Hongyu Peng

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5077396/publications.pdf

Version: 2024-02-01

61 papers	482 citations	1040056 9 h-index	888059 17 g-index
62 all docs	62 docs citations	62 times ranked	387 citing authors

#	Article	IF	Citations
1	Synchrotron X-ray topographic characterization of dislocations in 6H-SiC axial samples. Journal of Crystal Growth, 2022, 579, 126459.	1.5	1
2	Strain mapping of GaN substrates and epitaxial layers used for power electronic devices by synchrotron X-ray rocking curve topography. Journal of Crystal Growth, 2022, 583, 126559.	1.5	3
3	Quantitative analysis of dislocations in 4H-SiC wafers using synchrotron X-ray topography with ultra-high angular resolution. Journal of Applied Crystallography, 2022, 55, 544-550.	4.5	5
4	Effect of Annealing Conditions on Recovery of Lattice Damage in a High-Energy-Implanted 4H-SiC Superjunction PIN Diode. ECS Journal of Solid State Science and Technology, 2022, 11, 065003.	1.8	2
5	X-ray Topography Characterization of GaN Substrates Used for Power Electronic Devices. Journal of Electronic Materials, 2021, 50, 2981-2989.	2.2	2
6	Influence of surface relaxation on the contrast of threading edge dislocations in synchrotron X-ray topographs under the condition of gâ€…Â·â€…b = 0 and gâ€…Â·â€…bâ€…Ã—â€…l = 0. Journa of Applied Crystallography, 2021, 54, 439-443.	4.5	6
7	Synchrotron X-ray Topography Studies of Dislocation Behavior During Early Stages of PVT Growth of 4H-SiC Crystals. Journal of Electronic Materials, 2021, 50, 3258-3265.	2.2	4
8	Characterization of Hazy Morphology on AlInP/GaAs Epitaxial Wafers Grown by Organometallic Vapor-Phase Epitaxy. Journal of Electronic Materials, 2021, 50, 3006-3012.	2.2	1
9	Synchrotron X-ray topographic image contrast variation of screw-type basal plane dislocations located at different depths below the crystal surface in 4H-SiC. Acta Materialia, 2021, 208, 116746.	7.9	10
10	Characterization of Dislocations in 6H-SiC Wafer Through X-Ray Topography and Ray-Tracing Simulations. Journal of Electronic Materials, 2021, 50, 4104-4117.	2.2	3
11	Dislocation contrast on X-ray topographs under weak diffraction conditions. Journal of Applied Crystallography, 2021, 54, 1225-1233.	4.5	9
12	Application of synchrotron X-ray topography to characterization of ion implanted GaN epitaxial layers for the development of vertical power devices. MRS Advances, 2021, 6, 450-455.	0.9	1
13	Surface relaxation and photoelectric absorption effects on synchrotron X-ray topographic images of dislocations lying on the basal plane in off-axis 4H-SiC crystals. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 271, 115281.	3.5	4
14	Microstructure Analysis of GaN Epitaxial Layers During Ion Implantation Using Synchrotron X-Ray Topography. ECS Transactions, 2021, 104, 113-122.	0.5	5
15	Characterization of 4H-SiC Lattice Damage After Novel High Energy Ion Implantation. ECS Transactions, 2021, 104, 75-83.	0.5	6
16	Characterization of defects and strain in the (AlxGa(1â^'x))0.5In0.5P/ GaAs system by synchrotron X-ray topography. Journal of Crystal Growth, 2020, 533, 125458.	1.5	1
17	Synchrotron X-ray topography characterization of high quality ammonothermal-grown gallium nitride substrates. Journal of Crystal Growth, 2020, 551, 125903.	1.5	17
18	Ray Tracing Simulation of Images of Dislocations and Inclusions on X-Ray Topographs of GaAs Epitaxial Wafers. Journal of Electronic Materials, 2020, 49, 3472-3480.	2.2	5

