

# Theodore Moustakas

## List of Publications by Year in descending order

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120  
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91  
g-index

122  
all docs

122  
docs citations

122  
times ranked

5409  
citing authors

#	ARTICLE	IF	CITATIONS
1	Scattering of electrons at threading dislocations in GaN. Journal of Applied Physics, 1998, 83, 3656-3659.	1.1	578
2	Phase separation in InGaN thick films and formation of InGaN/GaN double heterostructures in the entire alloy composition. Applied Physics Letters, 1997, 70, 1089-1091.	1.5	455
3	The role of dislocation scattering in n-type GaN films. Applied Physics Letters, 1998, 73, 821-823.	1.5	407
4	Epitaxial growth and characterization of zinc-blende gallium nitride on (001) silicon. Journal of Applied Physics, 1992, 71, 4933-4943.	1.1	344
5	Metal contacts to gallium nitride. Applied Physics Letters, 1993, 62, 2859-2861.	1.5	327
6	Towards the Identification of the Dominant Donor in GaN. Physical Review Letters, 1995, 75, 296-299.	2.9	295
7	Growth of GaN by ECR-assisted MBE. Physica B: Condensed Matter, 1993, 185, 36-49.	1.3	239
8	Heteroepitaxy, polymorphism, and faulting in GaN thin films on silicon and sapphire substrates. Journal of Applied Physics, 1993, 74, 4430-4437.	1.1	220
9	Phase separation and ordering in InGaN alloys grown by molecular beam epitaxy. Journal of Applied Physics, 1998, 84, 1389-1395.	1.1	212
10	Thermal expansion of gallium nitride. Journal of Applied Physics, 1994, 76, 4909-4911.	1.1	211
11	Effect of nitrogen on the growth of diamond films. Applied Physics Letters, 1994, 65, 403-405.	1.5	210
12	Mechanism of yellow luminescence in GaN. Applied Physics Letters, 1995, 67, 2188-2190.	1.5	208
13	Temperature dependence of the energy gap in GaN bulk single crystals and epitaxial layer. Journal of Applied Physics, 1994, 76, 2429-2434.	1.1	171
14	Electron transport mechanism in gallium nitride. Applied Physics Letters, 1993, 62, 72-74.	1.5	161
15	Blue-violet light emitting gallium nitride pn junctions grown by electron cyclotron resonance-assisted molecular beam epitaxy. Applied Physics Letters, 1995, 66, 268-270.	1.5	157
16	High reflectivity and broad bandwidth AlN/GaN distributed Bragg reflectors grown by molecular-beam epitaxy. Applied Physics Letters, 2000, 76, 2818-2820.	1.5	156
17	Optoelectronic control of surface charge and translocation dynamics in solid-state nanopores. Nature Nanotechnology, 2013, 8, 946-951.	15.6	149
18	Optical properties and temperature dependence of the interband transitions of cubic and hexagonal GaN. Physical Review B, 1994, 50, 18017-18029.	1.1	147

