

Rafael Dalmau

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4425639/publications.pdf>

Version: 2024-02-01

49
papers

1,369
citations

430874
18
h-index

361022
35
g-index

50
all docs

50
docs citations

50
times ranked

1116
citing authors

#	ARTICLE	IF	CITATIONS
1	Progress on n-type doping of AlGaIn alloys on AlN single crystal substrates for UV optoelectronic applications. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2031-2033.	0.8	153
2	On the origin of the 265-nm absorption band in AlN bulk crystals. Applied Physics Letters, 2012, 100, .	3.3	137
3	Preparation of a Freestanding AlN Substrate from a Thick AlN Layer Grown by Hydride Vapor Phase Epitaxy on a Bulk AlN Substrate Prepared by Physical Vapor Transport. Applied Physics Express, 2012, 5, 055504.	2.4	121
4	Deep-Ultraviolet Light-Emitting Diodes Fabricated on AlN Substrates Prepared by Hydride Vapor Phase Epitaxy. Applied Physics Express, 2012, 5, 122101.	2.4	114
5	The growth and optical properties of large, high-quality AlN single crystals. Journal of Applied Physics, 2004, 96, 5870-5876.	2.5	92
6	Vacancy compensation and related donor-acceptor pair recombination in bulk AlN. Applied Physics Letters, 2013, 103, .	3.3	80
7	High-temperature electromechanical characterization of AlN single crystals. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 1880-1887.	3.0	63
8	The role of the carbon-silicon complex in eliminating deep ultraviolet absorption in AlN. Applied Physics Letters, 2014, 104, .	3.3	59
9	226-nm AlGaIn/AlN UV LEDs using p-type Si for hole injection and UV reflection. Applied Physics Letters, 2018, 113, .	3.3	59
10	229-nm UV LEDs on aluminum nitride single crystal substrates using p-type silicon for increased hole injection. Applied Physics Letters, 2018, 112, .	3.3	52
11	Characterization of dislocation arrays in AlN single crystals grown by PVT. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1545-1547.	1.8	37
12	Ni/Au Schottky diodes on Al _x Ga _{1-x} N (0.7<x<1) grown on AlN single crystal substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2407-2409.	0.8	37
13	X-ray characterization of composition and relaxation of Al _x Ga _{1-x} N (0<x<1) layers grown on GaN/sapphire templates by low pressure organometallic vapor phase epitaxy. Journal of Applied Physics, 2010, 108, .	2.5	30
14	Characterization of Threading Dislocations in PVT-Grown AlN Substrates via x-Ray Topography and Ray Tracing Simulation. Journal of Electronic Materials, 2014, 43, 838-842.	2.2	29
15	Low Defect Density Bulk AlN Substrates for High Performance Electronics and Optoelectronics. Materials Science Forum, 0, 717-720, 1287-1290.	0.3	26
16	(Invited) Polarization-Induced Doping in Graded AlGaIn Epilayers Grown on AlN Single Crystal Substrates. ECS Transactions, 2018, 86, 31-40.	0.5	26
17	Synchrotron white beam topography characterization of physical vapor transport grown AlN and ammonothermal GaN. Journal of Crystal Growth, 2002, 246, 271-280.	1.5	24
18	Impact of gallium supersaturation on the growth of n-polar GaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2078-2080.	0.8	24

