

# Hongyu Peng

## List of Publications by Year in descending order

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61  
papers

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citations

1040056

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17  
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62  
docs citations

62  
times ranked

387  
citing authors

#	ARTICLE	IF	CITATIONS
1	Epitaxy of Boron Phosphide on Aluminum Nitride(0001)/Sapphire Substrate. Crystal Growth and Design, 2016, 16, 981-987.	3.0	65
2	Defect analysis in crystals using X-ray topography. Microscopy Research and Technique, 2006, 69, 343-358.	2.2	44
3	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
4	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
5	X-Ray Topography Techniques for Defect Characterization of Crystals. , 2010, , 1425-1451.		23
6	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
7	X-ray topography characterization of gallium nitride substrates for power device development. Journal of Crystal Growth, 2020, 544, 125709.	1.5	20
8	High Quality AlN Single Crystal Substrates for AlGaN-Based Devices. Materials Science Forum, 0, 924, 923-926.	0.3	19
9	Prismatic Slip in PVT-Grown 4H-SiC Crystals. Journal of Electronic Materials, 2017, 46, 2040-2044.	2.2	17
10	Synchrotron X-ray topography characterization of high quality ammonothermal-grown gallium nitride substrates. Journal of Crystal Growth, 2020, 551, 125903.	1.5	17
11	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
12	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
13	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
14	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
15	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
16	CVD growth and properties of boron phosphide on 3C-SiC. Journal of Crystal Growth, 2016, 449, 15-21.	1.5	9
17	Dislocation contrast on X-ray topographs under weak diffraction conditions. Journal of Applied Crystallography, 2021, 54, 1225-1233.	4.5	9
18	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



#	ARTICLE	IF	CITATIONS
37	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
38	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
39	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
40	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
41	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
42	Characterization of Porous SiC Substrates and of the Epilayer Structures Grown on Them. Materials Research Society Symposia Proceedings, 2002, 742, 2111.	0.1	2
43	X-ray Topography Characterization of GaN Substrates Used for Power Electronic Devices. Journal of Electronic Materials, 2021, 50, 2981-2989.	2.2	2
44	Synchrotron X-ray Topography Characterization of Commercial GaN Substrates for Power Electronic Applications. ECS Transactions, 2020, 98, 21-34.	0.5	2
45	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
46	Characterization of 4H $\langle 000-1 \rangle$ Silicon Carbide Films Grown by Solvent-Laser Heated Floating Zone. Materials Research Society Symposia Proceedings, 2012, 1433, 113.	0.1	1
47	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
48	Characterization of defects and strain in the $(Al_xGa_{1-x})_{0.5}In_{0.5}P/GaAs$ system by synchrotron X-ray topography. Journal of Crystal Growth, 2020, 533, 125458.	1.5	1
49	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
50	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
51	Crystal Growth and Defect Characterization of AlN Single Crystals. Materials Research Society Symposia Proceedings, 2005, 892, 702.	0.1	1
52	Synchrotron X-ray topographic characterization of dislocations in 6H-SiC axial samples. Journal of Crystal Growth, 2022, 579, 126459.	1.5	1
53	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
54	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

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55	Sublimation Growth and Defect Characterization of AlN Single Crystals. Materials Research Society Symposia Proceedings, 2007, 1040, 1.	0.1	0
56	Synthesis of GaN Nanostructures at Low Temperatures by Chemical Vapor Deposition. Materials Research Society Symposia Proceedings, 2008, 1080, 1.	0.1	0
57	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
58	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
59	Structural characterization of GaN single crystal layers grown by vapor transport from a gallium oxide (Ga <sub>2</sub> O <sub>3</sub> ) powder source. Materials Research Society Symposia Proceedings, 2005, 892, 708.	0.1	0
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