Valentin A Gorodtsov

List of Publications by Year
in descending order

110 papers	928 citations	471509 17 h-index	580821 25 g-index
110 all docs	110 docs citations	110 times ranked	364 citing authors

#	Article	IF	Citations
1	Auxetic mechanics of crystalline materials. Mechanics of Solids, 2010, 45, 529-545.	0.7	53
2	Negative Poissonâ€™s ratio for cubic crystals and nano/microtubes. Physical Mesomechanics, 2014, 17, 97-115.	1.9	46
3	Equilibrium diamondâ€like carbon nanostructures with cubic anisotropy: Elastic properties. Physica Status Solidi (B): Basic Research, 2016, 253, 1295-1302.	1.5	37
4	Auxetics among Materials with Cubic Anisotropy. Mechanics of Solids, 2020, 55, 461-474.	0.7	34
5	Effect of residual surface stress and surface elasticity on deformation of nanometer spherical inclusions in an elastic matrix. Physical Mesomechanics, 2010, 13, 318-328.	1.9	29
6	Extreme values of Youngâ€™s modulus and Poissonâ€™s ratio of hexagonal crystals. Mechanics of Materials, 2019, 134, 1-8.	3.2	29
7	Elastic Properties of Fullerites and Diamondâ€Like Phases. Physica Status Solidi (B): Basic Research, 2019, 256, 1800049.	1.5	28
8	Elastic properties of diamond-like phases based on carbon nanotubes. Diamond and Related Materials, 2019, 97, 107411.	3.9	27
9	Three-layered plate exhibiting auxeticity based on stretching and bending modes. Composite Structures, 2018, 194, 643-651.	5.8	25
10	Auxetics among 6-constant tetragonal crystals. Letters on Materials, 2015, 5, 409-413.	0.7	24
11	Youngâ€™s modulus and Poissonâ€™s ratio for seven-constant tetragonal crystals and nano/microtubes. Physical Mesomechanics, 2015, 18, 213-222.	1.9	23
12	Equilibrium structures of carbon diamond-like clusters and their elastic properties. Physics of the Solid State, 2017, 59, 820-828.	0.6	22
13	Stability, elastic properties and deformation behavior of graphene-based diamond-like phases. Computational Materials Science, 2020, 172, 109355.	3.0	22
14	Cubic auxetics. Doklady Physics, 2011, 56, 399-402.	0.7	21
15	A Compact Analytic Model of the Strain Field Induced by Through Silicon Vias. IEEE Transactions on Electron Devices, 2012, 59, 777-782.	3.0	19
16	Classification of cubic auxetics. Physica Status Solidi (B): Basic Research, 2013, 250, 2038-2043.	1.5	19
17	The elastic properties of hexagonal auxetics under pressure. Physica Status Solidi (B): Basic Research, 2016, 253, 1261-1269.	1.5	18
18	Twoâ€Layered Tubes from Cubic Crystals: Auxetic Tubes. Physica Status Solidi (B): Basic Research, 2017, 254, 1600815.	1.5	18

#	Article	IF	Citations
19	Negative Poisson's ratio for sixâ€constant tetragonal nano/microtubes. Physica Status Solidi (B): Basic Research, 2015, 252, 1580-1586.	1.5	17
20	Auxeticity in nano/microtubes produced from orthorhombic crystals. Smart Materials and Structures, 2016, 25, 054006.	3.5	17
21	Rayleigh and Love surface waves in isotropic media with negative Poissonâ€™s ratio. Mechanics of Solids, 2014, 49, 422-434.	0.7	16
22	Longitudinal elastic tension of two-layered plates from isotropic auxetics-nonauxetics and cubic crystals. European Journal of Mechanics, A/Solids, 2017, 63, 122-127.	3.7	16
23	Thin Homogeneous Two-Layered Plates of Cubic Crystals with Different Layer Orientation. Physical Mesomechanics, 2019, 22, 261-268.	1.9	16
24	Study of internal waves in the case of rapid horizontal motion of cylinders and spheres. Fluid Dynamics, 1982, 17, 893-898.	0.9	15
25	Youngâ€™s modulus of cubic auxetics. Letters on Materials, 2011, 1, 127-132.	0.7	15
26	Similarity and weak closing relations for symmetric free turbulence. Fluid Dynamics, 1979, 14, 31-37.	0.9	14
27	Mesomechanics of multiwall carbon nanotubes and nanowhiskers. Physical Mesomechanics, 2009, 12, 38-53.	1.9	14
28	Chiral elasticity of nano/microtubes from hexagonal crystals. Acta Mechanica, 2018, 229, 2189-2201.	2.1	14
29	Shear modulus of cubic crystals. Letters on Materials, 2012, 2, 21-24.	0.7	14
30	Mechanical characteristics for seven-constant rhombohedral crystals and their nano/microtubes. Letters on Materials, 2016, 6, 93-97.	0.7	14
31	Variability of elastic properties of hexagonal auxetics. Doklady Physics, 2011, 56, 602-605.	0.7	13
32	Spreading of a film of nonlinearly viscous liquid over a horizontal smooth solid surface. Journal of Engineering Physics, 1989, 57, 879-884.	0.0	12
33	Relation of Poissonâ€™s ratio on average with Youngâ€™s modulus. Auxetics on average. Doklady Physics, 2012, 57, 174-178.	0.7	12
34	Youngâ€™s moduli and Poissonâ€™s ratios of curvilinear anisotropic hexagonal and rhombohedral nanotubes. Nanotubes-auxetics. Doklady Physics, 2013, 58, 400-404.	0.7	12
35	Extreme values of the shear modulus for hexagonal crystals. Scripta Materialia, 2017, 140, 55-58.	5.2	11
36	About negativity of the Poissonâ€™s ratio for anisotropic materials. Doklady Physics, 2009, 54, 546-548.	0.7	9

