Nikolay G Lebedev

List of Publications by Year
in descending order

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105 papers	576 citations	758635 12 h-index	752256 20 g-index
105 all docs	105 docs citations	105 times ranked	239 citing authors

#	Article	IF	Citations
1	Electromagnetic solitons in a system of carbon nanotubes. Journal of Russian Laser Research, 2006, 27, 457-465.	0.3	75
2	Two-dimensional light bullets in an array of carbon nanotubes. JETP Letters, 2010, 91, 461-465.	0.4	36
3	Electromagnetic solitons in bundles of zigzag carbon nanotubes. Physics of the Solid State, 2008, 50, 383-389.	0.2	32
4	Electromechanical nanothermometer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 366, 480-486.	0.9	23
5	Electrical conductivity of double-walled carbon nanotubes in the framework of the Hubbard model. Physics of the Solid State, 2007, 49, 189-196.	0.2	22
6	Amplification of ultimately-short pulses in graphene in the presence of a high-frequency field. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2010, 108, 618-623.	0.2	19
7	New class of non-carbon AlP nanotubes: Structure and electronic properties. JETP Letters, 2005, 81, 185-189.	0.4	18
8	Two-dimensional nonlinear electromagnetic waves in a carbon nanotube array. Physics of the Solid State, 2009, 51, 1758-1764.	0.2	16
9	Extremely short optical pulse in a system of nanotubes with adsorbed hydrogen. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 946-952.	0.9	16
10	Fluorination of carbon nanotubes within the molecular cluster method. Microelectronic Engineering, 2003, 69, 511-518.	1.1	15
11	Hiral effects of single-wall carbon nanotube fluorination and hydrogenation. International Journal of Quantum Chemistry, 2004, 100, 548-558.	1.0	13
12	Electromagnetic solitons in a system of graphene planes with Anderson impurities. Journal of Russian Laser Research, 2009, 30, 101-108.	0.3	12
13	Dynamics of laser bullet propagation in carbon nanotube array with metal inhomogeneities. Technical Physics Letters, 2011, 37, 119-122.	0.2	12
14	Solitons in a system of coupled graphene waveguides. Physics of the Solid State, 2012, 54, 174-177.	0.2	12
15	EXTREMELY SHORT OPTICAL PULSES IN CARBON NANOTUBES IN DISPERSIVE NONMAGNETIC DIELECTRIC MEDIA. International Journal of Modern Physics B, 2011, 25, 3401-3408.	1.0	11
16	Ultimately short optical pulses in carbon nanotubes in dispersive nonmagnetic dielectric media. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2011, 111, 85-90.	0.2	11
17	Light bullet passing an array of carbon nanotubes with metallic mesh irregularities. European Physical Journal D, 2011, 65, 635-640.	0.6	11
18	Periodic current domains in bundles of carbon nanotubes. Technical Physics, 2008, 53, 817-823.	0.2	10

