Victor A Karachevtsev

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Stacking interaction of cytosine with carbon nanotubes: MP2, DFT and Raman spectroscopy study. Chemical Physics Letters, 2008, 459, 153-158.	2.6	58
2	Noncovalent Interaction of Single-Walled Carbon Nanotubes with 1-Pyrenebutanoic Acid Succinimide Ester and Glucoseoxidase. Journal of Physical Chemistry C, 2011, 115, 21072-21082.	3.1	54
3	Raman Spectroscopy Study and First-Principles Calculations of the Interaction between Nucleic Acid Bases and Carbon Nanotubes. Journal of Physical Chemistry A, 2009, 113, 3621-3629.	2.5	49
4	Noncovalent Interaction of Methylene Blue with Carbon Nanotubes: Theoretical and Mass Spectrometry Characterization. Journal of Physical Chemistry C, 2012, 116, 20579-20590.	3.1	46
5	Achieving High Midâ€IR Bolometric Responsivity for Anisotropic Composite Materials from Carbon Nanotubes and Polymers. Advanced Functional Materials, 2012, 22, 2177-2186.	14.9	44
6	Glucose sensing based on NIR fluorescence of DNA-wrapped single-walled carbon nanotubes. Chemical Physics Letters, 2007, 435, 104-108.	2.6	40
7	Combined Raman scattering and ab initio investigation of the interaction between pyrene and carbon SWNT. Molecular Physics, 2003, 101, 2609-2614.	1.7	39
8	Decrease of carbon nanotube UV light absorption induced by π–΀-stacking interaction with nucleotide bases. Carbon, 2010, 48, 3682-3691.	10.3	37
9	Spectroscopic and SEM studies of SWNTs: Polymer solutions and films. Carbon, 2006, 44, 1292-1297.	10.3	34
10	Raman spectroscopy of HiPCO single-walled carbon nanotubes at 300 and 5 K. Carbon, 2003, 41, 1567-1574.	10.3	33
11	Peculiarities of Homooligonucleotides Wrapping around Carbon Nanotubes: Molecular Dynamics Modeling. Journal of Physical Chemistry B, 2011, 115, 9271-9279.	2.6	33
12	IR Spectra of Photopolymerized C60Films. Experimental and Density Functional Theory Study. Journal of Physical Chemistry B, 2006, 110, 15769-15775.	2.6	32
13	SWNT-DNA and SWNT-polyC Hybrids: AFM Study and Computer Modeling. Journal of Nanoscience and Nanotechnology, 2008, 8, 1473-1480.	0.9	30
14	Effective photopolymerization of C60 films under simultaneous deposition and UV light irradiation: Spectroscopy and morphology study. Carbon, 2004, 42, 2091-2098.	10.3	25
15	pH-Induced changes in electronic absorption and fluorescence spectra of phenazine derivatives. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2007, 66, 849-859.	3.9	24
16	Spectroscopic Detection of Tetracationic Porphyrin H-Aggregation on Polyanionic Matrix of Inorganic Polyphosphate. Journal of Fluorescence, 2010, 20, 695-702.	2.5	24
17	Raman Spectroscopy and Theoretical Characterization of Nanohybrids of Porphyrins with Carbon Nanotubes. Journal of Physical Chemistry C, 2010, 114, 16215-16222.	3.1	24
18	Noncovalent Interaction of Graphene with Heterocyclic Compounds: Benzene, Imidazole, Tetracene, and Imidazophenazines. ChemPhysChem, 2016, 17, 1204-1212.	2.1	22

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19	FTIR spectra and conformations of 2′-deoxyuridine in Kr matrices. Low Temperature Physics, 2007, 33, 590-594.	0.6	21
20	SWNT-DNA and SWNT-polyC Hybrids: AFM Study and Computer Modeling. Journal of Nanoscience and Nanotechnology, 2008, 8, 1473-1480.	0.9	20
21	Dimers of phenol in argon and neon matrices. Low Temperature Physics, 2001, 27, 666-675.	0.6	19
22	Photoluminescence intensity enhancement in SWNT aqueous suspensions due to reducing agent doping: Influence of adsorbed biopolymer. Chemical Physics, 2014, 438, 23-30.	1.9	18