#	Article	IF	Citations
37	Modeling of the Mechanical Properties of Chiral Metallic Nanotubes. Physical Mesomechanics, 2020, 23, 477-486.	1.9	9
38	Slow motions of a liquid drop in a viscous liquid. Journal of Applied Mechanics and Technical Physics, 1976, 16, 865-868.	0.5	8
39	Poyntingâ€™s effect of cylindrically anisotropic nano/microtubes. Physical Mesomechanics, 2016, 19, 229-238.	1.9	8
40	Chiral Fe nanotubes with both negative Poissonâ€™s ratio and Poyntingâ€™s effect. Atomistic simulation. Journal of Physics Condensed Matter, 2019, 31, 475304.	1.8	8
41	On the Modeling of Surface and Interface Elastic Effects in Case of Eigenstrains. Advanced Structured Materials, 2013, , 167-180.	0.5	7
42	Torsion of cylindrically anisotropic nano/microtubes from seven-constant tetragonal crystals. Poyntingâ€™s effect. Physical Mesomechanics, 2016, 19, 349-354.	1.9	7
43	Two-layer tubes from cubic crystals. Doklady Physics, 2016, 61, 604-610.	0.7	7
44	Tension of thin two-layered plates of hexagonal crystals. Composite Structures, 2019, 209, 453-459.	5.8	7
45	Average Poissonâ€™s ratio for crystals. Hexagonal auxetics. Letters on Materials, 2013, 3, 7-11.	0.7	7
46	Two-dimensional problem for internal waves generated by moving singular sources. Fluid Dynamics, 1981, 16, 219-224.	0.9	5
47	Specific features of the strength of carbon whiskers. Technical Physics Letters, 2006, 32, 837-839.	0.7	5
48	Linear poyntingâ€™s effect at torsion and extension of curvilinearly anisotropic tubes. Doklady Physics, 2015, 60, 396-399.	0.7	5
49	Torsion of cylindrically anisotropic nano/microtubes of the cubic crystals obtained by rolling the crystal planes (011). Letters on Materials, 2016, 6, 249-252.	0.7	5
50	Variability of elastic properties of chiral monoclinic tubes under extension and torsion. Letters on Materials, 2019, 9, 202-206.	0.7	5
51	Wave drag of rapidly and horizontally moving Rankine ovoid in uniformly stratified fluid. Progress in Natural Science: Materials International, 2008, 18, 723-727.	4.4	4
52	Deformation behaviour of re-entrant carbon honeycomb structures. IOP Conference Series: Materials Science and Engineering, 2018, 447, 012035.	0.6	4
53	Elastic Properties of Chiral Metallic Nanotubes Formed from Cubic Crystals. Physical Mesomechanics, 2021, 24, 464-474.	1.9	4
54	Stretching of chiral tubes obtained by rolling-up plates of cubic crystals with various orientations. Journal of Mechanics of Materials and Structures, 2021, 16, 139-157.	0.6	4

