Georgii G Samsonidze

List of Publications by Year
in descending order

94 papers	8,151 citations	46918 47 h-index	58464 82 g-index
95 all docs	95 docs citations	95 times ranked	8254 citing authors

#	Article	IF	Citations
1	Structure-Based Carbon Nanotube Sorting by Sequence-Dependent DNA Assembly. Science, 2003, 302, 1545-1548.	6.0	1,547
2	BerkeleyGW: A massively parallel computer package for the calculation of the quasiparticle and optical properties of materials and nanostructures. Computer Physics Communications, 2012, 183, 1269-1289.	3.0	706
3	Inhomogeneous optical absorption around theKpoint in graphite and carbon nanotubes. Physical Review B, 2003, 67, .	1.1	257
4	Double resonance Raman spectroscopy of single-wall carbon nanotubes. New Journal of Physics, 2003, 5, 157-157.	1.2	229
5	Resonance Raman spectroscopy(n,m)-dependent effects in small-diameter single-wall carbon nanotubes. Physical Review B, 2005, 71, .	1.1	225
6	D-band Raman intensity of graphitic materials as a function of laser energy and crystallite size. Chemical Physics Letters, 2006, 427, 117-121.	1.2	219
7	Chirality dependence of exciton effects in single-wall carbon nanotubes: Tight-binding model. Physical Review B, 2007, 75, .	1.1	208
8	Nanowires and nanotubes. Materials Science and Engineering C, 2003, 23, 129-140.	3.8	198
9	Family behavior of the optical transition energies in single-wall carbon nanotubes of smaller diameters. Applied Physics Letters, 2004, 85, 5703-5705.	1.5	185
10	Linewidth of the Raman features of individual single-wall carbon nanotubes. Physical Review B, 2002, 66, .	1.1	181
11	NbFeSb-based p-type half-Heuslers for power generation applications. Energy and Environmental Science, 2014, 7, 4070-4076.	15.6	174
12	Determination of LA and TO phonon dispersion relations of graphene near the Dirac point by double resonance Raman scattering. Physical Review B, 2007, 76, .	1.1	168
13	Phonon Softening in Individual Metallic Carbon Nanotubes due to the Kohn Anomaly. Physical Review Letters, 2007, 99, 145506.	2.9	168
14	Electron-phonon matrix elements in single-wall carbon nanotubes. Physical Review B, 2005, 72, .	1.1	160
15	Photoluminescence intensity of single-wall carbon nanotubes. Carbon, 2006, 44, 873-879.	5.4	151
16	Coulomb-hole summations and energies for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>G</mml:mi><mml:mi>W</mml:mi></mml:mrow></mml:math>calculations with limited number of empty orbitals: A modified static remainder approach. Physical Review B, 2013, 87, .	1.1	149
17	Electronâ€“Phonon Interactions and the Intrinsic Electrical Resistivity of Graphene. Nano Letters, 2014, 14, 1113-1119.	4.5	149
18	Raman spectroscopy for probing chemically/physically induced phenomena in carbon nanotubes. Nanotechnology, 2003, 14, 1130-1139.	1.3	143