23	Binding of Polycitydylic Acid to Graphene Oxide: Spectroscopic Study and Computer Modeling. Journal of Physical Chemistry C, 2017, 121, 18221-18233.	3.1	18
24	Mg2+ ion effect on conformational equilibrium of poly Aâ€^·â€^2 poly U and poly A poly U in aqueous solutions. International Journal of Biological Macromolecules, 2003, 31, 223-233.	7.5	17
25	Adsorption of Biopolymers on SWCNT: Ordered Poly(rC) and Disordered Poly(rI). Journal of Physical Chemistry B, 2013, 117, 2636-2644.	2.6	17
26	Adsorption of Poly(rA) on the Carbon Nanotube Surface and its Hybridization with Poly(rU). ChemPhysChem, 2008, 9, 2010-2018.	2.1	14
27	Fermi resonance in Ne, Ar and Kr-matrix infrared spectra of 5-bromouracil. Low Temperature Physics, 2013, 39, 546-551.	0.6	14
28	Comparative study on protection properties of anionic surfactants (SDS, SDBS) and DNA covering of singleâ€walled carbon nanotubes against pH influence: luminescence and absorption spectroscopy study. Materialwissenschaft Und Werkstofftechnik, 2011, 42, 41-46.	0.9	13
29	Interactions of the Watson–Crick nucleic acid base pairs with carbon nanotubes and graphene: DFT and MP2 study. Chemical Physics Letters, 2014, 610-611, 186-191.	2.6	13
30	Graphene induced molecular flattening of meso -5,10,15,20-tetraphenyl porphyrin: DFT calculations and molecular dynamics simulations. Computational and Theoretical Chemistry, 2018, 1133, 1-6.	2.5	13
31	Photophysics of Carbon Nanotubes Interfaced with Organic and Inorganic Materials. , 2012, , .		12
32	Absorption and fluorescent spectral studies of imidazophenazine derivatives. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2004, 60, 2005-2011.	3.9	11
33	Influence of cysteine doping on photoluminescence intensity from semiconducting single-walled carbon nanotubes. Chemical Physics Letters, 2015, 623, 51-54.	2.6	11
34	Evaluation of the reduction of imidazophenazine dye derivatives under fast-atom-bombardment mass-spectrometric conditions. Journal of Mass Spectrometry, 2006, 41, 113-123.	1.6	10
35	Unusual aggregation of poly(rC)-wrapped carbon nanotubes in aqueous suspension induced by cationic porphyrin. Journal of Materials Chemistry, 2012, 22, 10795.	6.7	10
36	The effect of protonation of cytosine and adenine on their interactions with carbon nanotubes. Journal of Molecular Graphics and Modelling, 2016, 70, 77-84.	2.4	10

VICTOR A KARACHEVTSEV

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37	Behavior of hybrid thermosensitive nanosystem dextran-graft-PNIPAM/gold nanoparticles: characterization within LCTS. Journal of Nanoparticle Research, 2018, 20, 1.	1.9	10
38	Exciton migration in quasi-one-dimensional crystals: AntiferromagneticCsMnCl3â‹2H2O. Physical Review B, 1994, 49, 11799-11807.	3.2	9
39	Raman spectroscopy of DNA-wrapped single-walled carbon nanotube films at 295 and 5K. Low Temperature Physics, 2010, 36, 373-381.	0.6	9
40	Excitonic energy transfer in polymer wrapped carbon nanotubes in gradually grown nanoassemblies. Physical Chemistry Chemical Physics, 2014, 16, 10914-10922.	2.8	9
41	DNA-wrapped carbon nanotubes aligned in stretched gelatin films: Polarized resonance Raman and absorption spectroscopy study. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 93, 92-96.	2.7	9
42	Nucleoside conformers in low-temperature argon matrices: Fourier transform IR spectroscopy of isolated thymidine and deuterothymidine molecules and quantum-mechanical calculations. Low Temperature Physics, 2019, 45, 1008-1017.	0.6	9
43	RNA-Wrapped Carbon Nanotubes Aggregation Induced by Polymer Hybridization. Molecular Crystals and Liquid Crystals, 2008, 497, 7/[339]-19/[351].	0.9	8