#	ARTICLE	IF	CITATIONS
19	Hydrogenation of $\alpha$ -type gallium nitride. Applied Physics Letters, 1994, 64, 2264-2266.	1.5	143
20	Growth of gallium nitride by electron-cyclotron resonance plasma-assisted molecular-beam epitaxy: The role of charged species. Journal of Applied Physics, 1994, 76, 4587-4595.	1.1	130
21	Deep ultraviolet emitting AlGaIn quantum wells with high internal quantum efficiency. Applied Physics Letters, 2009, 94, .	1.5	130
22	Long range order in $\text{Al}_x\text{Ga}_{1-x}\text{N}$ films grown by molecular beam epitaxy. Applied Physics Letters, 1997, 71, 72-74.	1.5	123
23	Sub-bandgap absorption of gallium nitride determined by Photothermal Deflection Spectroscopy. Solid State Communications, 1996, 97, 365-370.	0.9	116
24	Intensity dependence of photoluminescence in GaN thin films. Applied Physics Letters, 1994, 64, 336-338.	1.5	113
25	Surface and bulk electronic structure of thin-film wurtzite GaN. Physical Review B, 1997, 56, 10271-10275.	1.1	108
26	Quantized Electron Accumulation States in Indium Nitride Studied by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2006, 97, 237601.	2.9	103
27	Growth kinetics of AlGaIn films by plasma-assisted molecular-beam epitaxy. Applied Physics Letters, 2002, 81, 295-297.	1.5	100
28	Broadening of near-band-gap photoluminescence in n-GaN films. Applied Physics Letters, 1998, 73, 375-377.	1.5	98
29	Monte Carlo study of GaN versus GaAs terahertz quantum cascade structures. Applied Physics Letters, 2008, 92, .	1.5	98
30	Monte Carlo simulation of terahertz quantum cascade laser structures based on wide-bandgap semiconductors. Journal of Applied Physics, 2009, 105, .	1.1	98
31	Growth of gallium nitride thin films by electron cyclotron resonance microwave plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 1993, 73, 448-455.	1.1	97
32	Distributed Bragg reflectors based on AlN/GaN multilayers. Applied Physics Letters, 1999, 74, 1036-1038.	1.5	81
33	Density of states, hybridization, and band-gap evolution in $\text{Al}_x\text{Ga}_{1-x}\text{N}$ alloys. Physical Review B, 1998, 58, 1928-1933.	1.1	76
34	Conduction-electron spin resonance in zinc-blende GaN thin films. Physical Review B, 1993, 48, 15144-15147.	1.1	74
35	Enhanced near-green light emission from InGaIn quantum wells by use of tunable plasmonic resonances in silver nanoparticle arrays. Optics Express, 2010, 18, 21322.	1.7	69
36	Ultrafast all-optical switching with low saturation energy via intersubband transitions in GaN/AlN quantum-well waveguides. Optics Express, 2007, 15, 17922.	1.7	67

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37	Thickness dependent thermal conductivity of gallium nitride. Applied Physics Letters, 2017, 110, .	1.5	67
38	Epitaxial growth of gallium nitride thin films on A-Plane sapphire by molecular beam epitaxy. Journal of Applied Physics, 1999, 85, 3582-3589.	1.1	66
39	Local vibrational modes in Mg-doped gallium nitride. Physical Review B, 1994, 49, 14758-14761.	1.1	65
40	Strongly localized excitons in gallium nitride. Applied Physics Letters, 1996, 68, 2556-2558.	1.5	65
41	Electronic structure of GaN measured using soft-x-ray emission and absorption. Physical Review B, 1996, 54, R17335-R17338.	1.1	64
42	Chemical ordering in AlGaIn alloys grown by molecular beam epitaxy. Applied Physics Letters, 2001, 78, 463-465.	1.5	62
43	Microstructures of GaN films deposited on (001) and (111) Si substrates using electron cyclotron resonance assisted-molecular beam epitaxy. Journal of Materials Research, 1994, 9, 2370-2378.	1.2	60
44	Far-infrared intersubband photodetectors based on double-step III-nitride quantum wells. Applied Physics Letters, 2012, 100, 241113.	1.5	60
45	Thermal transport through GaN/SiC interfaces from 300 to 600 K. Applied Physics Letters, 2015, 107, .	1.5	60
46	Characteristics of light-emitting diodes based on GaN p-n junctions grown by plasma-assisted molecular beam epitaxy. Journal of Applied Physics, 1996, 79, 2779-2783.	1.1	59
47	Electrical characterization of GaN/SiC n-p heterojunction diodes. Applied Physics Letters, 1998, 72, 1371-1373.	1.5	55
48	Experimental determination of the N-p-partial density of states in the conduction band of GaN: Determination of the polytype fractions in mixed phase samples. Journal of Applied Physics, 1998, 83, 1437-1445.	1.1	54
49	Efficient p-type doping of GaN films by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2004, 85, 4956-4958.	1.5	51
50	Defects in diamond thin films. Physical Review B, 1993, 48, 14982-14988.	1.1	48
51	Operation of a compact electron cyclotron resonance source for the growth of gallium nitride by molecular beam epitaxy (ECR-MBE). Journal of Electronic Materials, 1995, 24, 275-281.	1.0	47
52	Domain structure in chemically ordered In <sub>x</sub> Ga <sub>1-x</sub> N alloys grown by molecular beam epitaxy. Journal of Applied Physics, 1999, 85, 883-886.	1.1	44
53	Formation of large-area freestanding gallium nitride substrates by natural stress-induced separation of GaN and sapphire. Journal of Crystal Growth, 2007, 300, 37-41.	0.7	43
54	Plasmon-enhanced light emission based on lattice resonances of silver nanocylinder arrays. Optics Letters, 2012, 37, 79.	1.7	42

