Alexey E Romanov

List of Publications by Year
in descending order

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52	2,511	279798	214800
papers	citations	23 h-index	47 g-index

53	53	53	2070
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Strain-induced polarization in wurtzite III-nitride semipolar layers. Journal of Applied Physics, 2006, 100, 023522.	2.5	629
2	Domain patterns in epitaxial rhombohedral ferroelectric films. I. Geometry and experiments. Journal of Applied Physics, 1998, 83, 2742-2753.	2.5	285
3	Pentagonal Symmetry and Disclinations in Small Particles. Crystal Research and Technology, 1999, 34, 1091-1119.	1.3	142
4	Basal plane misfit dislocations and stress relaxation in III-nitride semipolar heteroepitaxy. Journal of Applied Physics, 2011, 109, .	2.5	140
5	Scaling laws for the reduction of threading dislocation densities in homogeneous buffer layers. Journal of Applied Physics, 1996, 80, 3808-3816.	2.5	129
6	Domain pattern formation in epitaxial rhombohedral ferroelectric films. II. Interfacial defects and energetics. Journal of Applied Physics, 1998, 83, 2754-2765.	2.5	100
7	Size effects of dislocation stability in nanocrystals. Physical Review B, 1991, 44, 42-46.	3.2	95
8	Threading dislocation reduction in strained layers. Journal of Applied Physics, 1999, 85, 182-192.	2.5	95
9	Theory of microstructure and mechanics of the ...a1/a2/a1/a2... domain pattern in epitaxial ferroelectric and ferroelastic films. Journal of Applied Physics, 1996, 79, 4037.	2.5	79
10	Straight Edge Dislocation in a Thin Two-Phase Plate I. Elastic Stress Fields. Physica Status Solidi A, 1991, 125, 107-125.	1.7	64
11	An approach to threading dislocation â€˜â€˜reaction kineticsâ€™â€™. Applied Physics Letters, 1996, 69, 3342-3344.	3.3	61
12	444.9â€‰nm semipolar (112Â¯2) laser diode grown on an intentionally stress relaxed InGaN waveguiding layer. Applied Physics Letters, 2012, 100, .	3.3	59
13	Channels of Relaxation of Elastic Stresses in Pentagonal Nanoparticles. Physica Status Solidi (B): Basic Research, 1991, 167, 441-450.	1.5	56
14	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
15	Misfit dislocation formation via pre-existing threading dislocation glide in (112Â¯2) semipolar heteroepitaxy. Applied Physics Letters, 2011, 99, .	3.3	50
16	Critical Thickness for Onset of Plastic Relaxation in (11ar22) and (20ar21) Semipolar AlGaN Heterostructures. Applied Physics Express, 2010, 3, 111002.	2.4	48
17	Misfit dislocation loops and critical parameters of quantum dots and wires. Philosophical Magazine Letters, 2004, 84, 501-506.	1.2	42
18	Trace analysis of non-basal plane misfit stress relaxation in (202Â¯1) and (303Â¯1Â¯) semipolar InGaN/GaN heterostructures. Applied Physics Letters, 2012, 100, .	3.3	42