#	ARTICLE	IF	CITATIONS
19	Characterization of bulk grown GaN and AlN single crystal materials. Journal of Crystal Growth, 2006, 287, 349-353.	1.5	20
20	Implementation of the GaN lateral polarity junction in a MESFET utilizing polar doping selectivity. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 45-48.	1.8	19
21	High Quality AlN Single Crystal Substrates for AlGaIn-Based Devices. Materials Science Forum, 0, 924, 923-926.	0.3	19
22	AlN Bulk Crystal Growth by Physical Vapor Transport. , 2010, , 821-843.		19
23	P-type silicon as hole supplier for nitride-based UVC LEDs. New Journal of Physics, 2019, 21, 023011.	2.9	16
24	Defect Generation Mechanisms in PVT-Grown AlN Single Crystal Boules. Materials Science Forum, 0, 740-742, 91-94.	0.3	14
25	Growth of AlN bulk crystals from the vapor phase. Materials Research Society Symposia Proceedings, 2001, 693, 780.	0.1	12
26	Influence of high-temperature processing on the surface properties of bulk AlN substrates. Journal of Crystal Growth, 2016, 446, 33-38.	1.5	12
27	Influences of screw dislocations on electroluminescence of AlGaIn/AlN-based UVC LEDs. AIP Advances, 2019, 9, .	1.3	11
28	Growth of highly resistive Ga-polar GaN by LP-MOVPE. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2260-2263.	0.8	8
29	Fabrication of a GaN p/n lateral polarity junction by polar doping selectivity. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1977-1979.	0.8	8
30	X-Ray Topography Characterization of Large Diameter AlN Single Crystal Substrates. Materials Science Forum, 0, 1004, 63-68.	0.3	7
31	Growth and Characterization of AlN and AlGaIn Epitaxial Films on AlN Single Crystal Substrates. ECS Transactions, 2010, 33, 43-54.	0.5	6
32	(Invited) Progress and Challenges of AlGaIn Schottky Diodes Grown on AlN Substrates. ECS Transactions, 2017, 80, 217-226.	0.5	6
33	Single crystal AlN substrates for AlGaIn-based UV optoelectronics. , 2017, , .		5
34	Crucible Selection in AlN Bulk Crystal Growth. Materials Research Society Symposia Proceedings, 2003, 798, 361.	0.1	4
35	<i>(Invited)</i> X-Ray Metrology of AlN Single Crystal Substrates. ECS Transactions, 2019, 92, 113-121.	0.5	4
36	Structural Characterization of Bulk AlN Single Crystals Grown from Self-Seeding and Seeding by SiC Substrates. Materials Science Forum, 2006, 527-529, 1521-1524.	0.3	3

#	ARTICLE	IF	CITATIONS
37	Study of Dislocations in Homoepitaxially and Heteroepitaxially Grown AlN Layers. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000465.	1.8	3
38	Hydride vapor phase epitaxy of Si-doped AlN layers using SiCl ₄ as a doping gas. Journal of Crystal Growth, 2020, 545, 125730.	1.5	3
39	Prismatic Slip in AlN Crystals Grown By PVT. ECS Transactions, 2021, 104, 57-64.	0.5	2
40	265 nm Light Emitting Diodes on AlN Single Crystal Substrates: Growth and Characterization. , 2011, , .		1
41	(Invited) Complex Relative Permittivity of UV-C Transparent AlN. ECS Transactions, 2021, 104, 49-56.	0.5	1
42	(Invited) Progress and Challenges of AlGaN Schottky Diodes Grown on AlN Substrates. ECS Meeting Abstracts, 2017, MA2017-02, 1342-1342.	0.0	1
43	(Invited) X-Ray Metrology of AlN Single Crystal Substrates. ECS Meeting Abstracts, 2019, , .	0.0	1
44	(Invited) Insights into the UV-C Optical Absorption of AlN Substrates Grown by PVT. ECS Transactions, 2020, 98, 3-11.	0.5	1
45	Synchrotron white beam x-ray topography (SWBXT) and high resolution triple axis diffraction studies on AlN layers grown on 4H- and 6H-SiC seeds. Materials Research Society Symposia Proceedings, 2004, 831, 631.	0.1	0
46	(Invited) Polarization-Induced Doping in Graded AlGaN Epilayers Grown on AlN Single Crystal Substrates. ECS Meeting Abstracts, 2018, , .	0.0	0
47	(Invited) Insights into the UV-C Optical Absorption of AlN Substrates Grown by PVT. ECS Meeting Abstracts, 2020, MA2020-02, 1802-1802.	0.0	0
48	Prismatic Slip in AlN Crystals Grown By PVT. ECS Meeting Abstracts, 2021, MA2021-02, 987-987.	0.0	0
49	(Invited) Complex Relative Permittivity of UV-C Transparent AlN. ECS Meeting Abstracts, 2021, MA2021-02, 986-986.	0.0	0