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19	Review on the symmetry-related properties of carbon nanotubes. Physics Reports, 2006, 431, 261-302.	10.3	138
20	Optical characterization of DNA-wrapped carbon nanotube hybrids. Chemical Physics Letters, 2004, 397, 296-301.	1.2	129
21	Resonance Raman Spectra of Carbon Nanotubes by Cross-Polarized Light. Physical Review Letters, 2003, 90, 107403.	2.9	124
22	Second-order harmonic and combination modes in graphite, single-wall carbon nanotube bundles, and isolated single-wall carbon nanotubes. Physical Review B, 2002, 66, .	1.1	118
23	Potential dependent surface Raman spectroscopy of single wall carbon nanotube films on platinum electrodes. Chemical Physics Letters, 2003, 370, 675-682.	1.2	117
24	The Concept of Cutting Lines in Carbon Nanotube Science. Journal of Nanoscience and Nanotechnology, 2003, 3, 431-458.	0.9	115
25	Phonon-Assisted Excitonic Recombination Channels Observed in DNA-Wrapped Carbon Nanotubes Using Photoluminescence Spectroscopy. Physical Review Letters, 2005, 94, 127402.	2.9	110
26	Stokes and anti-Stokes Raman spectra of small-diameter isolated carbon nanotubes. Physical Review B, 2004, 69, .	1.1	98
27	Exciton-photon, exciton-phonon matrix elements, and resonant Raman intensity of single-wall carbon nanotubes. Physical Review B, 2007, 75, .	1.1	92
28	Competing spring constant versus double resonance effects on the properties of dispersive modes in isolated single-wall carbon nanotubes. Physical Review B, 2003, 67, .	1.1	88
29	Strong Polarization Dependence of Double-Resonant Raman Intensities in Graphene. Nano Letters, 2008, 8, 4270-4274.	4.5	88
30	Accelerated Screening of Thermoelectric Materials by Firstâ€Principles Computations of Electronâ€“Phonon Scattering. Advanced Energy Materials, 2018, 8, 1800246.	10.2	79
31	Relationship between Segmental Dynamics Measured by Quasi-Elastic Neutron Scattering and Conductivity in Polymer Electrolytes. ACS Macro Letters, 2018, 7, 504-508.	2.3	79
32	Interband optical transitions in left- and right-handed single-wall carbon nanotubes. Physical Review B, 2004, 69, .	1.1	77
33	Quantitative evaluation of the octadecylamine-assisted bulk separation of semiconducting and metallic single-wall carbon nanotubes by resonance Raman spectroscopy. Applied Physics Letters, 2004, 85, 1006-1008.	1.5	75
34	Intensity of the resonance Raman excitation spectra of single-wall carbon nanotubes. Physical Review B, 2005, 71, .	1.1	75
35	Enhanced thermoelectric properties of n-type NbCoSn half-Heusler by improving phase purity. APL Materials, 2016, 4, .	2.2	72
36	Simple Approximate Physical Orbitals for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>G</mml:mi><mml:mi>W</mml:mi></mml:math>Quasiparticle Calculations. Physical Review Letters, 2011, 107, 186404.	2.9	63

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37	Phonon Trigonal Warping Effect in Graphite and Carbon Nanotubes. Physical Review Letters, 2003, 90, 027403.	2.9	62
38	One-Dimensional Character of Combination Modes in the Resonance Raman Scattering of Carbon Nanotubes. Physical Review Letters, 2004, 93, 087401.	2.9	61
39	Strain-Induced Interference Effects on the Resonance Raman Cross Section of Carbon Nanotubes. Physical Review Letters, 2005, 95, 217403.	2.9	61
40	Steplike dispersion of the intermediate-frequency Raman modes in semiconducting and metallic carbon nanotubes. Physical Review B, 2005, 72, .	1.1	57
41	Electron-phonon coupling mechanism in two-dimensional graphite and single-wall carbon nanotubes. Physical Review B, 2007, 75, .	1.1	57
42	Photoexcited electron relaxation processes in single-wall carbon nanotubes. Physical Review B, 2005, 71, .	1.1	55
43	Resonant Raman Spectroscopy of Individual Strained Single-Wall Carbon Nanotubes. Nano Letters, 2007, 7, 2116-2121.	4.5	55
44	Probing the electronic trigonal warping effect in individual single-wall carbon nanotubes using phonon spectra. Chemical Physics Letters, 2002, 354, 62-68.	1.2	51
45	Single- and double-resonance RamanG-band processes in carbon nanotubes. Physical Review B, 2004, 69, .	1.1	48
46	Cutting lines near the Fermi energy of single-wall carbon nanotubes. Physical Review B, 2005, 72, .	1.1	48
47	Selection rules for one- and two-photon absorption by excitons in carbon nanotubes. Physical Review B, 2006, 73, .	1.1	48
48	Optical absorption of graphite and single-wall carbon nanotubes. Applied Physics A: Materials Science and Processing, 2004, 78, 1099-1105.	1.1	47
49	Resonance Raman scattering studies inBr2-adsorbed double-wall carbon nanotubes. Physical Review B, 2006, 73, .	1.1	46
50	Environment effects on the Raman spectra of individual single-wall carbon nanotubes: Suspended and grown on polycrystalline silicon. Applied Physics Letters, 2004, 85, 4744-4746.	1.5	40
51	Science and Applications of Single-Nanotube Raman Spectroscopy. Journal of Nanoscience and Nanotechnology, 2003, 3, 19-37.	0.9	34
52	Raman spectroscopy of double-walled carbon nanotubes treated with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2007, 76, .	1.1	34
53	Raman characterization of electronic transition energies of metallic single-wall carbon nanotubes. Physical Review B, 2006, 74, .	1.1	32
54	Torsional instability of chiral carbon nanotubes. Physical Review B, 2010, 81, .	1.1	32

