

Tatiana Argunova

List of Publications by Year in descending order

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70
papers

731
citations

759233

12
h-index

580821

25
g-index

70
all docs

70
docs citations

70
times ranked

632
citing authors

#	ARTICLE	IF	CITATIONS
1	Solid-state decomposition of silicon carbide for growing ultra-thin heteroepitaxial graphite films. <i>Journal of Applied Physics</i> , 2002, 92, 2479-2484.	2.5	190
2	($3\sqrt{3}\times 3\sqrt{3}$) $\sqrt{3}$ reconstruction of the $6H\sqrt{3}\text{-SiC}(0001)$ surface: A simple $\sqrt{3}\times\sqrt{3}$ adatom structure solved by grazing-incidence x-ray diffraction. <i>Physical Review B</i> , 1999, 59, 12224-12227.	3.2	73
3	Molecular beam epitaxy growth and characterization of thin ($< 2 \mu\text{m}$) GaSb layers on GaAs(100) substrates. <i>Semiconductor Science and Technology</i> , 1993, 8, 347-356.	2.0	44
4	Study of micropipe structure in SiC by x-ray phase contrast imaging. <i>Applied Physics Letters</i> , 2007, 91, 171901.	3.3	29
5	Detection of dislocations in strongly absorbing crystals by projection X-ray topography in back reflection. <i>Journal Physics D: Applied Physics</i> , 1995, 28, A47-A49.	2.8	22
6	Interaction of micropipes with foreign polytype inclusions in SiC. <i>Journal of Applied Physics</i> , 2006, 100, 093518.	2.5	18
7	Ramification of micropipes in SiC crystals. <i>Journal of Applied Physics</i> , 2002, 92, 889-894.	2.5	17
8	Synchrotron radiographic study and computer simulation of reactions between micropipes in silicon carbide. <i>Journal of Applied Physics</i> , 2003, 94, 7076-7082.	2.5	17
9	Micropipe evolution in silicon carbide. <i>Applied Physics Letters</i> , 2003, 83, 2157-2159.	3.3	17
10	Correlated reduction in micropipe cross sections in SiC growth. <i>Applied Physics Letters</i> , 2008, 93, 151905.	3.3	15
11	Silicon direct bonding technology employing a regularly grooved surface. <i>Electronics Letters</i> , 1995, 31, 2047-2048.	1.0	12
12	Synchrotron radiography and x-ray topography studies of hexagonal habitus SiC bulk crystals. <i>Journal of Materials Research</i> , 2002, 17, 2705-2711.	2.6	12
13	Role of micropipes in the formation of pores at foreign polytype boundaries in SiC crystals. <i>Physical Review B</i> , 2007, 76, .	3.2	12
14	Micropipe absorption mechanism of pore growth at foreign polytype boundaries in SiC crystals. <i>Journal of Applied Physics</i> , 2009, 106, .	2.5	12
15	Elliptical micropipes in SiC revealed by computer simulating phase contrast images. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1833-1837.	1.8	12
16	Freestanding single crystal AlN layers grown using the SiC substrate evaporation method. <i>CrystEngComm</i> , 2017, 19, 3192-3197.	2.6	11
17	X-ray Triple-Crystal Diffractometry and Transmission Electron Microscopy Characterization of Defects in Lattice-Mismatched Epitaxial Structures. <i>Journal of Applied Crystallography</i> , 1995, 28, 700-706.	4.5	10
18	Direct bonding of silicon carbide wafers with a regular relief at the interface. <i>Technical Physics Letters</i> , 2006, 32, 453-455.	0.7	10

