Mark E Twigg

List of Publications by Year
in descending order

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50 papers	560 citations	567281 15 h-index	642732 23 g-index
50 all docs	50 docs citations	50 times ranked	571 citing authors

#	Article	IF	Citations
1	Transmission electron microscopy analysis of reduction reactions and phase transformations in Nb2O5 films deposited by atomic layer deposition. Journal of Applied Physics, 2021, 129, .	2.5	4
2	Dislocation blocking in elastically anisotropic semiconductor thin films. Journal of Applied Physics, 2021, 130, 165303.	2.5	0
3	In Situ Hydrogen Plasma Exposure for Varying the Stoichiometry of Atomic Layer Deposited Niobium Oxide Films for Use in Neuromorphic Computing Applications. ACS Applied Materials & Interfaces, 2020, 12, 16639-16647.	8.0	16
4	Three-dimensional visualization of Sb segregation in InAs/InAsSb superlattices using atom probe tomography. Journal of Applied Physics, 2020, 128, .	2.5	8
5	10.1063/1.5143446.1. , 2020, , .		0
6	Sb-incorporation in MBE-grown metamorphic InAsSb for long-wavelength infrared applications. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, .	1.2	9
7	High absorption long wave infrared superlattices using metamorphic buffers. Applied Physics Letters, 2017, 110, 181107.	3.3	7
8	Defect sensitive etching of hexagonal boron nitride single crystals. Journal of Applied Physics, 2017, 122, .	2.5	10
9	Formation and stability of crystalline and amorphous Al2O3 layers deposited on Ga2O3 nanowires by atomic layer epitaxy. Journal of Applied Physics, 2016, 120, 124311.	2.5	11
10	Threading and Near-Surface Dislocations in InGaSb/AlSb Films with Blocking and Anti-Blocking Layers. Journal of Electronic Materials, 2016, 45, 2102-2107.	2.2	6
11	Growth of crystalline Al2O3 via thermal atomic layer deposition: Nanomaterial phase stabilization. APL Materials, 2014, 2, .	5.1	25
12	Energy-Filtered Transmission Electron Microscope Tomography of Silicon Nanoparticles in Silicon Dioxide Deposited with High Density Plasma Chemical Vapor Deposition. Microscopy and Microanalysis, 2014, 20, 810-811.	0.4	0
13	Initiating polarity inversion in GaN growth using an AlN interlayer. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1504-1506.	1.8	21
14	Diffraction Contrast of Threading Dislocations in GaN and 4H-SiC Epitaxial Layers Using Electron Channeling Contrast Imaging. Journal of Electronic Materials, 2010, 39, 743-746.	2.2	5
15	Analysis of strain compensated GaAs-based InAs QD solar cells. , 2009, , .		3
16	Structure and defects in multilayer CVD graphene on C-face 6H-SiC. , 2009, , .		0
17	Epitaxial SiC Growth Morphology and Extended Defects Investigated by Electron Backscatter Diffraction and Electron Channeling Contrast Imaging. Journal of Electronic Materials, 2008, 37, 691-698.	2.2	11
18	Experimental study of plasmonically enhanced GaN nanowire light emitters. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 378-382.	1.8	9