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55	A fast neural network approach for direct covariant forces prediction in complex multi-element extended systems. Nature Machine Intelligence, 2019, 1, 471-479.	8.3	32
56	Phonon-assisted exciton relaxation dynamics for a (6,5)-enriched DNA-wrapped single-walled carbon nanotube sample. Physical Review B, 2005, 72, .	1.1	30
57	Resonant Raman spectra of carbon nanotube bundles observed by perpendicularly polarized light. Chemical Physics Letters, 2004, 387, 301-306.	1.2	27
58	Spatial Resolution of a Type II Heterojunction in a Single Bipolar Molecule. Nano Letters, 2009, 9, 3963-3967.	4.5	27
59	Strain and friction induced by van der Waals interaction in individual single walled carbon nanotubes. Applied Physics Letters, 2007, 90, 253113.	1.5	22
60	Resonance Raman Spectroscopy Characterization of Single-Wall Carbon Nanotube Separation by their Metallicity and Diameter. Journal of Nanoscience and Nanotechnology, 2005, 5, 209-228.	0.9	19
61	Estimation of electron-phonon coupling via moving least squares averaging: a method for fast-screening potential thermoelectric materials. Materials Today Physics, 2018, 6, 22-30.	2.9	19
62	Advances in single nanotube spectroscopy: Raman spectra from cross-polarized light and chirality dependence of Raman frequencies. Carbon, 2004, 42, 1067-1069.	5.4	18
63	Quasiparticle and optical properties of polythiophene-derived polymers. Physical Review B, 2014, 90, .	1.1	18
64	Insights and challenges of applying theGWmethod to transition metal oxides. Journal of Physics Condensed Matter, 2014, 26, 475501.	0.7	16
65	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>D</mml:mi></mml:mrow></mml:math>band Raman intensity calculation in armchair edged graphene nanoribbons. Physical Review B, 2011, 83, .	1.1	14
66	Improved quasiparticle wave functions and mean field for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>G</mml:mi><mml:mn>0</mml:mn></mml:msub></mml:mrow></mml:m Initialization with the COHSEX operator. Physical Review B, 2014, 90, .	1.1	14
67	Raman spectroscopy study of heat-treated and boron-doped double wall carbon nanotubes. Physical Review B, 2009, 80, .	1.1	13
68	Recent advances in carbon nanotube photophysics. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 443-446.	1.3	12
69	Raman scattering from one-dimensional carbon systems. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 81-87.	1.3	10
70	Quantification of uncertainties in thermoelectric properties of materials from a first-principles prediction method: An approach based on Gaussian process regression. Physical Review Materials, 2019, 3, .	0.9	7
71	Laser-energy-dependent Raman scattering studies of graphitic foams. Physical Review B, 2007, 76, .	1.1	6
72	Compensation-doped silicon for photovoltaic applications. Physical Review B, 2011, 84, .	1.1	6

