

# Vyacheslav N Gorshkov

## List of Publications by Year in descending order

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76  
papers

1,267  
citations

567247

15  
h-index

377849

34  
g-index

76  
all docs

76  
docs citations

76  
times ranked

1119  
citing authors

#	ARTICLE	IF	CITATIONS
1	Topological charge and angular momentum of light beams carrying optical vortices. <i>Physical Review A</i> , 1997, 56, 4064-4075.	2.5	480
2	Model of Controlled Synthesis of Uniform Colloid Particles: Cadmium Sulfide. <i>Langmuir</i> , 2003, 19, 10679-10683.	3.5	84
3	Beam wandering in the atmosphere: The effect of partial coherence. <i>Physical Review E</i> , 2007, 76, 056606.	2.1	61
4	Formation of monodispersed cadmium sulfide particles by aggregation of nanosize precursors. <i>Advances in Colloid and Interface Science</i> , 2003, 100-102, 169-183.	14.7	58
5	Semiclassical Monte-Carlo approach for modelling non-adiabatic dynamics in extended molecules. <i>Nature Communications</i> , 2013, 4, 2144.	12.8	45
6	Shape Selection in Diffusive Growth of Colloids and Nanoparticles. <i>Langmuir</i> , 2009, 25, 7940-7953.	3.5	42
7	Suppression of intensity fluctuations in free space high-speed optical communication based on spectral encoding of a partially coherent beam. <i>Optics Communications</i> , 2007, 280, 264-270.	2.1	41
8	Wavefront motion in the vicinity of a phase dislocation: "optical vortex". <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2000, 88, 260-265.	0.6	35
9	Models of synthesis of uniform colloids and nanocrystals. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010, 43, 1-12.	2.7	29
10	Scintillation reduction for laser beams propagating through turbulent atmosphere. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 055402.	1.5	24
11	Morphology of Nanoclusters and Nanopillars Formed in Nonequilibrium Surface Growth for Catalysis Applications. <i>Langmuir</i> , 2011, 27, 8554-8561.	3.5	23
12	Kinetic Monte Carlo model of breakup of nanowires into chains of nanoparticles. <i>Journal of Applied Physics</i> , 2017, 122, .	2.5	22
13	Liquid metal microdroplet source for deposition purposes. <i>Applied Surface Science</i> , 1993, 65-66, 1-12.	6.1	21
14	Semiclassical Monte Carlo: A first principles approach to non-adiabatic molecular dynamics. <i>Journal of Chemical Physics</i> , 2014, 141, 184101.	3.0	17
15	Microdroplet emission and instabilities in liquid-metal ion sources. <i>Surface Science</i> , 1992, 266, 185-190.	1.9	16
16	Permanent magnet plasma lens. <i>Review of Scientific Instruments</i> , 2002, 73, 1001-1003.	1.3	13
17	Formation of nanoclusters and nanopillars in nonequilibrium surface growth for catalysis applications: growth by diffusional transport of matter in solution synthesis. <i>Heat and Mass Transfer</i> , 2014, 50, 383-392.	2.1	13
18	Modeling of Growth Morphology of Core-Shell Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2014, 118, 24959-24966.	3.1	13