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19	Micropipes in silicon carbide crystals. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, 1942-1947.	0.8	10
20	Far-field x-ray phase contrast imaging has no detailed information on the object. <i>Journal Physics D: Applied Physics</i> , 2010, 43, 442002.	2.8	10
21	Determination of YBaCuO thin layer structural parameters by using high-resolution X-ray diffractometry. <i>Journal Physics D: Applied Physics</i> , 1995, 28, A212-A215.	2.8	9
22	Study of micropores in single crystals by in-line phase contrast imaging with synchrotron radiation. <i>Physics-Uspekh</i> , 2019, 62, 602-616.	2.2	9
23	The influence of defects in the crystal structure on helium diffusion in quartz. <i>Physics of the Solid State</i> , 2003, 45, 1910-1917.	0.6	8
24	Distribution of Dislocations near the Interface in AlN Crystals Grown on Evaporated SiC Substrates. <i>Crystals</i> , 2017, 7, 163.	2.2	8
25	Computer simulation of phase-contrast images in white synchrotron radiation using micropipes in silicon carbide. <i>Journal of Surface Investigation</i> , 2008, 2, 861-865.	0.5	7
26	SR phase contrast imaging to address the evolution of defects during SiC growth. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 819-824.	1.8	7
27	Quantitative hard x-ray phase contrast imaging of micropipes in SiC. <i>AIP Advances</i> , 2013, 3, 122109.	1.3	7
28	Prevention of AlN crystal from cracking on SiC substrates by evaporation of the substrates. <i>Physics of the Solid State</i> , 2015, 57, 2473-2478.	0.6	7
29	Application of X-ray diffraction in Laue geometry to imperfect near-surface layers. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1997, 19, 267-275.	0.4	6
30	X-ray imaging study of lattice defects related to diffusion of helium in quartz. <i>Journal Physics D: Applied Physics</i> , 2003, 36, A12-A16.	2.8	6
31	Current-voltage characteristics of isotype SiC-SiC junctions fabricated by direct wafer bonding. <i>Semiconductors</i> , 2007, 41, 921-924.	0.5	6
32	Microstructure and strength of AlN-SiC interface studied by synchrotron X-rays. <i>Journal of Materials Science</i> , 2017, 52, 4244-4252.	3.7	6
33	Reduction of elastic strains in directly-bonded silicon structures. <i>Physics of the Solid State</i> , 1999, 41, 1790-1798.	0.6	5
34	X-ray diffractometry and topography of lattice plane curvature in thermally deformed Si wafer. <i>Journal of Synchrotron Radiation</i> , 2008, 15, 96-99.	2.4	5
35	Features in phase-contrast images of micropipes in SiC in white synchrotron radiation beam. <i>Journal of Surface Investigation</i> , 2011, 5, 1-6.	0.5	5
36	On the cause of a contrast change in the SR images of micropipes in SiC. <i>Journal of Surface Investigation</i> , 2012, 6, 840-844.	0.5	5

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37	Structural Quality of Directly Bonded Silicon Wafers with Regularly Grooved Interfaces. Journal of the Electrochemical Society, 1997, 144, 622-627.	2.9	4
38	Micropipes in crystals: experimental characterization, theoretical modeling and computer simulation. , 2005, , .		4
39	White X-ray beam topography and radiography of Si _{1-x} Ge _x crystals bonded to silicon. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2669-2674.	1.8	4
40	Investigation of dislocations in Czochralski grown Si _{1-x} Ge _x single crystals. Journal Physics D: Applied Physics, 2009, 42, 085404.	2.8	4
41	Capsule-like voids in SiC single crystal: Phase contrast imaging and computer simulations. AIP Advances, 2014, 4, .	1.3	4
42	Structural transformation of lattice defects in free-spreading growth of bulk SiC crystals. CrystEngComm, 2014, 16, 8917.	2.6	4
43	Synchrotron X-Ray Study on Crack Prevention in AlN Crystals Grown on Gradually Decomposing SiC Substrates. Materials Science Forum, 0, 821-823, 1011-1014.	0.3	4
44	Interfacial Properties of Silicon Structures Fabricated by Vacuum Grooved Surface Bonding Technology. Japanese Journal of Applied Physics, 1998, 37, 6287-6289.	1.5	3
45	Analytic determination of the three-dimensional distribution of dislocations using synchrotron X-ray topography. Journal of Applied Crystallography, 2006, 39, 106-108.	4.5	3
46	Structural and electrical properties of the Ge _x Si _{1-x} /Si heterojunctions obtained by the method of direct bonding. Semiconductors, 2007, 41, 679-683.	0.5	3
47	Contact-free reactions between micropipes in bulk SiC growth. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1432-1437.	1.8	3
48	Mechanisms of the formation of morphological features of micropipes in bulk crystals of silicon carbide. Physics of the Solid State, 2015, 57, 752-759.	0.6	3
49	Microvoids in Solids: Synchrotron Radiation Phase Contrast Imaging and Simulations. Physica Status Solidi (B): Basic Research, 2018, 255, 1800209.	1.5	3
50	Near-field phase-contrast imaging of micropores in SiC crystals with synchrotron radiation. Physica Status Solidi (B): Basic Research, 0, , .	1.5	3
51	Direct bonding of silicon wafers with the concurrent formation of diffusion layers. Technical Physics, 2001, 46, 690-695.	0.7	2
52	X-ray Studies of Si _{1-x} Ge _x Single Crystals. Physics of the Solid State, 2005, 47, 1225.	0.6	2
53	Composition inhomogeneity and structural defects in Czochralski grown Ge _x Si _{1-x} solid solution crystals. Technical Physics Letters, 2007, 33, 512-516.	0.7	2
54	Current-voltage characteristics of Si/Si _{1-x} Ge _x heterodiodes fabricated by direct bonding. Technical Physics Letters, 2008, 34, 1027-1029.	0.7	2