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73	First-principles study of quasiparticle energies of a bipolar molecule in a scanning tunneling microscope measurement. Computational Materials Science, 2014, 91, 187-191.	1.4	5
74	Auger recombination in semiconductor quantum wells in a magnetic field. Physical Review B, 2001, 63, .	1.1	3
75	Thermoelectric Materials: Accelerated Screening of Thermoelectric Materials by First-Principles Computations of Electron-Phonon Scattering (Adv. Energy Mater. 20/2018). Advanced Energy Materials, 2018, 8, 1870095.	10.2	3
76	Raman on Carbon Nanotubes Using a Tunable Laser and Comparison with Photoluminescence. AIP Conference Proceedings, 2004, , .	0.3	2
77	Resonance Raman Scattering in Carbon Nanotubes and Nanographites. AIP Conference Proceedings, 2003, , .	0.3	1
78	Resonance Raman Spectroscopy to Study and Characterize Defects on Carbon Nanotubes and other Nano-Graphite Systems. Materials Research Society Symposia Proceedings, 2004, 858, 1.	0.1	1
79	Electron-Phonon Interaction and Raman Intensities in Graphite. AIP Conference Proceedings, 2004, , .	0.3	1
80	Intermediate Frequency Raman Modes in Metallic and Semiconducting Carbon Nanotubes. AIP Conference Proceedings, 2005, , .	0.3	1
81	Trigonal Anisotropy in Graphite and Carbon Nanotubes. Molecular Crystals and Liquid Crystals, 2006, 455, 287-294.	0.4	1
82	Fermi-Energy-Dependent Structural Deformation of Chiral Single-Wall Carbon Nanotubes. Physical Review Applied, 2014, 2, .	1.5	1
83	Characterization of nanographite and carbon nanotubes by polarization dependent optical spectroscopy. Materials Research Society Symposia Proceedings, 2002, 737, 521.	0.1	0
84	Anisotropy in the Phonon Dispersion Relations of Graphite and Carbon Nanotubes Measured by Raman Spectroscopy. Materials Research Society Symposia Proceedings, 2002, 737, 652.	0.1	0
85	New effects in the resonance Raman features in one-dimensional systems: isolated single-wall carbon nanotube studies. AIP Conference Proceedings, 2002, , .	0.3	0
86	Dispersive Bands in Graphite and Carbon Nanotubes. AIP Conference Proceedings, 2003, , .	0.3	0
87	Double resonance Raman spectroscopy and optical properties of single wall carbon nanotubes. AIP Conference Proceedings, 2004, , .	0.3	0
88	Corrections to the Optical Transition Energies in Single-Wall Carbon Nanotubes of Smaller Diameters. Materials Research Society Symposia Proceedings, 2004, 858, 271.	0.1	0
89	Probing the Phonon-Assisted Relaxation Processes in DNA-wrapped Carbon Nanotubes Using Photoluminescence Spectroscopy. Materials Research Society Symposia Proceedings, 2004, 858, 52.	0.1	0
90	Carbon nanotube photo-physics. , 2005, 6008, 22.		0

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91	Effects of strain on the resonant Raman profile of metallic. Materials Research Society Symposia Proceedings, 2005, 901, 1.	0.1	0
92	Spectroscopy of small diameter single-wall carbon nanotubes. AIP Conference Proceedings, 2005, , .	0.3	0
93	Band-Gap Modulation and Kohn Anomalies in Two-Dimensional Graphite and Single-Wall Carbon Nanotubes. Materials Research Society Symposia Proceedings, 2006, 963, 1.	0.1	0
94	Far Infrared Characterization of Single and Double Walled Carbon Nanotubes. Materials Research Society Symposia Proceedings, 2011, 1284, 137.	0.1	0