#	Article	IF	Citations
19	Relationship Between Basal Plane Dislocation Distribution and Local Basal Plane Bending in PVT-Grown 4H-SiC Crystals. Journal of Electronic Materials, 2020, 49, 3455-3464.	2.2	10
20	X-ray topography characterization of gallium nitride substrates for power device development. Journal of Crystal Growth, 2020, 544, 125709.	1.5	20
21	Synchrotron X-ray Topography Characterization of Commercial GaN Substrates for Power Electronic Applications. ECS Transactions, 2020, 98, 21-34.	0.5	2
22	Studies on Lattice Strain Variation due to Nitrogen Doping by Synchrotron X-ray Contour Mapping Technique in PVT-Grown 4H-SiC Crystals. Journal of Electronic Materials, 2019, 48, 3363-3369.	2.2	7
23	Characterization of Strain Due to Nitrogen Doping Concentration Variations in Heavy Doped 4H-SiC. Journal of Electronic Materials, 2018, 47, 938-943.	2.2	8
24	Mapping of Lattice Strain in 4H-SiC Crystals by Synchrotron Double-Crystal X-ray Topography. Journal of Electronic Materials, 2018, 47, 903-909.	2.2	25
25	Penetration Depth and Defect Image Contrast Formation in Grazing-Incidence X-ray Topography of 4H-SiC Wafers. Journal of Electronic Materials, 2018, 47, 1218-1222.	2.2	3
26	Prismatic Slip in PVT-Grown 4H-SiC Crystals. Journal of Electronic Materials, 2017, 46, 2040-2044.	2.2	17
27	Current Status of the Quality of 4H-SiC Substrates and Epilayers for Power Device Applications. MRS Advances, 2016, 1, 91-102.	0.9	5
28	Direct Determination of Burgers Vectors of Threading Mixed Dislocations in 4H-SiC Grown by PVT Method. Journal of Electronic Materials, 2016, 45, 2045-2050.	2.2	15
29	Effect of Doping Concentration Variations in PVT-Grown 4H-SiC Wafers. Journal of Electronic Materials, 2016, 45, 2066-2070.	2.2	6
30	CVD growth and properties of boron phosphide on 3C-SiC. Journal of Crystal Growth, 2016, 449, 15-21.	1.5	9
31	Study of Defect Structures in 6H-SiC a/m-Plane Pseudofiber Crystals Grown by Hot-Wall CVD Epitaxy. Journal of Electronic Materials, 2016, 45, 2078-2086.	2.2	0
32	Epitaxy of Boron Phosphide on Aluminum Nitride(0001)/Sapphire Substrate. Crystal Growth and Design, 2016, 16, 981-987.	3.0	65
33	Characterization of V-shaped Defects in 4H-SiC Homoepitaxial Layers. Journal of Electronic Materials, 2015, 44, 1293-1299.	2.2	4
34	Direct Observation of Stacking Fault Nucleation from Deflected Threading Dislocations with Burgers Vector c+a in PVT Grown 4H-SiC. Materials Research Society Symposia Proceedings, 2014, 1693, 49.	0.1	3
35	Structural Characterization of Lateral-grown 6H-SiC a/m-plane Seed Crystals by Hot Wall CVD Epitaxy. Materials Research Society Symposia Proceedings, 2014, 1693, 43.	0.1	0
36	Effect of doping on crystalline quality of rubidium titanyl phosphate (RTP) crystals grown by the TSSG method. Materials Research Society Symposia Proceedings, 2014, 1698, 71.	0.1	1