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19	Non-adiabatic molecular dynamics by accelerated semiclassical Monte Carlo. Journal of Chemical Physics, 2015, 143, 014115.	3.0	13
20	<title>Diffraction and self-restoration of a severely screened vortex beam</title>. , 2001, , .		12
21	Lifetimes of excited levels of Nd I and Nd II. Oscillator strengths of the spectral lines of Nd I. Astrofizika, 1982, 17, 437-441.	0.0	11
22	Nonequilibrium kinetic modeling of sintering of a layer of dispersed nanocrystals. CrystEngComm, 2014, 16, 10395-10409.	2.6	11
23	Mechanisms of interparticle bridging in sintering of dispersed nanoparticles. Journal of Coupled Systems and Multiscale Dynamics, 2014, 2, 91-99.	0.2	11
24	Reduction of laser intensity scintillations in turbulent atmospheres using time averaging of a partially coherent beam. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 225403.	1.5	10
25	Diversity of anisotropy effects in the breakup of metallic FCC nanowires into ordered nanodroplet chains. CrystEngComm, 2020, 22, 2601-2611.	2.6	10
26	Kinetics modeling of nanoparticle growth on and evaporation off nanotubes. Journal of Applied Physics, 2017, 121, .	2.5	9
27	Dynamics of Anisotropic Breakâ€šUp in Nanowires of FCC Lattice Structure. Advanced Theory and Simulations, 2019, 2, 1900118.	2.8	8
28	Spin diffusion and relaxation in a nonuniform magnetic field. Physical Review B, 2005, 71, .	3.2	7
29	Nonequilibrium kinetic study of sintering of dispersed nanoparticles. CrystEngComm, 2013, 15, 7177.	2.6	7
30	Lattice percolation approach to 3D modeling of tissue aging. Physica A: Statistical Mechanics and Its Applications, 2016, 462, 207-216.	2.6	7
31	Phononic dispersion in anisotropic pseudo-fractal hyper-lattices. Materials and Design, 2019, 164, 107560.	7.0	7
32	Restructuring and breakup of nanowires with the diamond cubic crystal structure into nanoparticles. Materials Today Communications, 2020, 22, 100727.	1.9	7
33	Instabilities of electron-hole plasma under impact ionization and microwave emission. Solid State Communications, 1979, 30, 153-156.	1.9	6
34	Radiative lifetimes of excited states and oscillator strengths of spectral lines of some lanthanide atoms and ions (Review). Journal of Applied Spectroscopy, 1984, 41, 1091-1104.	0.7	6
35	Roughening transition as a driving factor in the formation of self-ordered one-dimensional nanostructures. CrystEngComm, 2021, 23, 1836-1848.	2.6	6
36	<title>Topology of optical vortices spontaneous birth</title>. , 2002, 4607, 13.		5

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37	Random spin signal in magnetic resonance force microscopy. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 318, 584-591.	2.1	5
38	Optimization and new applications of a magnetic trap for ultra-cold neutrons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 592, 385-392.	1.6	5
39	Lattice percolation approach to numerical modelling of tissue aging. International Journal of Parallel, Emergent and Distributed Systems, 2016, 31, 1-19.	1.0	5
40	Heterogeneous and Homogeneous Nucleation in the Synthesis of Quasi-One-Dimensional Periodic Core-Shell Nanostructures. Crystal Growth and Design, 2021, 21, 1604-1616.	3.0	5
41	<title>Synthesis of optical vortices by technique of a phase wedge</title>. , 2002, , .		4
42	Space-charge lens for focusing a negative-ion beam. Plasma Physics Reports, 2003, 29, 480-484.	0.9	4
43	Modeling and Simulations of a Single-Spin Measurement Using MRFM. IEEE Nanotechnology Magazine, 2005, 4, 14-20.	2.0	4
44	Bose-Einstein condensate of ultra-light axions as a candidate for the dark matter galaxy halos. Modern Physics Letters A, 2019, 34, 1950361.	1.2	4
45	Plasma self-oscillations in semiconductors within submillimetre frequency range. Solid State Communications, 1980, 34, 555-557.	1.9	3
46	Combined breakdown in bismuth-Antimony semiconductor alloys. Solid State Communications, 1983, 46, 193-196.	1.9	3
47	The dynamical effects in liquid-metal ion sources. Applied Surface Science, 1995, 87-88, 112-116.	6.1	3
48	Numerical simulations of a high-current plasma lens. Plasma Physics Reports, 2003, 29, 874-882.	0.9	3
49	Reduction of magnetic noise in magnetic resonance force microscopy. Physical Review B, 2004, 69, .	3.2	3
50	Scintillation reduction for combined Gaussian-vortex beam propagating through turbulent atmosphere. , 2011, , .		3
51	Magnetic resonance force microscopy with a paramagnetic probe. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1445-1448.	2.1	3
52	Space charge lens for focusing negative ion beam: Theory and experiment. Review of Scientific Instruments, 2004, 75, 1774-1776.	1.3	2
53	The low-field permanent magnet electrostatic plasma lens. Review of Scientific Instruments, 2004, 75, 1662-1664.	1.3	2
54	Uncooled infrared and terahertz detectors based on micromechanical mirror as a radiation pressure sensor. Proceedings of SPIE, 2009, , .	0.8	2