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55	Photoconductive detectors based on partially ordered Al <sub>x</sub> Ga <sub>1-x</sub> N alloys grown by molecular beam epitaxy. Applied Physics Letters, 1999, 74, 2203-2205.	1.5	40
56	Nonlinear optical waveguides based on near-infrared intersubband transitions in GaN/AlN quantum wells. Optics Express, 2007, 15, 5860.	1.7	40
57	Complex and incommensurate ordering in Al <sub>0.72</sub> Ga <sub>0.28</sub> N thin films grown by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2006, 88, 181915.	1.5	38
58	Intersubband absorption in AlN/GaN/AlGaIn coupled quantum wells. Applied Physics Letters, 2007, 91, 141104.	1.5	37
59	Micro-Raman imaging of GaN hexagonal island structures. Applied Physics Letters, 1999, 75, 1757-1759.	1.5	36
60	Investigation of the design parameters of AlN/GaN multiple quantum wells grown by molecular beam epitaxy for intersubband absorption. Journal of Crystal Growth, 2005, 278, 387-392.	0.7	34
61	Study of defects in wide band gap semiconductors by electron paramagnetic resonance. Physica B: Condensed Matter, 1993, 185, 228-233.	1.3	33
62	Electrical conductivity studies of diamond films prepared by electron cyclotron resonance microwave plasma. Applied Physics Letters, 1993, 63, 2354-2356.	1.5	33
63	Application of near-edge x-ray absorption fine structure for the identification of hexagonal and cubic polytypes in epitaxial GaN. Applied Physics Letters, 1996, 69, 4206-4208.	1.5	31
64	Investigation of vertical transport in n-GaN films grown by molecular beam epitaxy using Schottky barrier diodes. Applied Physics Letters, 2000, 76, 1045-1047.	1.5	31
65	Plasmon enhanced light emission from InGaIn quantum wells via coupling to chemically synthesized silver nanoparticles. Applied Physics Letters, 2009, 95, 151109.	1.5	30
66	Growth and properties of In <sub>x</sub> Ga <sub>1-x</sub> N/Al <sub>y</sub> Ga <sub>1-y</sub> N multiquantum wells developed by molecular beam epitaxy. Applied Physics Letters, 1996, 69, 2388-2390.	1.5	28
67	NK-edge x-ray-absorption study of heteroepitaxial GaN films. Physical Review B, 1997, 56, 13380-13386.	1.1	27
68	Photoluminescence and pressure effects in short period InN/nGaN superlattices. Journal of Applied Physics, 2013, 113, 123101.	1.1	26
69	Comparative study of GaN/AlGaIn MQWs grown homoepitaxially on and (0001) GaN. Journal of Crystal Growth, 2003, 251, 487-493.	0.7	25
70	Study of defects in diamond films with electron paramagnetic resonance measurements. Diamond and Related Materials, 1992, 1, 773-775.	1.8	24
71	X-ray characterization of GaN/AlGaIn multiple quantum wells for ultraviolet laser diodes. Applied Physics Letters, 1998, 72, 1004-1006.	1.5	24
72	Surface electronic structure of p-type GaN(0001). Surface Science, 2000, 467, L827-L833.	0.8	23