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19	A study of the oxidation and fluorination of single-walled carbon nanotubes by the MNDO method. Physics of the Solid State, 2002, 44, 482-484.	0.2	9
20	Single and regular hydrogenation and oxidation of carbon nanotubes: MNDO calculations. International Journal of Quantum Chemistry, 2004, 96, 149-154.	1.0	9
21	Electronic structure of carbon nanotubes modified by alkali metal atoms. Physics of the Solid State, 2004, 46, 1173-1178.	0.2	8
22	Fluorination of carbon nanotubes: Quantum chemical investigation within MNDO approximation. International Journal of Quantum Chemistry, 2004, 96, 142-148.	1.0	8
23	Electronic structure of laser dye DCM and its derivatives. International Journal of Quantum Chemistry, 2005, 104, 189-196.	1.0	8
24	Quantum-chemical calculations of the piezoelectric characteristics of boron nitride and carbon nanotubes. Physics of the Solid State, 2006, 48, 2028-2034.	0.2	8
25	Proton conductivity of single-walled carbon nanotubes: A semiempirical study. Physics of the Solid State, 2006, 48, 806-811.	0.2	7
26	Hiral Effects of Single Wall Carbon Nanotube Fluorination and Hydrogenation. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 12, 443-448.	1.0	6
27	Geometric structure and electronic properties of planar and nanotubular BN structures of the Haeckelite type. Physics of the Solid State, 2006, 48, 192-198.	0.2	6
28	Soliton antiferromagnetic lattice in carbon nanotubes. Russian Journal of Physical Chemistry B, 2008, 2, 964-968.	0.2	6
29	An electromechanical nanothermometer based on thermal vibrations of carbon nanotube walls. Physics of the Solid State, 2009, 51, 1306-1314.	0.2	6
30	Electrical conduction of carbon nanotubes due to the migration of protons over their surface. Physics of the Solid State, 2009, 51, 2421-2427.	0.2	6
31	Ultrashort optical pulses in carbon nanotubes and graphene with periodic impurities. Physics of the Solid State, 2010, 52, 1780-1786.	0.2	6
32	Tunneling through the carbon nanotube/graphene interface exposed to a strong oscillating electric field. Journal of Nanophotonics, 2010, 4, 041670.	0.4	6
33	Electronic spectrum and tunneling current in curved graphene nanoribbons. Solid State Communications, 2011, 151, 1147-1150.	0.9	6
34	Piezoresistive effect in single-walled carbon nanotubes. Physics of the Solid State, 2012, 54, 1501-1506.	0.2	6
35	Electrical conductivity and diffusion coefficient of electrons in a graphene bilayer. Technical Physics, 2012, 57, 1025-1029.	0.2	6
36	Effect of an electric field on the transport and diffusion properties of bilayer graphene ribbons. Physica Scripta, 2013, 87, 015602.	1.2	6

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37	Nonchiral BN Haeckelite nanotubes. JETP Letters, 2005, 81, 346-350.	0.4	5
38	Two-qubit cells made of boron nitride nanotubes for a quantum computer. Technical Physics, 2009, 54, 338-342.	0.2	5
39	Magnetic field effect on ultra short pulse propagation in system of carbon nanotubes. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2011, 110, 557-561.	0.2	5
40	Coefficients of diffusion and conductivity of semiconductor carbon nanotubes in an external electric field. Physics of the Solid State, 2011, 53, 1943-1946.	0.2	5
41	Absolute negative conductivity in graphene with the Hubbard interaction in a magnetic field. Physics of the Solid State, 2010, 52, 1952-1956.	0.2	4
42	Interaction of few-cycle optical pulses in nonmetallic carbon nanotubes. Physics of Wave Phenomena, 2011, 19, 39-42.	0.3	4
43	Adsorption model of atomic hydrogen on the surfaces of carbon nanotubes. Russian Journal of Physical Chemistry A, 2013, 87, 979-984.	0.1	4
44	Dynamics and damping of electromagnetic solitons in the carbon nanotube bundles. Russian Journal of Physical Chemistry B, 2008, 2, 745-752.	0.2	3
45	Negative differential conductivity in bilayer graphene controlled by an external voltage and in the presence of a magnetic field. Physica Scripta, 2011, 83, 015603.	1.2	3
46	A model of the multiple adsorption of hydrogen atoms on the surface of carbon nanotubes. Russian Journal of Physical Chemistry B, 2012, 6, 321-326.	0.2	3
47	The chiral effect of adsorption of univalent atoms and diatomic molecules on the surface of carbon nanotubes. Russian Journal of Physical Chemistry B, 2012, 6, 448-454.	0.2	3
48	Strain-induced changes in the band gap of doped carbon nanotubes. Russian Journal of Physical Chemistry B, 2014, 8, 745-751.	0.2	3
49	Quantum model of a hysteresis in a single-domain magnetically soft ferromagnetic. Journal of Magnetism and Magnetic Materials, 2018, 446, 135-142.	1.0	3
50	Phonon spectrum of double-wall carbon nanotubes. Physics of the Solid State, 2006, 48, 2354-2358.	0.2	2
51	Electromechanical Nanothermometer Based on Carbon Nanotubes. Fullerenes Nanotubes and Carbon Nanostructures, 2008, 16, 352-356.	1.0	2
52	Electromagnetic solitons in carbon nanotubes at low temperatures. Russian Journal of Physical Chemistry B, 2010, 4, 151-155.	0.2	2
53	Study of the indirect interaction in the quantum dots of the graphene bilayer in the framework of the s-d model. Technical Physics Letters, 2011, 37, 724-727.	0.2	2
54	Dissipative solitons in carbon nanotubes. Physics of the Solid State, 2011, 53, 209-214.	0.2	2