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19	Nondestructive defect measurement and surface analysis of 3C-SiC on Si (001) by electron channeling contrast imaging. Materials Research Society Symposia Proceedings, 2008, 1068, 1.	0.1	0
20	Lateral/vertical Homoepitaxial Growth on 4H-SiC Surfaces Controlled by Dislocations. Materials Research Society Symposia Proceedings, 2008, 1069, 1.	0.1	0
21	Nondestructive dislocation delineation using topographically enhanced imaging of surface morphologies in 4H-SiC epitaxial layers. Journal of Applied Physics, 2008, 103, .	2.5	7
22	The influence of substrate atomic step morphology on threading dislocation distributions in iii-nitride films. , 2007, , .		1
23	Recent Results From Epitaxial Growth on Step Free 4H-SiC Mesas. Materials Research Society Symposia Proceedings, 2006, 911, 3.	0.1	4
24	Planar defects in 4H-SiC PiN diodes. Journal of Electronic Materials, 2005, 34, 351-356.	2.2	0
25	Investigation of three-step epilayer growth approach of GaN films to minimize compensation. Journal of Electronic Materials, 2005, 34, 1187-1192.	2.2	17
26	Technique for site-specific plan-view transmission electron microscopy of nanostructural electronic devices. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 1107.	1.6	2
27	Partial dislocations and stacking faults in 4H-SiC PiN diodes. Journal of Electronic Materials, 2004, 33, 472-476.	2.2	5
28	Ga vacancies and grain boundaries in GaN. Applied Physics Letters, 2003, 82, 1021-1023.	3.3	24
29	Extended Defects in 4H-SiC PiN Diodes. Materials Research Society Symposia Proceedings, 2002, 742, 371.	0.1	0
30	Effect of growth temperature on the microstructure of the nucleation layers of GaN grown by MOCVD on (11<ovl>2</ovl>0) sapphire. Materials Research Society Symposia Proceedings, 2002, 743, L3.19.1.	0.1	1
31	Correlation between nucleation layer structure, dislocation density, and electrical resistivity for GaN films grown on a-plane sapphire by metalorganic vapor phase epitaxy. Applied Physics Letters, 2001, 79, 4322-4324.	3.3	17
32	Microstructure of GaN Grown on (1120) Sapphire. Materials Research Society Symposia Proceedings, 2000, 639, 391.	0.1	0
33	The influence of OMVPE growth pressure on the morphology, compensation, and doping of GaN and related alloys. Journal of Electronic Materials, 2000, 29, 21-26.	2.2	51
34	Nucleation layer microstructure, grain size, and electrical properties in GaN grown on a-plane sapphire. Applied Physics Letters, 1999, 75, 686-688.	3.3	20
35	Anion control in molecular beam epitaxy of mixed As/Sb III-V heterostructures. Journal of Applied Physics, 1999, 85, 2157-2161.	2.5	38
36	The impact of nitridation and nucleation layer process conditions on morphology and electron transport in GaN epitaxial films. Journal of Electronic Materials, 1999, 28, 301-307.	2.2	36

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37	The Use of AlN Interlayers to Improve GaN Growth on A-Plane Sapphire. Materials Research Society Symposia Proceedings, 1999, 587, O7.3.1.	0.1	0
38	Interfacial disorder in InAs/GaSb superlattices. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 77, 7-30.	0.6	20
39	Enhancement of electrical and structural properties of GaN layers grown on vicinal-cut, a-plane sapphire substrates. Applied Physics Letters, 1998, 73, 608-610.	3.3	35
40	Enhanced GaN decomposition in H2 near atmospheric pressures. Applied Physics Letters, 1998, 73, 2018-2020.	3.3	76
41	Limitations to the use of Sb as a Surfactant During SiGe MBE. Materials Research Society Symposia Proceedings, 1998, 533, 289.	0.1	0
42	Nanoscale Features Grown by MBE on Nonplanar Patterned Si Substrates. Materials Research Society Symposia Proceedings, 1995, 380, 9.	0.1	0
43	Influence of interace and buffer layer on the structure of InAs/GaSb superlattices. Applied Physics Letters, 1995, 67, 1609-1611.	3.3	12
44	Thermal stressâ€induced, highâ€strain fragmentation of buried SiGe layers grown on Si. Applied Physics Letters, 1995, 67, 2678-2680.	3.3	4
45	Structure of stacking fault pyramids in siliconâ€onâ€insulator material. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 2341-2347.	2.1	2
46	Interfacial roughness in InAs/GaSb superlattices. Applied Physics Letters, 1994, 64, 3476-3478.	3.3	17
47	Solidâ€phase regrowth of amorphous GaAs grown by lowâ€temperature molecularâ€beam epitaxy. Applied Physics Letters, 1993, 63, 320-321.	3.3	8
48	Distribution of Ge in O+implanted silicon. Applied Physics Letters, 1992, 61, 3142-3144.	3.3	2
49	Fabrication of Bond and Etchâ€Back Silicon on Insulator Using a Strained Si0.7Ge0.3 Layer as an Etch Stop. Journal of the Electrochemical Society, 1990, 137, 3219-3223.	2.9	16
50	The Nucleation and Growth of Germanium on (1102) Sapphire Deposited by Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 1989, 160, 505.	0.1	0