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73	Ultraviolet electroabsorption modulator based on AlGaIn <sup>x</sup> GaN multiple quantum wells. Journal of Applied Physics, 2005, 97, 123515.	1.1	22
74	Sequential tunneling transport characteristics of GaN/AlGaIn coupled-quantum-well structures. Journal of Applied Physics, 2010, 108, 103704.	1.1	22
75	Composition dependent bilayer atomic ordering in Al <sub>x</sub> Ga <sub>1-x</sub> N films examined by polarization-dependent extended x-ray absorption fine structure. Applied Physics Letters, 2012, 100, .	1.5	22
76	Unoccupied band structure of wurtzite GaN(0001). Physical Review B, 1999, 59, 5003-5007.	1.1	21
77	Epitaxial growth and self-organized superlattice structures in AlGaIn films grown by plasma assisted molecular beam epitaxy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 87, 227-236.	1.7	21
78	High power ultraviolet light emitting diodes based on GaIn <sup>x</sup> AlGaIn quantum wells produced by molecular beam epitaxy. Journal of Applied Physics, 2006, 100, 104506.	1.1	21
79	Structural characterization of non-polar (1120) and semi-polar (1126) GaN films grown on r-plane sapphire. Journal of Crystal Growth, 2008, 310, 2981-2986.	0.7	21
80	Investigation of excitons in AlGaIn/GaN multiple quantum wells by lateral photocurrent and photoluminescence spectroscopies. Journal of Applied Physics, 2004, 95, 3495-3502.	1.1	20
81	Two-dimensional electron gas in monolayer InN quantum wells. Applied Physics Letters, 2014, 105, 213503.	1.5	20
82	Deep ultraviolet distributed Bragg reflectors based on graded composition AlGaIn alloys. Applied Physics Letters, 2015, 106, .	1.5	19
83	The optical properties and electronic transitions of cubic and hexagonal GaN films between 1.5 and 10 eV. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1995, 29, 65-69.	1.7	18
84	Optical properties of GaN grown over SiO <sub>2</sub> on SiC substrates by molecular beam epitaxy. Applied Physics Letters, 1998, 72, 244-245.	1.5	18
85	Growth and silicon doping of AlGaIn films in the entire alloy composition by molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2220-2223.	0.8	18
86	Plasmonic off-axis unidirectional beaming of quantum-well luminescence. Applied Physics Letters, 2013, 103, .	1.5	18
87	Study of group-III binary and ternary nitrides using X-ray absorption fine structure measurements. Journal of Crystal Growth, 2001, 230, 405-409.	0.7	17
88	Deep-UV optical gain in AlGaIn-based graded-index separate confinement heterostructure. Optical Materials Express, 2015, 5, 809.	1.6	17
89	Complex ordering in ternary wurtzite nitride alloys. Journal of Physics and Chemistry of Solids, 2003, 64, 1525-1532.	1.9	16
90	Microstructure of relaxed InN quantum dots grown on GaN buffer layers by molecular-beam epitaxy. Applied Physics Letters, 2006, 88, 231906.	1.5	16