#	Article	IF	Citations
19	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
20	Stress relaxation and critical thickness for misfit dislocation formation in (101Â¯0) and (3031Â¯) InGaN/GaN heteroepitaxy. Applied Physics Letters, 2012, 100, 171917.	3.3	32
21	Misfit dislocation loops in composite core-shell nanoparticles. Physics of the Solid State, 2014, 56, 723-730.	0.6	28
22	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
23	Dislocation and disclination loops in the virtual-defect method. Physics of the Solid State, 2003, 45, 1706-1718.	0.6	24
24	Straight disclinations near a free surface I. Stress fields. Physica Status Solidi A, 1981, 63, 109-118.	1.7	20
25	Critical thickness for the formation of misfit dislocations originating from prismatic slip in semipolar and nonpolar III-nitride heterostructures. APL Materials, 2016, 4, .	5.1	18
26	Stacking faults and interface roughening in semipolar (202Â¯1Â¯) single InGaN quantum wells for long wavelength emission. Applied Physics Letters, 2014, 104, .	3.3	14
27	Dislocation loops in solid and hollow semiconductor and metal nanoheterostructures. Physics of the Solid State, 2015, 57, 1177-1182.	0.6	13
28	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
29	Blue and aquamarine stress-relaxed semipolar (112Â¯2) laser diodes. Applied Physics Letters, 2013, 103, .	3.3	11
30	Stressâ€“strain state in Î±-Ga₂O₃ epitaxial films on Î±-Al₂O₃ substrates. Applied Physics Express, 2020, 13, 075502.	2.4	11
31	Highâ€Quality Bulk Î²â€Ga₂O₃ and Î²â€(Al_xGa_{1â^'x})₂O₃ Crystals: Growth and Properties. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100335.	1.8	11
32	Stress relaxation in semipolar and nonpolar III-nitride heterostructures by formation of misfit dislocations of various origin. Journal of Applied Physics, 2019, 126, .	2.5	10
33	On the Screening Length of Disclinations in Amorphous Structures. Physica Status Solidi (B): Basic Research, 1987, 143, 43-53.	1.5	8
34	Elastic models of defects in two-dimensional crystals. Physics of the Solid State, 2014, 56, 2573-2579.	0.6	8
35	Deposition of Î²-Ga2O3 layers by sublimation on sapphire substrates of different orientations. Physics of the Solid State, 2015, 57, 1342-1346.	0.6	8
36	Disclination ensembles in graphene. Low Temperature Physics, 2018, 44, 918-924.	0.6	8

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37	Volume Gallium Oxide Crystals Grown from Melt by the Czochralski Method in an Oxygen-Containing Atmosphere. Technical Physics Letters, 2020, 46, 1144-1146.	0.7	7
38	Misfit stresses and their relaxation by misfit dislocation loops in core-shell nanoparticles with truncated spherical cores. European Journal of Mechanics, A/Solids, 2020, 81, 103967.	3.7	6
39	Chloride epitaxy of Î²-Ga2O3 layers grown on c-sapphire substrates. Semiconductors, 2016, 50, 980-983.	0.5	5
40	Twist disclination loop in an elastic spheroid. Technical Physics Letters, 2009, 35, 985-989.	0.7	4
41	Misfit stress relaxation in wide bandgap semiconductor heterostructures with trigonal and hexagonal crystal structure. Journal of Applied Physics, 2022, 131, 025301.	2.5	4
42	Micromechanics of defects in functional materials. Acta Mechanica, 2021, 232, 1901-1915.	2.1	3
43	Misfit Stress Relaxation in Î±-Ga2O3/Î±-Al2O3 Heterostructures via Formation of Misfit Dislocations. Physics of the Solid State, 2021, 63, 924-931.	0.6	3
44	Evolution of Pentagonal Nano- and Micro-Objects in Temperature Fields. Russian Physics Journal, 2015, 58, 854-857.	0.4	1
45	On Fracture of Pseudo-Graphenes. Mechanics of Solids, 2020, 55, 69-76.	0.7	1
46	On mesoscopic description of interfaces in graphene. Physics of Complex Systems, 2020, 1, 129-134.	0.2	1
47	Formation of a pore as stress relaxation mechanism in decahedral small particles. Letters on Materials, 2022, 12, 137-141.	0.7	1
48	Si doping effects on the electrical and structural properties of high Al composition AlxGa1â^'xN films grown by MOCVD. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2010-2013.	0.8	0
49	Nanomechanics of Stress Relaxation in Composite Low-Dimensional Structures. , 2018, , 1-23.		0
50	Amplitude dependence of internal friction and elastic modulus at ultrasonic frequencies in the Ni-Mn-Ga martensitic phase. AIP Conference Proceedings, 2021, , .	0.4	0
51	RESIADUAL STRESS RELAXATION IN DECAHEDRAL PARTICLES THROUGH THE FORMATION OF A CENTRAL SPHERICAL VOID. , 2021, , 27-38.		0
52	The influence of dislocation and twin structures on the mechanical characteristics of Niâ€“Mnâ€“Ga alloys at ultrasonic frequencies. , 2022, , 28-36.		0