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	Problems with Evaluation of Micro-Pore Size in Silicon Carbide Using Synchrotron X-ray Phase Contrast Imaging. Materials, 2022, 15, 856.	2.9	1
2	Sublimation Anisotropic Etching of Silicon Carbide in Aluminum Nitride Vapors. ECS Journal of Solid State Science and Technology, 2021, 10, 045008.	1.8	1
3	A Model of Microcrack Development in Human Tooth Dentin Using Data of Microtomography. Technical Physics Letters, 2020, 46, 505-509.	0.7	2
4	Third International Conference â€œPhysics for Life Sciencesâ€•Study of Dentin Structural Features by Computed Microtomography and Transmission Electron Microscopy. Technical Physics, 2020, 65, 1391-1402.	0.7	1
5	The misfit stresses of dilatation line in semiconductor nanoheterostructures with angular boundaries. Journal of Physics: Conference Series, 2020, 1695, 012014.	0.4	0
6	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
7	Study of micropores in single crystals by in-line phase contrast imaging with synchrotron radiation. Physics-Uspekhi, 2019, 62, 602-616.	2.2	9
8	Nondestructive 3D-evaluation of human dentin by microtomography using synchrotron radiation. Journal of Physics: Conference Series, 2019, 1410, 012066.	0.4	1
9	Microvoids in Solids: Synchrotron Radiation Phase Contrast Imaging and Simulations. Physica Status Solidi (B): Basic Research, 2018, 255, 1800209.	1.5	3
10	Microstructure and strength of AlNâ€“SiC interface studied by synchrotron X-rays. Journal of Materials Science, 2017, 52, 4244-4252.	3.7	6
11	Freestanding single crystal AlN layers grown using the SiC substrate evaporation method. CrystEngComm, 2017, 19, 3192-3197.	2.6	11
12	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
13	Distribution of Dislocations near the Interface in AlN Crystals Grown on Evaporated SiC Substrates. Crystals, 2017, 7, 163.	2.2	8
14	Novel applications of X-ray topography for studying materials with extreme absorption, thickness and density characteristics. , 2017, , 191-194.		0
15	Study of a macrodefect in a silicon carbid single crystal by means of X-ray phase contrast. Crystallography Reports, 2016, 61, 914-917.	0.6	1
16	Prevention of AlN crystal from cracking on SiC substrates by evaporation of the substrates. Physics of the Solid State, 2015, 57, 2473-2478.	0.6	7
17	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
18	Capsule-like voids in SiC single crystal: Phase contrast imaging and computer simulations. AIP Advances, 2014, 4, .	1.3	4

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19	Structural transformation of lattice defects in free-spreading growth of bulk SiC crystals. CrystEngComm, 2014, 16, 8917.	2.6	4
20	Contact-Free Micropipe Reactions in Silicon Carbide. Materials Science Forum, 2013, 740-742, 597-600.	0.3	1
21	Quantitative hard x-ray phase contrast imaging of micropipes in SiC. AIP Advances, 2013, 3, 122109.	1.3	7
22	On the cause of a contrast change in the SR images of micropipes in SiC. Journal of Surface Investigation, 2012, 6, 840-844.	0.5	5
23	Contactâ€free reactions between micropipes in bulk SiC growth. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1432-1437.	1.8	3
24	Reverse recovery of Si/Si1 â^’ x Ge x heterodiodes fabricated by direct bonding. Technical Physics Letters, 2011, 37, 632-635.	0.7	1
25	Features in phase-contrast images of micropipes in SiC in white synchrotron radiation beam. Journal of Surface Investigation, 2011, 5, 1-6.	0.5	5
26	X-ray imaging of structural defects in Si1â^’x Ge x single crystals using a white synchrotron beam. Crystallography Reports, 2011, 56, 811-818.	0.6	2
27	SR phase contrast imaging to address the evolution of defects during SiC growth. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 819-824.	1.8	7
28	Far-field x-ray phase contrast imaging has no detailed information on the object. Journal Physics D: Applied Physics, 2010, 43, 442002.	2.8	10
29	Structural and electrical properties of SiGe-on-insulator substrates fabricated by direct bonding. Semiconductors, 2010, 44, 1101-1105.	0.5	1
30	Micropipe absorption mechanism of pore growth at foreign polytype boundaries in SiC crystals. Journal of Applied Physics, 2009, 106, .	2.5	12
31	Investigation of dislocations in Czochralski grown Si1â^’xGexsingle crystals. Journal Physics D: Applied Physics, 2009, 42, 085404.	2.8	4
32	Elliptical micropipes in SiC revealed by computer simulating phase contrast images. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1833-1837.	1.8	12
33	Micropipes in silicon carbide crystals. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1942-1947.	0.8	10
34	X-ray diffractometry and topography of lattice plane curvature in thermally deformed Si wafer. Journal of Synchrotron Radiation, 2008, 15, 96-99.	2.4	5
35	Current-voltage characteristics of Si/Si1 â^’ x Ge x heterodiodes fabricated by direct bonding. Technical Physics Letters, 2008, 34, 1027-1029.	0.7	2
36	Computer simulation of phase-contrast images in white synchrotron radiation using micropipes in silicon carbide. Journal of Surface Investigation, 2008, 2, 861-865.	0.5	7