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91	Measurement of electric field across individual wurtzite GaN quantum dots using electron holography. Applied Physics Letters, 2011, 99, .	1.5	16
92	Growth of InN films by RF plasma-assisted MBE and cluster beam epitaxy. Journal of Crystal Growth, 2006, 288, 254-260.	0.7	15
93	Photoluminescence microscopy of InGaN quantum wells. Applied Physics Letters, 1997, 70, 1333-1335.	1.5	14
94	Intermixing and chemical structure at the interface between n-GaN and V-based contacts. Applied Physics Letters, 2008, 93, .	1.5	14
95	GalliumK-edge EXAFS measurements on cubic and hexagonal GaN. Journal of Synchrotron Radiation, 1999, 6, 561-563.	1.0	13
96	Well width dependence of disorder effects on the optical properties of AlGaIn <sup>x</sup> GaN quantum wells. Applied Physics Letters, 2004, 85, 3068-3070.	1.5	13
97	Electronic characterization of diamond films prepared by electron cyclotron resonance microwave plasma. Diamond and Related Materials, 1994, 3, 878-882.	1.8	12
98	Photoemission study of sulfur and oxygen adsorption on GaN(). Surface Science, 2006, 600, 116-123.	0.8	12
99	Nitrogen in diamond thin films. Physica B: Condensed Matter, 1996, 229, 27-36.	1.3	11
100	Comparison of Fe and Si doping of GaN: An EXAFS and Raman study. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 723-726.	1.7	10
101	Doping, Schottky barrier and p-n junction formation in amorphous germanium and silicon by rf sputtering. Solid State Communications, 1993, 88, 1019-1022.	0.9	9
102	Interfacial and defect structures in multilayered GaN/AlN films. Journal of Physics Condensed Matter, 2002, 14, 13277-13283.	0.7	9
103	Growth of diamond thin films by ECR plasma-assisted CVD at low pressures and temperatures. Diamond and Related Materials, 1993, 2, 1355-1359.	1.8	8
104	Observation of an inverted band structure near the surface of InN. Europhysics Letters, 2008, 83, 47003.	0.7	7
105	Microstructure of vanadium-based contacts on n-type GaN. Journal Physics D: Applied Physics, 2012, 45, 105401.	1.3	5
106	Potassium and ion beam induced electron accumulation in InN. Surface Science, 2015, 632, 154-157.	0.8	5
107	NitrogenK-edge EXAFS measurements on Mg- and Si-doped GaN. Journal of Synchrotron Radiation, 1999, 6, 555-557.	1.0	4
108	Surface degradation of In <sub>x</sub> Ga <sub>1-x</sub> N thin films by sputter-anneal processing: A scanning photoemission microscope study. Journal of Applied Physics, 2003, 94, 5820-5825.	1.1	4

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109	Resonant shake-up satellites in photoemission at the Ga 3p photothreshold in GaN. Solid State Communications, 2005, 136, 191-195.	0.9	4
110	InN/GaN Superlattices: Band Structures and Their Pressure Dependence. Japanese Journal of Applied Physics, 2013, 52, 08JL06.	0.8	4
111	Vacuum flashover on diamond-like carbon-coated insulators. IEEE Transactions on Dielectrics and Electrical Insulation, 1996, 3, 108-112.	1.8	3
112	MBE Grown AlN Films on SiC for Piezoelectric MEMS Sensors. Materials Research Society Symposia Proceedings, 2003, 798, 193.	0.1	3
113	Temperature dependent photon echoes of a GaN thin film. Applied Physics Letters, 2012, 101, 142102.	1.5	2
114	NitrogenK-edge NEXAFS measurements on group-III binary and ternary nitrides. Journal of Synchrotron Radiation, 1999, 6, 558-560.	1.0	1
115	Resonant photoemission at the Ga 3p photothreshold in $\text{In}_x\text{Ga}_{1-x}\text{N}$ . Journal of Electron Spectroscopy and Related Phenomena, 2006, 152, 25-28.	0.8	1
116	Materials Issues for Vertical Gallium Nitride Power Devices. ECS Transactions, 2013, 58, 427-438.	0.3	1
117	Ultraviolet light emitting diodes using non-polar A-plane AlGaIn multiple quantum wells. Materials Research Society Symposia Proceedings, 2006, 955, 1.	0.1	0
118	1-D wavefunction localization and effective quantum wire behavior inside QWs deposited on textured GaN materials. , 2007, , .		0
119	Growth and characterization of deep ultraviolet emitting AlGaIn structures on SiC substrates. , 2011, , .		0
120	Coupled Metallic Thin-Film/Nanoparticle-Array Systems for Far-Field Engineering of Quantum-Well Luminescence. , 2012, , .		0