#	Article	IF	Citations
55	The Extreme Values of Youngâ€™s Modulus and the Negative Poissonâ€™s Ratios of Rhombic Crystals. Crystals, 2021, 11, 863.	2.2	4
56	Outâ€ofâ€plane tension of thin twoâ€layered plates of cubic crystals. Physica Status Solidi (B): Basic Research, 0, , 2100184.	1.5	4
57	Final period of decay of turbulent motions of viscoelastic fluids. Journal of Applied Mechanics and Technical Physics, 1965, 6, 61-63.	0.5	3
58	Description of the reduction in turbulent friction drag in viscoelastic fluids. Journal of Engineering Physics, 1973, 25, 1559-1566.	0.0	3
59	Radiation of internal waves by periodically moving sources. Journal of Applied Mechanics and Technical Physics, 1984, 24, 521-526.	0.5	3
60	Convective heat conduction and diffusion in one-dimensional hydrodynamics. Journal of Experimental and Theoretical Physics, 1999, 89, 872-879.	0.9	3
61	Finite speed of diffusion propagation in a two-component continuous medium. Prikladnaya Matematika I Mekhanika, 2001, 65, 353-356.	0.4	3
62	Variability of the elastic properties of multiwalled carbon nanotubes. Technical Physics Letters, 2005, 31, 18-20.	0.7	3
63	Simulation of stress-strain state in SiGe island heterostructures. Mechanics of Solids, 2010, 45, 312-323.	0.7	3
64	To the description of multi-layered nanotubes in models of cylindrically anisotropic elasticity. Physical Mesomechanics, 2010, 13, 12-20.	1.9	3
65	Modeling and Optimization of Edge Dislocation Stressors. IEEE Electron Device Letters, 2013, 34, 948-950.	3.9	3
66	On surface elasticity theory for plane interfaces. Physical Mesomechanics, 2014, 17, 30-38.	1.9	3
67	Extreme values of Youngâ€™s modulus of tetragonal crystals. Mechanics of Materials, 2021, 154, 103724.	3.2	3
68	Description of mechanical properties of carbon nanotubes. Tube wall thickness problem. Size effect. Part 1. Letters on Materials, 2011, 1, 185-189.	0.7	3
69	Description of mechanical properties of carbon nanotubes. Tube wall thickness problem. Size effect. Part 2. Letters on Materials, 2011, 1, 190-193.	0.7	3
70	On similarity laws for the developed turbulence of dilute polymer solutions. Journal of Engineering Physics, 1973, 25, 1467-1474.	0.0	2
71	Radiation of internal waves during vertical motion of a body through a nonuniform liquid. Journal of Engineering Physics, 1980, 39, 1062-1065.	0.0	2
72	Diffusion spreading of localized hydrodynamic disturbances under the action of random forces. Prikladnaya Matematika I Mekhanika, 1988, 52, 165-170.	0.4	2

#	Article	IF	Citations
73	Radiative forces acting on point sources moving in a stratified fluid. Journal of Experimental and Theoretical Physics, 1997, 85, 276-284.	0.9	2
74	SiGe Quantum Rings by Ultra-high Vacuum Chemical Vapor Deposition. ECS Transactions, 2009, 16, 647-657.	0.5	2
75	Variability of Youngâ€™s modulus and Poissonâ€™s ratio of hexagonal crystals. IOP Conference Series: Materials Science and Engineering, 2018, 347, 012019.	0.6	2
76	Out-of-Plane Tension of Thin Two-Layered Plates of Identically Oriented Hexagonal Crystals. Physical Mesomechanics, 2021, 24, 146-154.	1.9	2
77	Effective elastic properties variability for two-layered plates of hexagonal and cubic crystals under longitudinal tension. Composite Structures, 2021, 274, 114300.	5.8	2
78	Model of the dynamic layer in the wall turbulence of a liquid with relaxation stress. Fluid Dynamics, 1975, 9, 35-46.	0.9	1
79	Power laws of reduced turbulent friction for polymer solutions. Journal of Engineering Physics, 1975, 28, 275-282.	0.0	1
80	Turbulence with low heterogeneity and anisotropy. Journal of Engineering Physics, 1975, 28, 749-752.	0.0	1
81	Turbulent flow of a polymer solution over a flat plate. Journal of Engineering Physics, 1976, 31, 1069-1074.	0.0	1
82	Slow motions of a rigid sphere in incompressible viscoelastic fluids. Fluid Dynamics, 1977, 11, 183-189.	0.9	1
83	Evolution of axisymmetric vorticity distributions in an ideal incompressible stratified liquid. Prikladnaya Matematika I Mekhanika, 1983, 47, 479-484.	0.4	1
84	High-speed asymptotic form of the wave resistance of bodies in a uniformly stratified liquid. Journal of Applied Mechanics and Technical Physics, 1991, 32, 331-337.	0.5	1
85	Wave drag of an ellipsoid of revolution for the case of its rapid vertical motion in homogeneous stratified fluid. Doklady Physics, 2007, 52, 165-167.	0.7	1
86	On modeling the mechanical behavior of heterostructures with quantum dots. Russian Physics Journal, 2009, 52, 1177-1185.	0.4	1
87	A mechanical model of the contact interaction between the atomic force microscope measuring element and a surface under investigation. Nanotechnologies in Russia, 2009, 4, 525-529.	0.7	1
88	Small Wave â€“ Vortex Disturbances in Stratified Fluid. Procedia IUTAM, 2013, 8, 111-118.	1.2	1
89	The degeneration of turbulence in a liquid with internal rotation. Journal of Applied Mechanics and Technical Physics, 1971, 8, 29-31.	0.5	0
90	Normal stresses in a viscoelastic medium with decaying turbulent motion. Journal of Applied Mechanics and Technical Physics, 1971, 8, 40-44.	0.5	0