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55	Specific features of indirect interaction in an impurity graphene bilayer in the framework of the s-d model. Physics of the Solid State, 2011, 53, 1689-1693.	0.2	2
56	Asymptotic dynamics of extremely short pulses in a system of carbon nanotubes. Russian Physics Journal, 2011, 53, 1118-1124.	0.2	2
57	The effect of spin-orbit interaction on the dynamics of ultimately short pulses in graphene systems. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2012, 112, 453-456.	0.2	2
58	Extremely short optical pulses in strained graphene in terms of the gauge theory. Physics of the Solid State, 2013, 55, 2602-2607.	0.2	2
59	Chiral effect of the dissociative adsorption of molecular oxygen on the carbon nanotube surface. Russian Journal of Physical Chemistry A, 2015, 89, 823-827.	0.1	2
60	Influence of the surface curvature of carbon nanotubes on their conductivity in the dirac approximation. Physics of the Solid State, 2016, 58, 1207-1212.	0.2	2
61	Quantum model for studying magneto-mechanical properties of a magnetically soft ferromagnet. Journal of Magnetism and Magnetic Materials, 2020, 494, 165658.	1.0	2
62	Piezoconductivity of Đ¡hiral Đ¡arbon Nanotubes in the Framework of the Tight-Binding Method. Mathematical Physics and Computer Simulation, 2018, , 53-63.	0.2	2
63	Orbital-stoichiometric cluster model of carbon nanotube generation on quantum dots of diamond surface. International Journal of Quantum Chemistry, 2004, 96, 155-166.	1.0	1
64	Nonlinear Waves in Carbon Nanotubes under Conditions of Electron-Phonon Bonding. Russian Physics Journal, 2005, 48, 639-645.	0.2	1
65	<title>Light scattering on solitons in carbon nanotubes</title>. Proceedings of SPIE, 2008, , .	0.8	1
66	Ultrashort optical pulses controlling electric fields in carbon nanotubes at low temperatures. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1598-1600.	0.1	1
67	Doped carbon nanotubes as quantum memory devices. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1675-1677.	0.1	1
68	Absolute negative conductivity of graphene in the Hubbard model. Physica Scripta, 2010, 82, 025704.	1.2	1
69	Absolute negative conductivity of graphene with impurities in magnetic field. Semiconductors, 2011, 45, 628-632.	0.2	1
70	Negative differential conductivity of bigraphene controlled by an external voltage in a magnetic field. Physics of the Solid State, 2011, 53, 1694-1698.	0.2	1
71	Curved graphene nanoribbons and tunneling current. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 1576-1578.	0.1	1
72	Discrete solitons in the bigraphene with adsorbed atomic hydrogen. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 1655-1657.	0.1	1