#	Article	IF	Citations
37	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
38	Characterization and Formation Mechanism of Six Pointed Star-Type Stacking Faults in 4H-SiC. Journal of Electronic Materials, 2013, 42, 787-793.	2.2	3
39	Quantitative Comparison Between Dislocation Densities in Offcut 4H-SiC Wafers Measured Using Synchrotron X-ray Topography and Molten KOH Etching. Journal of Electronic Materials, 2013, 42, 794-798.	2.2	5
40	Grazing Incidence X-ray Topographic Studies of Threading Dislocations in Hydrothermal Grown ZnO Single Crystal Substrates. Materials Research Society Symposia Proceedings, 2013, 1494, 121-126.	0.1	7
41	Simulation of Grazing-Incidence Synchrotron X-ray Topographic Images of Threading c+a Dislocations in 4H-SiC. Materials Research Society Symposia Proceedings, 2012, 1433, 53.	0.1	23
42	Characterization of 4H <000-1> Silicon Carbide Films Grown by Solvent-Laser Heated Floating Zone. Materials Research Society Symposia Proceedings, 2012, 1433, 113.	0.1	1
43	X-Ray Topography Techniques for Defect Characterization of Crystals. , 2010, , 1425-1451.		23
44	Nucleation Mechanism of 6H-SiC Polytype Inclusions Inside 15R-SiC Crystals. Journal of Electronic Materials, 2010, 39, 799-804.	2.2	3
45	Electronic Impact of Inclusions in Diamond. Materials Research Society Symposia Proceedings, 2009, 1203, 1.	0.1	5
46	Synthesis of GaN Nanostructures at Low Temperatures by Chemical Vapor Deposition. Materials Research Society Symposia Proceedings, 2008, 1080, 1.	0.1	0
47	Sublimation Growth and Defect Characterization of AlN Single Crystals. Materials Research Society Symposia Proceedings, 2007, 1040, 1.	0.1	0
48	Effects of Different Defect Types on the Performance of Devices Fabricated on a 4H-SiC Homoepitaxial Layer. Materials Research Society Symposia Proceedings, 2006, 911, 3.	0.1	9
49	Defect analysis in crystals using X-ray topography. Microscopy Research and Technique, 2006, 69, 343-358.	2.2	44
50	Crystal Growth and Defect Characterization of AlN Single Crystals. Materials Research Society Symposia Proceedings, 2005, 892, 702.	0.1	1
51	Structural characterization of GaN single crystal layers grown by vapor transport from a gallium oxide (Ga2O3) powder source. Materials Research Society Symposia Proceedings, 2005, 892, 708.	0.1	0
52	X-ray characterization of GaN single crystal layers grown by the ammonothermal technique on HVPE GaN seeds and by the sublimation technique on sapphire seeds. Materials Research Society Symposia Proceedings, 2004, 831, 55.	0.1	0
53	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
54	Crucible Selection in AlN Bulk Crystal Growth. Materials Research Society Symposia Proceedings, 2003, 798, 361.	0.1	4

#	Article	IF	Citations
55	Characterization of Porous SiC Substrates and of the Epilayer Structures Grown on Them. Materials Research Society Symposia Proceedings, 2002, 742, 2111.	0.1	2
56	Using Ray Tracing Simulations for Direct Determination of Burgers Vectors of Threading Mixed Dislocations in 4H-SiC c-Plane Wafers Grown by PVT Method. Materials Science Forum, 0, 858, 15-18.	0.3	9
57	High Quality AlN Single Crystal Substrates for AlGaN-Based Devices. Materials Science Forum, 0, 924, 923-926.	0.3	19
58	Synchrotron X-Ray Topography Study on the Relationship between Local Basal Plane Bending and Basal Plane Dislocations in PVT-Grown 4H-SiC Substrate Wafers. Materials Science Forum, 0, 1004, 393-400.	0.3	6
59	Ray-Tracing Simulation Analysis of Effective Penetration Depths on Grazing Incidence Synchrotron X-Ray Topographic Images of Basal Plane Dislocations in 4H-SiC Wafers. Materials Science Forum, 0, 1062, 366-370.	0.3	3
60	Dislocation Contrast Analysis in Weak Beam Synchrotron X-Ray Topography. Materials Science Forum, 0, 1062, 356-360.	0.3	0
61	Synchrotron X-Ray Topography Characterization of Power Electronic GaN Materials. Materials Science Forum, 0, 1062, 351-355.	0.3	0