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55	X-ray imaging of structural defects in Si _{1-x} Ge _x single crystals using a white synchrotron beam. Crystallography Reports, 2011, 56, 811-818.	0.6	2
56	Thermal and Lattice Misfit Stress Relaxation in Growing AlN Crystal with Simultaneous Evaporation of SiC Substrate. Materials Science Forum, 2017, 897, 711-714.	0.3	2
57	A Model of Microcrack Development in Human Tooth Dentin Using Data of Microtomography. Technical Physics Letters, 2020, 46, 505-509.	0.7	2
58	Structural and electrical properties of SiGe-on-insulator substrates fabricated by direct bonding. Semiconductors, 2010, 44, 1101-1105.	0.5	1
59	Reverse recovery of Si/Si _{1-x} Ge _x heterodiodes fabricated by direct bonding. Technical Physics Letters, 2011, 37, 632-635.	0.7	1
60	Contact-Free Micropipe Reactions in Silicon Carbide. Materials Science Forum, 2013, 740-742, 597-600.	0.3	1
61	Study of a macrodefect in a silicon carbide single crystal by means of X-ray phase contrast. Crystallography Reports, 2016, 61, 914-917.	0.6	1
62	Nondestructive 3D-evaluation of human dentin by microtomography using synchrotron radiation. Journal of Physics: Conference Series, 2019, 1410, 012066.	0.4	1
63	Third International Conference "Physics for Life Sciences" - Study of Dentin Structural Features by Computed Microtomography and Transmission Electron Microscopy. Technical Physics, 2020, 65, 1391-1402.	0.7	1
64	Sublimation Anisotropic Etching of Silicon Carbide in Aluminum Nitride Vapors. ECS Journal of Solid State Science and Technology, 2021, 10, 045008.	1.8	1
65	Computer simulations of X-ray phase-contrast images and microtomographic observation of tubules in dentin. Journal of Synchrotron Radiation, 2020, 27, 462-467.	2.4	1
66	Problems with Evaluation of Micro-Pore Size in Silicon Carbide Using Synchrotron X-ray Phase Contrast Imaging. Materials, 2022, 15, 856.	2.9	1
67	The effect of structural defects on magnetic field distribution in YBa ₂ Cu ₃ O _{7-x} films. Superconductor Science and Technology, 1993, 6, 822-826.	3.5	0
68	Epitaxial growth of Pb(Zr, Ti)O ₃ thin films on sapphire (0112). Ferroelectrics, 1993, 144, 213-221.	0.6	0
69	Novel applications of X-ray topography for studying materials with extreme absorption, thickness and density characteristics. , 2017, , 191-194.		0
70	The misfit stresses of dilatation line in semiconductor nanoheterostructures with angular boundaries. Journal of Physics: Conference Series, 2020, 1695, 012014.	0.4	0