

Alexey E Romanov

List of Publications by Year in descending order

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52
papers

2,511
citations

279798

23
h-index

214800

47
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all docs

53
docs citations

53
times ranked

2070
citing authors

#	ARTICLE	IF	CITATIONS
1	Misfit stress relaxation in wide bandgap semiconductor heterostructures with trigonal and hexagonal crystal structure. <i>Journal of Applied Physics</i> , 2022, 131, 025301.	2.5	4
2	Formation of a pore as stress relaxation mechanism in decahedral small particles. <i>Letters on Materials</i> , 2022, 12, 137-141.	0.7	1
3	The influence of dislocation and twin structures on the mechanical characteristics of Ni-Mn-Ga alloys at ultrasonic frequencies. , 2022, , 28-36.		0
4	High-Quality Bulk Ga_2O_3 and $\text{Al}_x\text{Ga}_{1-x}\text{O}_3$ Crystals: Growth and Properties. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021, 218, 2100335.	1.8	11
5	Micromechanics of defects in functional materials. <i>Acta Mechanica</i> , 2021, 232, 1901-1915.	2.1	3
6	Amplitude dependence of internal friction and elastic modulus at ultrasonic frequencies in the Ni-Mn-Ga martensitic phase. <i>AIP Conference Proceedings</i> , 2021, , .	0.4	0
7	RESIDUAL STRESS RELAXATION IN DECAHEDRAL PARTICLES THROUGH THE FORMATION OF A CENTRAL SPHERICAL VOID. , 2021, , 27-38.		0
8	Misfit Stress Relaxation in $\text{Ga}_2\text{O}_3/\text{Al}_2\text{O}_3$ Heterostructures via Formation of Misfit Dislocations. <i>Physics of the Solid State</i> , 2021, 63, 924-931.	0.6	3
9	Volume Gallium Oxide Crystals Grown from Melt by the Czochralski Method in an Oxygen-Containing Atmosphere. <i>Technical Physics Letters</i> , 2020, 46, 1144-1146.	0.7	7
10	Stress-strain state in Ga_2O_3 epitaxial films on $\text{Al}_x\text{Ga}_{1-x}\text{O}_3$ substrates. <i>Applied Physics Express</i> , 2020, 13, 075502.	2.4	11
11	Misfit stresses and their relaxation by misfit dislocation loops in core-shell nanoparticles with truncated spherical cores. <i>European Journal of Mechanics, A/Solids</i> , 2020, 81, 103967.	3.7	6
12	On Fracture of Pseudo-Graphenes. <i>Mechanics of Solids</i> , 2020, 55, 69-76.	0.7	1
13	On mesoscopic description of interfaces in graphene. <i>Physics of Complex Systems</i> , 2020, 1, 129-134.	0.2	1
14	Stress relaxation in semipolar and nonpolar III-nitride heterostructures by formation of misfit dislocations of various origin. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	10
15	Disclination ensembles in graphene. <i>Low Temperature Physics</i> , 2018, 44, 918-924.	0.6	8
16	Nanomechanics of Stress Relaxation in Composite Low-Dimensional Structures. , 2018, , 1-23.		0
17	Critical thickness for the formation of misfit dislocations originating from prismatic slip in semipolar and nonpolar III-nitride heterostructures. <i>APL Materials</i> , 2016, 4, .	5.1	18
18	Chloride epitaxy of Ga_2O_3 layers grown on c-sapphire substrates. <i>Semiconductors</i> , 2016, 50, 980-983.	0.5	5

