Michael A Mastro

List of Publications by Year in Descending Order

40 papers	2,086 citations	15 h-index	42 g-index
42 ext. papers	2,568 ext. citations	3.9 avg, IF	5.22 L-index

#	Paper	IF	Citations
40	Effect of GaN Substrate Properties on Vertical GaN PiN Diode Electrical Performance. *Journal of Electronic Materials*, **2021**, 50, 3013-3021	1.9	4
39	Delta-doped β-(AlxGa1−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, 033402	2.9	2
38	Site control of quantum emitters in gallium nitride by polarity. *Applied Physics Letters*, **2021**, 118, 021103	3.4	4
37	Design of Ga2O3 modulation doped field effect transistors. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2021**, 39, 023412	2.9	4
36	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, 053212	2.9	4
35	Assessment of the (010) β-Ga2O3 surface and substrate specification. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2021**, 39, 013408	2.9	2
34	Band offset determination for amorphous Al2O3 deposited on bulk AlN and atomic-layer epitaxial AlN on sapphire. *Applied Physics Letters*, **2020**, 117, 182103	3.4	1
33	(Invited) GaN Homoepitaxial Growth and Substrate-Dependent Effects for Vertical Power Devices. *ECS Transactions*, **2020**, 98, 63-67	1	3
32	Controlling the threshold voltage of β-Ga2O3 field-effect transistors via remote fluorine plasma treatment. *Journal of Materials Chemistry C*, **2019**, 7, 8855-8860	7.1	13
31	Valence and Conduction Band Offsets for InN and III-Nitride Ternary Alloys on (2̄01) Bulk β-Ga2O3. *ECS Journal of Solid State Science and Technology*, **2019**, 8, Q3154-Q3158	2	9
30	Thermal atomic layer etching of crystalline GaN using sequential exposures of XeF2 and BCl3. *Applied Physics Letters*, **2019**, 114, 243103	3.4	23
29	A review of Ga2O3 materials, processing, and devices. *Applied Physics Reviews*, **2018**, 5, 011301	17.3	1114
28	Heterostructure WSe-GaO Junction Field-Effect Transistor for Low-Dimensional High-Power Electronics. *ACS Applied Materials & Interfaces*, **2018**, 10, 29724-29729	9.5	60
27	Perspective□pportunities and Future Directions for Ga2O3. *ECS Journal of Solid State Science and Technology*, **2017**, 6, P356-P359	2	261
26	Quasi-Two-Dimensional h-BN/β-GaO Heterostructure Metal-Insulator-Semiconductor Field-Effect Transistor. *ACS Applied Materials & Interfaces*, **2017**, 9, 21322-21327	9.5	71
25	Effect of front and back gates on β-Ga2O3 nano-belt field-effect transistors. *Applied Physics Letters*, **2016**, 109, 062102	3.4	79
24	Exfoliated β-Ga2O3 nano-belt field-effect transistors for air-stable high power and high temperature electronics. *Physical Chemistry Chemical Physics*, **2016**, 18, 15760-4	3.6	111

23	Determination of GaN polarity on periodically oriented surfaces. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2015**, 33, 011206	1.3	7
22	Effect of GaN surface treatment on Al2O3/n-GaN MOS capacitors. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2015**, 33, 061201	1.3	22
21	III-nitride nanowire based light emitting diodes on carbon paper. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2014**, 11, 442-445		1
20	All-epitaxial fabrication of a nanowire plasmon laser structure. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2014**, 11, 754-757		
19	Substrate-Dependent Effects on the Response of AlGaN/GaN HEMTs to 2-MeV Proton Irradiation. *IEEE Electron Device Letters*, **2014**, 35, 826-828	4.4	65
18	Degradation mechanisms of AlGaN/GaN HEMTs on sapphire, Si, and SiC substrates under proton irradiation **2014**,		6
17	Impact of surface treatments on high-□dielectric integration with Ga-polar and N-polar GaN. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2014**, 32, 03D106	1.3	17
16	Perspectives on future directions in III-N semiconductor research. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2013**, 31, 058501	2.9	33
15	Nickel Foam as a Substrate for III-nitride Nanowire Growth. *Materials Research Society Symposia Proceedings*, **2013**, 1538, 311-316		
14	Selective chemical etch of gallium nitride by phosphoric acid. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2012**, 30, 040602	2.9	20
13	Optical and electrical characterization of AlGaN/GaN high electron mobility transistors irradiated with 5MeV protons. *Journal of Crystal Growth*, **2011**, 326, 62-64	1.6	14
12	Initiating polarity inversion in GaN growth using an AlN interlayer. *Physica Status Solidi (A) Applications and Materials Science*, **2011**, 208, 1504-1506	1.6	18
11	Emission enhancement from nonpolar a-plane III-nitride nanopillar. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2011**, 29, 021004	1.3	3
10	Violet electroluminescence from p-GaN thin film/n-GaN nanowire homojunction. *Applied Physics Letters*, **2010**, 96, 132105	3.4	7
9	Polarization fields in III-nitride nanowire devices. *Nanotechnology*, **2010**, 21, 145205	3.4	22
8	Non-toxic inhibition of HIV-1 replication with silver□copper nanoparticles. *Medicinal Chemistry Research*, **2010**, 19, 1074-1081	2.2	9
7	Array of Two UV-Wavelength Detector Types. *IEEE Transactions on Electron Devices*, **2010**, 57, 1224-1229	2.9	11
6	Towards a polariton-based light emitter based on non-polar GaN quantum wells. *Solid State Communications*, **2009**, 149, 2039-2042	1.6	6

5	Group-III Nitride P-Ttype Nanowire Heterostructure Field Effect Transistors. *ECS Transactions*, **2008**, 13, 21-27	1	9
4	Experimental study of plasmonically enhanced GaN nanowire light emitters. *Physica Status Solidi (A) Applications and Materials Science*, **2008**, 205, 378-382	1.6	9
3	Design of Gallium Nitride Resonant Cavity Light-Emitting Diodes on Si Substrates. *Advanced Materials*, **2008**, 20, 115-118	24	25
2	Plasmonically enhanced emission from a group-III nitride nanowire emitter. *Nanotechnology*, **2007**, 18, 265401	3.4	13
1	Recent Results From Epitaxial Growth on Step Free 4H-SiC Mesas. *Materials Research Society Symposia Proceedings*, **2006**, 911, 3		4