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37	Correlated reduction in micropipe cross sections in SiC growth. Applied Physics Letters, 2008, 93, 151905.	3.3	15
38	Study of micropipe structure in SiC by x-ray phase contrast imaging. Applied Physics Letters, 2007, 91, 171901.	3.3	29
39	Role of micropipes in the formation of pores at foreign polytype boundaries in SiC crystals. Physical Review B, 2007, 76, .	3.2	12
40	White X-ray beam topography and radiography of Si1-xGexcrystals bonded to silicon. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2669-2674.	1.8	4
41	Structural and electrical properties of the Ge x Si1â^'x /Si heterojunctions obtained by the method of direct bonding. Semiconductors, 2007, 41, 679-683.	0.5	3
42	Current-voltage characteristics of isotype SiC-SiC junctions fabricated by direct wafer bonding. Semiconductors, 2007, 41, 921-924.	0.5	6
43	Composition inhomogeneity and structural defects in Czochralski grown Ge x Si1 â^' x solid solution crystals. Technical Physics Letters, 2007, 33, 512-516.	0.7	2
44	Interaction of micropipes with foreign polytype inclusions in SiC. Journal of Applied Physics, 2006, 100, 093518.	2.5	18
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	Direct bonding of silicon carbide wafers with a regular relief at the interface. Technical Physics Letters, 2006, 32, 453-455.	0.7	10
47	Micropipes in crystals: experimental characterization, theoretical modeling and computer simulation. , 2005, , .		4
48	X-ray Studies of Si[sub 1 â€"][sub x]Ge[sub x] Single Crystals. Physics of the Solid State, 2005, 47, 1225.	0.6	2
49	The influence of defects in the crystal structure on helium diffusion in quartz. Physics of the Solid State, 2003, 45, 1910-1917.	0.6	8
50	Synchrotron radiographic study and computer simulation of reactions between micropipes in silicon carbide. Journal of Applied Physics, 2003, 94, 7076-7082.	2.5	17
51	Micropipe evolution in silicon carbide. Applied Physics Letters, 2003, 83, 2157-2159.	3.3	17
52	X-ray imaging study of lattice defects related to diffusion of helium in quartz. Journal Physics D: Applied Physics, 2003, 36, A12-A16.	2.8	6
53	Ramification of micropipes in SiC crystals. Journal of Applied Physics, 2002, 92, 889-894.	2.5	17
54	Synchrotron radiography and x-ray topography studies of hexagonal habitus SiC bulk crystals. Journal of Materials Research, 2002, 17, 2705-2711.	2.6	12

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55	Solid-state decomposition of silicon carbide for growing ultra-thin heteroepitaxial graphite films. Journal of Applied Physics, 2002, 92, 2479-2484.	2.5	190
56	Direct bonding of silicon wafers with the concurrent formation of diffusion layers. Technical Physics, 2001, 46, 690-695.	0.7	2
57	(3Ã—3)R30Â°reconstruction of the6Hâˆ’SiC(0001) surface: A simpleT4Si adatom structure solved by grazing-incidence x-ray diffraction. Physical Review B, 1999, 59, 12224-12227.	3.2	73
58	Reduction of elastic strains in directly-bonded silicon structures. Physics of the Solid State, 1999, 41, 1790-1798.	0.6	5
59	Interfacial Properties of Silicon Structures Fabricated by Vacuum Grooved Surface Bonding Technology. Japanese Journal of Applied Physics, 1998, 37, 6287-6289.	1.5	3
60	Structural Quality of Directly Bonded Silicon Wafers with Regularly Grooved Interfaces. Journal of the Electrochemical Society, 1997, 144, 622-627.	2.9	4
61	Application of X-ray diffraction in Laue geometry to imperfect near-surface layers. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1997, 19, 267-275.	0.4	6
62	Silicon direct bonding technology employing a regularly grooved surface. Electronics Letters, 1995, 31, 2047-2048.	1.0	12
63	X-ray Triple-Crystal Diffractometry and Transmission Electron Microscopy Characterization of Defects in Lattice-Mismatched Epitaxic Structures. Journal of Applied Crystallography, 1995, 28, 700-706.	4.5	10
64	Determination of YBaCuO thin layer structural parameters by using high-resolution X-ray diffractometry. Journal Physics D: Applied Physics, 1995, 28, A212-A215.	2.8	9
65	Detection of dislocations in strongly absorbing crystals by projection X-ray topography in back reflection. Journal Physics D: Applied Physics, 1995, 28, A47-A49.	2.8	22
66	Molecular beam epitaxy growth and characterization of thin (<2 mu m) GaSb layers on GaAs(100) substrates. Semiconductor Science and Technology, 1993, 8, 347-356.	2.0	44
67	The effect of structural defects on magnetic field distribution in YBa2Cu3O7-xfilms. Superconductor Science and Technology, 1993, 6, 822-826.	3.5	0
68	Epitaxial growth of Pb(Zr, Ti)O₃thin films on sapphire (0112). Ferroelectrics, 1993, 144, 213-221.	0.6	0
69	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
70	Nearâ€field phaseâ€contrast imaging of micropores in SiC crystals with synchrotron radiation. Physica Status Solidi (B): Basic Research, 0, , .	1.5	3