#	ARTICLE	IF	CITATIONS
19	Evolution of Pentagonal Nano- and Micro-Objects in Temperature Fields. Russian Physics Journal, 2015, 58, 854-857.	0.4	1
20	Dislocation loops in solid and hollow semiconductor and metal nanoheterostructures. Physics of the Solid State, 2015, 57, 1177-1182.	0.6	13
21	Deposition of \hat{I}^2 -Ga2O3 layers by sublimation on sapphire substrates of different orientations. Physics of the Solid State, 2015, 57, 1342-1346.	0.6	8
22	Elastic models of defects in two-dimensional crystals. Physics of the Solid State, 2014, 56, 2573-2579.	0.6	8
23	Stacking faults and interface roughening in semipolar $(202\hat{A}^{-1}\hat{A}^{-})$ single InGaN quantum wells for long wavelength emission. Applied Physics Letters, 2014, 104, .	3.3	14
24	Misfit dislocation loops in composite core-shell nanoparticles. Physics of the Solid State, 2014, 56, 723-730.	0.6	28
25	Blue and aquamarine stress-relaxed semipolar $(112\hat{A}^{-2})$ laser diodes. Applied Physics Letters, 2013, 103, .	3.3	11
26	Trace analysis of non-basal plane misfit stress relaxation in $(202\hat{A}^{-1})$ and $(303\hat{A}^{-1}\hat{A}^{-})$ semipolar InGaN/GaN heterostructures. Applied Physics Letters, 2012, 100, .	3.3	42
27	444.9 $\hat{\epsilon}$ %nm semipolar $(112\hat{A}^{-2})$ laser diode grown on an intentionally stress relaxed InGaN waveguiding layer. Applied Physics Letters, 2012, 100, .	3.3	59
28	Stress relaxation and critical thickness for misfit dislocation formation in $(101\hat{A}^{-0})$ and $(3031\hat{A}^{-})$ InGaN/GaN heteroepitaxy. Applied Physics Letters, 2012, 100, 171917.	3.3	32
29	Misfit dislocation formation at heterointerfaces in (Al,In)GaN heteroepitaxial layers grown on semipolar free-standing GaN substrates. Journal of Applied Physics, 2011, 109, .	2.5	41
30	Misfit dislocation formation via pre-existing threading dislocation glide in $(112\hat{A}^{-2})$ semipolar heteroepitaxy. Applied Physics Letters, 2011, 99, .	3.3	50
31	Basal plane misfit dislocations and stress relaxation in III-nitride semipolar heteroepitaxy. Journal of Applied Physics, 2011, 109, .	2.5	140
32	Representations of elastic fields of circular dislocation and disclination loops in terms of spherical harmonics and their application to various problems of the theory of defects. International Journal of Solids and Structures, 2010, 47, 58-70.	2.7	12
33	Critical Thickness for Onset of Plastic Relaxation in $(11\text{ar}22)$ and $(20\text{ar}21)$ Semipolar AlGaN Heterostructures. Applied Physics Express, 2010, 3, 111002.	2.4	48
34	Twist disclination loop in an elastic spheroid. Technical Physics Letters, 2009, 35, 985-989.	0.7	4
35	Strain-induced polarization in wurtzite III-nitride semipolar layers. Journal of Applied Physics, 2006, 100, 023522.	2.5	629
36	Misfit dislocation loops and critical parameters of quantum dots and wires. Philosophical Magazine Letters, 2004, 84, 501-506.	1.2	42

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37	Virtual Circular Dislocation-Disclination Loop Technique in Boundary Value Problems in the Theory of Defects. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 409-417.	2.2	26
38	Si doping effects on the electrical and structural properties of high Al composition Al _x Ga _{1-x} N films grown by MOCVD. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2010-2013.	0.8	0
39	Dislocation and disclination loops in the virtual-defect method. Physics of the Solid State, 2003, 45, 1706-1718.	0.6	24
40	Threading dislocation reduction in strained layers. Journal of Applied Physics, 1999, 85, 182-192.	2.5	95
41	Pentagonal Symmetry and Disclinations in Small Particles. Crystal Research and Technology, 1999, 34, 1091-1119.	1.3	142
42	Domain patterns in epitaxial rhombohedral ferroelectric films. I. Geometry and experiments. Journal of Applied Physics, 1998, 83, 2742-2753.	2.5	285
43	Domain pattern formation in epitaxial rhombohedral ferroelectric films. II. Interfacial defects and energetics. Journal of Applied Physics, 1998, 83, 2754-2765.	2.5	100
44	An approach to threading dislocation reaction kinetics. Applied Physics Letters, 1996, 69, 3342-3344.	4.3	61
45	Modeling of Threading Dislocation Density Reduction in Heteroepitaxial Layers I. Geometry and Crystallography. Physica Status Solidi (B): Basic Research, 1996, 198, 599-613.	1.5	56
46	Scaling laws for the reduction of threading dislocation densities in homogeneous buffer layers. Journal of Applied Physics, 1996, 80, 3808-3816.	2.5	129
47	Theory of microstructure and mechanics of the $\dots a_1/a_2/a_1/a_2 \dots$ domain pattern in epitaxial ferroelectric and ferroelastic films. Journal of Applied Physics, 1996, 79, 4037.	2.5	79
48	Size effects of dislocation stability in nanocrystals. Physical Review B, 1991, 44, 42-46.	3.2	95
49	Channels of Relaxation of Elastic Stresses in Pentagonal Nanoparticles. Physica Status Solidi (B): Basic Research, 1991, 167, 441-450.	1.5	56
50	Straight Edge Dislocation in a Thin Two-Phase Plate I. Elastic Stress Fields. Physica Status Solidi A, 1991, 125, 107-125.	1.7	64
51	On the Screening Length of Disclinations in Amorphous Structures. Physica Status Solidi (B): Basic Research, 1987, 143, 43-53.	1.5	8
52	Straight disclinations near a free surface I. Stress fields. Physica Status Solidi A, 1981, 63, 109-118.	1.7	20