44	Tuning the carbon nanotube photoluminescence enhancement at addition of cysteine through the change of external conditions. Materials Chemistry and Physics, 2017, 186, 131-137.	4.0	8
45	Infrared spectra of 5-fluorouracil molecules isolated in inert Ar matrices, and their films on graphene oxide at 6 K. Low Temperature Physics, 2017, 43, 400-408.	0.6	8
46	Mg2+ and Ni2+ ion effect on stability and structure of triple poly l·poly A·poly I helix. International Journal of Biological Macromolecules, 2005, 35, 201-210.	7.5	7
47	Luminescence and Raman scattering of nonpolymerized and photopolymerized fullerene films at 297 and 5K. Low Temperature Physics, 2007, 33, 704-709.	0.6	6
48	Permeability of C60 films deposited on polycarbonatesyloxane to N2, O2, CH4, and He gases. Applied Surface Science, 2007, 253, 3062-3065.	6.1	6
49	Self-assemblies of tricationic porphyrin on inorganic polyphosphate. Biophysical Chemistry, 2014, 185, 39-46.	2.8	6
50	The conformational structure of adenosine molecules, isolated in low-temperature Ar matrices. Low Temperature Physics, 2015, 41, 936-941.	0.6	6
51	Interaction of a tricationic meso-substituted porphyrin with guanine-containing polyribonucleotides of various structures. Methods and Applications in Fluorescence, 2016, 4, 034005.	2.3	6
52	Composite films of single-walled carbon nanotubes with strong oxidized graphene: Characterization with spectroscopy, microscopy, conductivity measurements (5–291 K) and computer modeling. Low Temperature Physics, 2019, 45, 754-762.	0.6	6
53	Low-temperature transport of magnetic excitons in the quasi-one-dimensional antiferromagnetCsMnCl3â‹2H2O doped withCu2+ions. Physical Review B, 1996, 54, 447-453. 	3.2	5
54	Spectroscopy Study of SWNT in Aqueous Solution With Different Surfactants. AIP Conference Proceedings, 2003, , .	0.4	5

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55	Nanohybrid Structures Formed by Carbon Nanotubes with Long Polynucleotide. Fullerenes Nanotubes and Carbon Nanostructures, 2010, 18, 531-537.	2.1	5
56	Binding of Metallated Porphyrin-Imidazophenazine Conjugate to Tetramolecular Quadruplex Formed by Poly(G): a Spectroscopic Investigation. Journal of Fluorescence, 2015, 25, 1897-1904.	2.5	5
57	Probing the Influence of Amino Acids on Photoluminescence from Carbon Nanotubes Suspended with DNA. Journal of Fluorescence, 2016, 26, 1951-1958.	2.5	5
58	Comparison of noncovalent interactions of zigzag and armchair carbon nanotubes with heterocyclic and aromatic compounds: Imidazole and benzene, imidazophenazines, and tetracene. Chemical Physics, 2017, 483-484, 68-77.	1.9	5
59	The temperature dependence of electron transport in a composite film of graphene oxide with single-wall carbon nanotubes: an analysis and comparison with a nanotube film. Low Temperature Physics, 2019, 45, 1109-1116.	0.6	5
60	Unusual behaviour of the luminescence in quasi-one-dimensional antiferromagnetic crystal CsMnCl32H2O at low temperature. Solid State Communications, 1993, 87, 1027-1029.	1.9	4
61	Monte Carlo simulation of exciton trapping in quasiâ€oneâ€dimensional antiferromagnetic CsMnCl3â‹2H2O. Journal of Chemical Physics, 1995, 103, 2656-2660.	3.0	4
62	Phonon termoactivated exciton tunneling in crystals of weak charge transfer complexes N-TCPA doped with Nd8-TCPA. Chemical Physics, 1997, 216, 1-6.	1.9	4
63	Absorption and luminescence of CsMnCl3·2H2O crystals doped with Cu2+. Journal of Luminescence, 2000, 92, 35-42.	3.1	4
64	Effect of Mg2+ Ions on the Stability of PolyA/2PolyU Three-Stranded Helices in Aqueous Solutions. Macromolecular Bioscience, 2002, 2, 155.	4.1	4