#	Article	IF	Citations
91	Spectrum of developed turbulence of incompressible viscoelastic fluids. Fluid Dynamics, 1972, 7, 20-30.	0.9	0
92	Role of the scalar structure parameter in the description of the rheological behavior of elastico-viscous liquids. Polymer Mechanics, 1972, 5, 972-982.	0.1	0
93	Drag reduction in rough pipes by water-soluble polymer additives. Fluid Dynamics, 1972, 3, 117-118.	0.9	0
94	Logarithmic equations for the resistance of turbulent friction for a viscous liquid and polymer solutions. Journal of Engineering Physics, 1975, 29, 1403-1407.	0.0	0
95	Slow nonstationary motions of viscoelastic liquids. Fluid Dynamics, 1976, 10, 711-716.	0.9	0
96	Turbulent boundary layer of polymer solutions with a flow-retarding pressure gradient. Journal of Engineering Physics, 1979, 37, 1396-1401.	0.0	0
97	Similarity of undeveloped turbulent near-wall flows. Journal of Engineering Physics, 1979, 37, 1415-1418.	0.0	0
98	Laminated structures in the final stage in the decay of turbulence in stratified fluids. Fluid Dynamics, 1986, 20, 552-559.	0.9	0
99	Effect of homogeneous shear flow on small long-lived perturbations in a stratified fluid. Fluid Dynamics, 1988, 23, 237-244.	0.9	0
100	Collapse of asymmetric perturbations in a stratified fluid. Fluid Dynamics, 1992, 26, 834-840.	0.9	0
101	Fast asymptotic form of the resistance of bodies in a waveguide layer of non-uniform fluids. Prikladnaya Matematika I Mekhanika, 1992, 56, 222-228.	0.4	0
102	Precursor waves associated with the motion of sources of variable intensity in a stratified fluid. Fluid Dynamics, 1994, 29, 232-237.	0.9	0
103	Radiation of internal gravitational waves in the case of uniform motion of sources of variable amplitude (the plane problem). Journal of Applied Mechanics and Technical Physics, 1994, 34, 653-660.	0.5	0
104	Stochastic Kadomtsev-Petviashvili equation. Journal of Experimental and Theoretical Physics, 2000, 90, 1105-1113.	0.9	0
105	The anomalous diffusion of wave disturbances in hydrodynamic-type systems. Prikladnaya Matematika I Mekhanika, 2003, 67, 565-574.	0.4	0
106	Wave drag of an ellipsoid of revolution rapidly moving in a horizontal direction in a uniformly stratified fluid. Fluid Dynamics, 2006, 41, 415-423.	0.9	0
107	Drag increment of internal waves generated by horizontally moving spheroid in supercritical regime. Acta Mechanica Sinica/Lixue Xuebao, 2008, 24, 127-132.	3.4	0
108	Modeling of mechanical effects related to operation of atomic force microscopes. Nanotechnologies in Russia, 2008, 3, 378-390.	0.7	0

#	Article	IF	Citations
109	Reply to â€œComment on â€˜A Compact Analytic Model of the Strain Field Induced by Through ilicon Viasâ€â€™. IEEE Transactions on Electron Devices, 2015, 62, 3106-3106.	3.0	0
110	Deformation of Spherical Inclusion in an Elastic Body with Account for Influence of Interface Considered as Infinitesimal Layer with Abnormal Properties. Advanced Structured Materials, 2017, , 163-169.	0.5	0