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55	Two-component axionic dark matter halos. Modern Physics Letters A, 2020, 35, 2050227.	1.2	2
56	On the nature of oscillations of Z-pinch in n-InSb under impact ionization. Solid State Communications, 1976, 19, 563-567.	1.9	1
57	Grantmakher-Kaner effect in strong magnetic fields. Solid State Communications, 1978, 27, 595-598.	1.9	1
58	On the coherent self-oscillation mechanism under transverse breakdown in n-InSb (T = 77 K). Solid State Communications, 1985, 56, 399-402.	1.9	1
59	Microdroplet emission on liquid metal surface at the development of Rayleigh instabilities " applications in cosmos. Applied Surface Science, 1996, 94-95, 171-176.	6.1	1
60	Regular and random magnetic resonance force microscopy signal with a cantilever oscillating parallel to a sample surface. Journal of Applied Physics, 2004, 96, 5081-5084.	2.5	1
61	Physical Processes in Compensated Beams of Negative Ions and Problems of Transport of the Beams. AIP Conference Proceedings, 2007, , .	0.4	1
62	Process of compensation of the space charge of a negative ion beam in a gas. Plasma Physics Reports, 2007, 33, 1032-1037.	0.9	1
63	The effects of phase diffuser on scintillations of laser radiation for long-distance propagation in the atmosphere. , 2010, , .		1
64	Radiation damping for speeding " NMR applications. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2012, 40A, 179-185.	0.5	1
65	Rate-equation modelling and ensemble approach to extraction of parameters for viral infection-induced cell apoptosis and necrosis. Journal of Chemical Physics, 2016, 145, 094103.	3.0	1
66	Electron spin relaxation induced by a cantilever when the spin frequency matches the cantilever frequency. Journal of Applied Physics, 2021, 130, 144402.	2.5	1
67	Dynamics of Quasi-One-Dimensional Structures under Roughening Transition Stimulated by External Irradiation. Nanomaterials, 2022, 12, 1411.	4.1	1
68	Z-pinch dynamics under the combined breakdown in bismuth-antimony alloys. Solid State Communications, 1985, 53, 259-262.	1.9	0
69	Determination of atom concentrations by resonant radiation capture. Journal of Applied Spectroscopy, 1986, 45, 671-675.	0.7	0
70	Periodic structures on the surface of liquid metal electrodes in contact with plasma. Journal of Engineering Physics and Thermophysics, 1992, 62, 489-491.	0.6	0
71	Phase dislocations in a focused Gaussian beam induced via self-action in a dye-doped nematic liquid crystal cell. , 1999, , .		0
72	<title>Spontaneous birth of optical vortices in a system of copropagating Gaussian beams</title>. , 2002, 4607, 40.		0

#	ARTICLE	IF	CITATIONS
73	Spin diffusion and relaxation in solid state spin quantum computer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 352, 107-114.	2.1	0
74	Ground states of Heisenberg spin chains via quantum annealing. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 369, 151-156.	2.1	0
75	Suppression of scintillations and beam wandering in free space gigabit rate optical communication based on spectral encoding of a partially coherent beam. Proceedings of SPIE, 2009, , .	0.8	0
76	Axionic dark matter halos in the gravitational field of baryonic matter. Modern Physics Letters A, 2020, 35, 2050248.	1.2	0