65	Raman Spectroscopy and SEM Study of SWNTs in Aqueous Solution and Films with Surfactant or Polymer Surroundings. Fullerenes Nanotubes and Carbon Nanostructures, 2006, 14, 221-225.	2.1	4
66	Binding of polynucleotides with singleâ€walled carbon nanotubes: Effect of temperature. Materialwissenschaft Und Werkstofftechnik, 2011, 42, 92-97.	0.9	4
67	Raman scattering in non-polymerized and photo-polymerized C60films at 5 K. Low Temperature Physics, 2012, 38, 854-862.	0.6	4
68	Photophysical Properties of SWNT Interfaced with DNA. , 2012, , 89-163.		4
69	Manifestation of Fermi resonance in the vibrational spectra of 5-ioduracil, and its deutero-derivatives isolated in low-temperature Ar matrices. Low Temperature Physics, 2014, 40, 1097-1103.	0.6	4
70	Spectroscopic Studies on Binding of Porphyrin-Phenazine Conjugate to Four-Stranded Poly(G). Journal of Fluorescence, 2015, 25, 1013-1021.	2.5	4
71	Hybridization of Homopolynucleotides with Different Base Ordering on the Carbon Nanotube Surface. Journal of Physical Chemistry C, 2015, 119, 11991-12001.	3.1	4
72	Enhancement of Photoluminescence from Semiconducting Nanotubes in Aqueous Suspensions due to Cysteine and Dithiothreitol Doping: Influence of the Sonication Treatment. Nanoscale Research Letters, 2016, 11, 490.	5.7	4

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73	Comparison of temperature dependences of electrical conductivity of composite rGO-SWNT film with rGO and SWNT films. Low Temperature Physics, 2020, 46, 285-292.	0.6	4
74	Composite films of graphene oxide with semiconducting carbon nanotubes: Raman spectroscopy characterization. Low Temperature Physics, 2021, 47, 206-213.	0.6	4
75	Hydrogen-bonded complexes of 2-aminopyrimidine–parabenzoquinone in an argon matrix. Low Temperature Physics, 2006, 32, 148-157.	0.6	3
76	Pre-resonance Raman and IR absorption spectroscopy of imidazophenazine and its derivatives: Experimental and ab initio study. Vibrational Spectroscopy, 2008, 47, 71-81.	2.2	3
77	Luminescence investigations of hybrids of carbon nanotubes with DNA in a water suspension and film at 5–290K. Low Temperature Physics, 2008, 34, 1033-1037.	0.6	3
78	The Effect of Divalent Metal Ions on the Temperature Stability of Poly(I:C) Duplex. Journal of Spectroscopy, 2020, 2020, 1-7.	1.3	3
79	SWNTs with DNA in Aqueous Solution and Film. AIP Conference Proceedings, 2005, , .	0.4	2
80	Noncovalent Functionalization of Single-Walled Carbon Nanotubes for Biological Application: Raman and Nir Absorption Spectroscopy. , 2004, , 139-150.		2
81	IR Spectroscopy andab initiocalculations of imidazophenazine and its derivatives in a low-temperature argon matrix. Low Temperature Physics, 2009, 35, 491-502.	0.6	2
82	Enhancement of single-walled nanotubes luminescence intensity upon dithiothreitol doping. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2014, 117, 428-433.	0.6	2
83	Controlled Aggregation of Biopolymerâ€ <scp>W</scp> rapped Carbon Nanotubes in Aqueous Suspension, Induced by Cationic Porphyrin. Macromolecular Symposia, 2014, 335, 51-57.	0.7	2
84	Adsorption of Polyadenylic acid on graphene oxide: experiments and computer modeling. Journal of Biomolecular Structure and Dynamics, 2020, , 1-13.	3.5	2
85	Pheophorbide–phenazinium conjugate as a fluorescent light-up probe for G-quadruplex structure. Journal of Molecular Structure, 2020, 1214, 128218.	3.6	2
86	SWNT-DNA and SWNT-polyC hybrids: AFM study and computer modeling. Journal of Nanoscience and Nanotechnology, 2008, 8, 1473-80.	0.9	2
