Michael A Mastro

List of Publications by Year
in descending order

42 papers	3,087 citations	516215 16 h-index	329751 37 g-index
42 all docs	42 docs citations	42 times ranked	2780 citing authors

#	Article	IF	Citations
1	A review of Ga2O3 materials, processing, and devices. Applied Physics Reviews, 2018, 5, .	5.5	1,816
2	Perspectiveâ€"Opportunities and Future Directions for Ga₂O₃. ECS Journal of Solid State Science and Technology, 2017, 6, P356-P359.	0.9	352
3	Exfoliated Î²-Ga₂O₃ nano-belt field-effect transistors for air-stable high power and high temperature electronics. Physical Chemistry Chemical Physics, 2016, 18, 15760-15764.	1.3	136
4	Effect of front and back gates on Î²-Ga2O3 nano-belt field-effect transistors. Applied Physics Letters, 2016, 109, .	1.5	93
5	Quasi-Two-Dimensional h-BN/Î²-Ga₂O₃ Heterostructure Metalâ€"Insulatorâ€"Semiconductor Field-Effect Transistor. ACS Applied Materials & Interfaces, 2017, 9, 21322-21327.	4.0	92
6	Heterostructure WSe₂â^'Ga₂O₃ Junction Field-Effect Transistor for Low-Dimensional High-Power Electronics. ACS Applied Materials & Interfaces, 2018, 10, 29724-29729.	4.0	88
7	Substrate-Dependent Effects on the Response of AlGaN/GaN HEMTs to 2-MeV Proton Irradiation. IEEE Electron Device Letters, 2014, 35, 826-828.	2.2	78
8	Perspectives on future directions in III-N semiconductor research. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	39
9	Thermal atomic layer etching of crystalline GaN using sequential exposures of XeF2 and BCl3. Applied Physics Letters, 2019, 114, .	1.5	38
10	Effect of GaN surface treatment on Al2O3/n-GaN MOS capacitors. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	0.6	29
11	Design of Gallium Nitride Resonant Cavity Lightâ€Emitting Diodes on Si Substrates. Advanced Materials, 2008, 20, 115-118.	11.1	28
12	Polarization fields in III-nitride nanowire devices. Nanotechnology, 2010, 21, 145205.	1.3	27
13	Selective chemical etch of gallium nitride by phosphoric acid. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, 040602.	0.9	22
14	Initiating polarity inversion in GaN growth using an AlN interlayer. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1504-1506.	0.8	21
15	Impact of surface treatments on high-Îº dielectric integration with Ga-polar and N-polar GaN. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	20
16	Controlling the threshold voltage of Î²-Ga₂O₃ field-effect transistors via remote fluorine plasma treatment. Journal of Materials Chemistry C, 2019, 7, 8855-8860.	2.7	17
17	Optical and electrical characterization of AlGaN/GaN high electron mobility transistors irradiated with 5MeV protons. Journal of Crystal Growth, 2011, 326, 62-64.	0.7	16
18	Valence and Conduction Band Offsets for InN and III-Nitride Ternary Alloys on (â^'201) Bulk Î²-Ga₂O₃. ECS Journal of Solid State Science and Technology, 2019, 8, Q3154-Q3158.	0.9	15

#	Article	IF	Citations
19	Plasmonically enhanced emission from a group-III nitride nanowire emitter. Nanotechnology, 2007, 18, 265401.	1.3	13
20	Non-toxic inhibition of HIV-1 replication with silverâ€“copper nanoparticles. Medicinal Chemistry Research, 2010, 19, 1074-1081.	1.1	13
21	Design of Ga2O3 modulation doped field effect transistors. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	13
22	Array of Two UV-Wavelength Detector Types. IEEE Transactions on Electron Devices, 2010, 57, 1224-1229.	1.6	12
23	Group-III Nitride P-Ttype Nanowire Heterostructure Field Effect Transistors. ECS Transactions, 2008, 13, 21-27.	0.3	11
24	Homoepitaxial GaN micropillar array by plasma-free photo-enhanced metal-assisted chemical etching. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	11
25	Site control of quantum emitters in gallium nitride by polarity. Applied Physics Letters, 2021, 118, .	1.5	10
26	Delta-doped Î²-(AlxGa1â^'x)2O3/Ga2O3 heterostructure field-effect transistors by ozone molecular beam epitaxy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	10
27	Experimental study of plasmonically enhanced GaN nanowire light emitters. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 378-382.	0.8	9
28	Degradation mechanisms of AlGaN/GaN HEMTs on sapphire, Si, and SiC substrates under proton irradiation. , 2014, , .		9
29	Determination of GaN polarity on periodically oriented surfaces. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 011206.	0.6	8
30	Effect of GaN Substrate Properties on Vertical GaN PiN Diode Electrical Performance. Journal of Electronic Materials, 2021, 50, 3013-3021.	1.0	8
31	Violet electroluminescence from p-GaN thin film/n-GaN nanowire homojunction. Applied Physics Letters, 2010, 96, 132105.	1.5	7
32	Towards a polariton-based light emitter based on non-polar GaN quantum wells. Solid State Communications, 2009, 149, 2039-2042.	0.9	6
33	Band offset determination for amorphous Al2O3 deposited on bulk AlN and atomic-layer epitaxial AlN on sapphire. Applied Physics Letters, 2020, 117, 182103.	1.5	5
34	Recent Results From Epitaxial Growth on Step Free 4H-SiC Mesas. Materials Research Society Symposia Proceedings, 2006, 911, 3.	0.1	4
35	Emission enhancement from nonpolar a-plane III-nitride nanopillar. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 021004.	0.6	3
36	Assessment of the (010) Î²-Ga2O3 surface and substrate specification. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 013408.	0.9	3

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37	(Invited) GaN Homoepitaxial Growth and Substrate-Dependent Effects for Vertical Power Devices. ECS Transactions, 2020, 98, 63-67.	0.3	3
38	The influence of substrate atomic step morphology on threading dislocation distributions in iii-nitride films. , 2007, , .		1
39	IIIâ€nitride nanowire based light emitting diodes on carbon paper. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 442-445.	0.8	1
40	Investigation of nanocrystalline diamond films as UV transparent Ohmic contacts to GaN. , 2007, , .		0
41	Nickel Foam as a Substrate for III-nitride Nanowire Growth. Materials Research Society Symposia Proceedings, 2013, 1538, 311-316.	0.1	0
42	Allâ€epitaxial fabrication of a nanowire plasmon laser structure. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 754-757.	0.8	0