfaces. Surface Structure of MBE-grown III-nitride Semiconductors.. Hyomen Kagaku, 2000, 21, 169-176.	0.0	0

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73	An Approach to Achieve Intense Photoluminescence of GaN. Japanese Journal of Applied Physics, 1999, 38, L14-L16.	0.8	22
74	Improvements of the Optical and Electrical Properties of GaN Films by Using In-doping Method During Growth. Japanese Journal of Applied Physics, 1999, 38, L411-L413.	0.8	29
75	Enhancement of surface decomposition using supersonic beam: direct evidence from GaN quantum dot formations on AlGaN surfaces in gas-source molecular beam epitaxy. Journal of Crystal Growth, 1999, 201-202, 402-406.	0.7	0
76	Effect of indium doping on the transient optical properties of GaN films. Applied Physics Letters, 1999, 75, 2879-2881.	1.5	40
77	Chemical beam epitaxy of GaN using triethylgallium and ammonia. Journal of Crystal Growth, 1998, 188, 86-91.	0.7	4
78	Real-time observations of the GaN dot formation by controlling growth mode on the AlGaN surface in gas-source molecular beam epitaxy. Journal of Crystal Growth, 1998, 189-190, 147-152.	0.7	3
79	The formation of GaN dots on AlxGa1â^'xN surfaces using Si in gas-source molecular beam epitaxy. Applied Physics Letters, 1998, 72, 344-346.	1.5	55
80	Influencs of Surface V/III Ratio on the Film Quality during the GaN Growth in Gas-Source Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 1998, 37, L637-L639.	0.8	5
81	Initial growth behaviors of disk-shaped mesas in GaAs molecular beam epitaxy on GaAs(111)B substrates. Journal of Crystal Growth, 1997, 177, 175-180.	0.7	11
82	Arsenic pressure dependence of inter-surface diffusion in MBE of GaAs studied by the microprobe-RHEED/SEM MBE system. Thin Solid Films, 1997, 306, 187-191.	0.8	10
83	Arsenic pressure dependence of pure two-face inter-surface diffusion between (0 0 1) and (1 1 1)B in molecular beam epitaxy of GaAs. Journal of Crystal Growth, 1997, 174, 539-543.	0.7	9
84	In situ observation of macrostep formation on misoriented GaAs(111)B by molecular beam epitaxy. Journal of Crystal Growth, 1996, 166, 217-221.	0.7	14
85	Surface diffusion length of cation incorporation studied by microprobe-RHEED/SEM MBE. Journal of Crystal Growth, 1996, 163, 60-66.	0.7	52
86	Real-time observations of faceting and shrinkage processes of disk-shaped mesas in GaAs molecular beam epitaxy on GaAs(111)B substrates. Journal of Crystal Growth, 1996, 169, 607-612.	0.7	11
87	Inter-surface diffusion of In on (111)A-(001) InAs nonplanar substrates in molecular beam epitaxy. Journal of Crystal Growth, 1995, 146, 374-378.	0.7	23
88	Arsenic Pressure Dependence of Surface Diffusion of Ga on Nonplanar GaAs Substrates. Japanese Journal of Applied Physics, 1994, 33, 11-17.	0.8	79
89	Surface diffusion and adatom stoichiometry in GaAs MBE studied by microprobe-RHEED/SEM MBE. Applied Surface Science, 1994, 82-83, 141-148.	3.1	20
90	Molecular beam epitaxial growth of GaAs, AlAs and Al0.45Ga0.55As on (111) A-(001) V-grooved substrates. Journal of Crystal Growth, 1994, 135, 85-96.	0.7	36

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91	Resharpening effect of AlAs and fabrication of quantum-wires on V-grooved substrates by molecular beam epitaxy. Journal of Crystal Growth, 1993, 127, 932-936.	0.7	42
92	Arsenic Pressure Dependence of the Surface Diffusion in Molecular Beam Epitaxy on (111)B-(001) Mesa-Etched GaAs Substrates Studied byIn SituScanning Microprobe Reflection High-Energy Electron Diffraction. Japanese Journal of Applied Physics, 1993, 32, L1117-L1119.	0.8	46