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73	Tunneling current of the contact between impurity-containing graphene nanoribbons. Semiconductors, 2013, 47, 662-664.	0.2	1
74	Transport properties of bilayer graphene nanoribbons with hydrogen adatoms. Russian Journal of Physical Chemistry B, 2016, 10, 844-850.	0.2	1
75	10.1007/s11451-008-2027-7. , 2010, 50, 383.		1
76	Quantum chemical calculations for polyvinylidene fluoride with substitution defects. Journal of Structural Chemistry, 2000, 41, 378-382.	0.3	0
77	Nonlinear electron density waves and nonlinear acoustic waves in carbon nanotubes. Bulletin of the Russian Academy of Sciences: Physics, 2007, 71, 134-138.	0.1	0
78	Design of soliton electron lattices in carbon nanotubes by a magnetic field. Russian Physics Journal, 2008, 51, 1262-1269.	0.2	0
79	Interaction of ultrashort light pulses with carbon nanotubes. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 673-676.	0.1	0
80	Control of soliton lattices of Hubbard electrons in carbon nanotubes by a magnetic field. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 1614-1616.	0.1	0
81	Polarized electromagnetic solitons in carbon nanotubes. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1678-1680.	0.1	0
82	Two-dimensional unitary waves in a nonuniform block of carbon nanotubes. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 1642-1644.	0.1	0
83	Semiempirical studies of the electronic structure of aluminophosphide and Haeckelite boronitride nanotubes. Russian Journal of Physical Chemistry B, 2010, 4, 143-150.	0.2	0
84	Amplification of electromagnetic pulses in graphene with Hubbard interaction by a uniform high-frequency alternating field. Russian Journal of Physical Chemistry B, 2010, 4, 709-714.	0.2	0
85	The stabilization of magnetic solitons in carbon nanotubes by a constant electric field at low temperatures. Russian Journal of Physical Chemistry B, 2010, 4, 860-863.	0.2	0
86	Alternating field-induced phase transition in zigzag carbon nanotubes. Journal of Russian Laser Research, 2010, 31, 415-420.	0.3	0
87	Domain structure of graphene with Hubbard interaction under conditions of emergence of a spontaneous transverse field. Russian Journal of Physical Chemistry B, 2011, 5, 215-219.	0.2	0
88	Ferroelectric phase transition in graphene with the Hubbard interaction. Physics of the Solid State, 2011, 53, 2520-2524.	0.2	0
89	Spontaneous transverse field in impurity graphene. Technical Physics, 2011, 56, 1123-1128.	0.2	0
90	Dissipative solitons in carbon nanotubes. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 168-171.	0.1	0

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91	Localization of electron density waves in a system of carbon nanotubes and fullerenes. Physics of Wave Phenomena, 2011, 19, 43-46.	0.3	0
92	Collision of extremely short optical pulses in semiconductor carbon nanotubes. Russian Physics Journal, 2011, 54, 77-85.	0.2	0
93	Effect of Atomic Hydrogen Concentration in the Study of Adsorption on Graphene. Key Engineering Materials, 0, 465, 211-214.	0.4	0
94	Solitons in a System of Coupled Bilayer Graphene Waveguides. Fullerenes Nanotubes and Carbon Nanostructures, 2012, 20, 574-578.	1.0	0
95	Tunneling current of the contact impurity graphene nanoribbon â€“ quantum dots. Russian Physics Journal, 2012, 55, 644-648.	0.2	0
96	Absolute negative conductivity in zig-zag carbon nanotubes in the presence of a magnetic field. Russian Physics Journal, 2012, 54, 1185-1190.	0.2	0
97	Echoes of relativistic Landau levels in graphene and bilayer graphene. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 264-266.	0.1	0
98	On the possibility of current amplification by random inhomogeneities in graphene. Russian Physics Journal, 2013, 55, 1111-1116.	0.2	0
99	Effect of atomic hydrogen adsorption on the transport characteristics of semiconducting carbon nanotubes. Russian Journal of Physical Chemistry B, 2014, 8, 590-595.	0.2	0
100	Dependence of the Dipole Moment of Functionalized Carbon Nanotubes of Chair Type on Their Length. Russian Journal of Physical Chemistry B, 2018, 12, 165-171.	0.2	0
101	Quantum Model of Hysteresis in a Single-Domain Magnetically Soft Ferromagnet. Physics of Metals and Metallography, 2018, 119, 452-461.	0.3	0
102	Macromagnetic Calculation of the Magnetization of a Deformed Ferromagnet. Physics of Metals and Metallography, 2019, 120, 211-221.	0.3	0
103	The effect of isomorphic impurities on the elastic conductivity of Dirac structures. Journal of Physics Condensed Matter, 2020, 32, 145301.	0.7	0
104	Differential Thermal EMF of Carbon Zigzag-Type Nanotubes in an External Electric Field. Physics of the Solid State, 2020, 62, 1928-1932.	0.2	0
105	SOLITON LATTICES IN CARBON NANOTUBES. , 2007, , 471-480.		0