87	Temperature dependence of the phosphorescence of naphthalene-tetrachlorophthalic anhydride charge-transfer crystal complex. Journal of Applied Spectroscopy, 1987, 46, 377-380.	0.7	1
88	A wide-range unit for recording luminescence decay kinetics. Journal of Applied Spectroscopy, 1993, 58, 448-453.	0.7	1
89	Hybridization of poly(rI) with poly(rC) adsorbed to the carbon nanotube surface. Nanoscale Research Letters, 2014, 9, 157.	5.7	1
90	Enhancement of the absorption bands in the infrared spectra of low-temperature uracil films by interference. Low Temperature Physics, 2018, 44, 1215-1218.	0.6	1

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91	Structures and infrared spectra of 5-chlorouracil molecules in the low-temperature inert Ar, Ne matrices and composite films with oxide graphene. Low Temperature Physics, 2018, 44, 847-855.	0.6	1
92	Modeling of nucleobase/oligonucleotide interaction with graphene and graphene oxide: the role of charging and/or oxidizing the graphene surface. Molecular Crystals and Liquid Crystals, 2020, 697, 49-59.	0.9	1
93	Spectroscopic study of binding of a cationic Pheophorbide-a to an antiparallel quadruplex Tel22. Biopolymers and Cell, 2019, 35, 129-142.	0.4	1
94	7th International Conference "Nanobiophysics: Fundamental and Applied Aspects―Kharkiv, Ukraine, October 4–8, 2021. Low Temperature Physics, 2022, 48, 275-277.	0.6	1
95	New Approach to Growth of Photopolymerized C60 Films. AlP Conference Proceedings, 2002, , .	0.4	0
96	Emission of carbon nanotube-DNA-GOX bionanohybrid for glucose detection. Proceedings of SPIE, 2007, , .	0.8	0
97	Enhancement of infrared absorption of low-temperature uracil thin films by a nanostructured silver surface. Low Temperature Physics, 2016, 42, 106-110.	0.6	0
98	Comparison of Raman scattering in non-polymerized and photo-polymerized fullerene films at temperatures of 5–300 K. Low Temperature Physics, 2016, 42, 1144-1150.	0.6	0
99	Change in the Microviscosity of Erythrocyte Membranes and Proteins in Blood Plasma after Graphene Oxide Addition: The ESR Spectroscopy Study. Journal of Spectroscopy, 2019, 2019, 1-8.	1.3	0
100	Interaction of Single Walled Carbon Nanotube with Graphene: Quantum-Chemical Calculation and Molecular Dynamics Study. , 2019, , .		0
101	Interaction of double-stranded polynucleotide poly(A:U) with graphene/graphene oxide. European Physical Journal E, 2021, 44, 24.	1.6	0
102	Biomolecules and their complexes with nanostructures. Low Temperature Physics, 2021, 47, 179-180.	0.6	0
103	Coronene-uracil complexes embedded in argon matrices: FTIR spectroscopy and quantum-mechanical calculations. Low Temperature Physics, 2021, 47, 325-334.	0.6	0
104	COMPOSITE FULLERENE MEMBRANES AND THEIR APPLICABILITY AS ELEMENTS OF VENTILATION-FILTRATION-DISINFECTION SYSTEMS. , 2007, , .		0
105	Comparison of Poly(rI) and Poly(rA) Adsorption on Carbon Nanotubes. Springer Proceedings in Physics, 2013, , 275-290.	0.2	0
106	Enhancement of Luminescence from a Carbon Nanotube Aqueous Suspension at the Cysteine Doping: Influence of the Adsorbed Polymer. Ukrainian Journal of Physics, 2016, 61, 932-939.	0.2	0
107	Spectroscopy analysis of the alignment of nanoassemblies of DNA-wrapped carbon nanotubes in stretched gelatin film. Low Temperature Physics, 2022, 48, 286-292.	0.6	0
108	Low-temperature electrical conductivity of composite film formed by carbon nanotubes with MoS ₂ flakes. Low Temperature Physics, 2022, 48, 322-329.	0.6	0

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109	Spectroscopic features of Pheophorbide- <i>a</i> binding to poly-L-lysine. Molecular Crystals and Liquid Crystals, 0, , 1-14.	0.9	0