

Valentin N Popov

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104
papers

5,572
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h-index

74
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108
ext. papers

5,980
ext. citations

3.8
avg, IF

6.05
L-index

#	Paper	IF	Citations
104	Carbon nanotubes: properties and application. <i>Materials Science and Engineering Reports</i> , 2004 , 43, 61-102	3.9	1347
103	Raman spectroscopy of orthorhombic perovskitelike YMnO ₃ and LaMnO ₃ . <i>Physical Review B</i> , 1998 , 57, 2872-2877	3.3	514
102	Elastic properties of single-walled carbon nanotubes. <i>Physical Review B</i> , 2000 , 61, 3078-3084	3.3	369
101	Comparative study of optical phonons in the rhombohedrally distorted perovskites LaAlO ₃ and LaMnO ₃ . <i>Physical Review B</i> , 1999 , 59, 4146-4153	3.3	250
100	Curvature effects on the structural, electronic and optical properties of isolated single-walled carbon nanotubes within a symmetry-adapted non-orthogonal tight-binding model. <i>New Journal of Physics</i> , 2004 , 6, 17-17	2.9	180
99	Raman- and infrared-active phonons in hexagonal YMnO ₃ : Experiment and lattice-dynamical calculations. <i>Physical Review B</i> , 1997 , 56, 2488-2494	3.3	166
98	Comparative study of the optical properties of single-walled carbon nanotubes within orthogonal and nonorthogonal tight-binding models. <i>Physical Review B</i> , 2004 , 70,	3.3	148
97	Elastic properties of crystals of single-walled carbon nanotubes. <i>Solid State Communications</i> , 2000 , 114, 395-399	1.6	146
96	Raman spectroscopy of CaCu ₃ Ti ₄ O ₁₂ . <i>Physical Review B</i> , 2002 , 66,	3.3	124
95	Radius and chirality dependence of the radial breathing mode and the G-band phonon modes of single-walled carbon nanotubes. <i>Physical Review B</i> , 2006 , 73,	3.3	117
94	Fine structure of the radial breathing mode of double-wall carbon nanotubes. <i>Physical Review B</i> , 2005 , 72,	3.3	107
93	Raman spectroscopy of CaMnO ₃ : Mode assignment and relationship between Raman line intensities and structural distortions. <i>Physical Review B</i> , 2002 , 65,	3.3	104
92	Role of Jahn-Teller disorder in Raman scattering of mixed-valence manganites. <i>Physical Review B</i> , 2003 , 67,	3.3	99
91	Breathinglike phonon modes of multiwalled carbon nanotubes. <i>Physical Review B</i> , 2002 , 65,	3.3	97
90	Lattice dynamics of single-walled carbon nanotubes. <i>Physical Review B</i> , 1999 , 59, 8355-8358	3.3	87
89	Electron-phonon and electron-photon interactions and resonant Raman scattering from the radial-breathing mode of single-walled carbon nanotubes. <i>Physical Review B</i> , 2005 , 72,	3.3	80
88	Raman and infrared-active phonons in hexagonal HoMnO ₃ single crystals: magnetic ordering effects. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 809-819	1.8	78

87	Low-temperature specific heat of nanotube systems. <i>Physical Review B</i> , 2002 , 66,	3.3	75
86	Raman active phonons of identified semiconducting single-walled carbon nanotubes. <i>Physical Review Letters</i> , 2006 , 96, 257401	7.4	70
85	Raman spectroscopy of SrRuO ₃ near the paramagnetic-to-ferromagnetic phase transition. <i>Physical Review B</i> , 1999 , 59, 364-368	3.3	68
84	Resonant Raman Intensity of the Radial Breathing Mode of Single-Walled Carbon Nanotubes within a Nonorthogonal Tight-Binding Model. <i>Nano Letters</i> , 2004 , 4, 1795-1799	11.5	61
83	Experimental evidence of a mechanical coupling between layers in an individual double-walled carbon nanotube. <i>Nano Letters</i> , 2011 , 11, 4800-4	11.5	60
82	Theoretical Raman fingerprints of $\sqrt{3}\sqrt{3}$ and $\sqrt{3}\times\sqrt{3}$ graphyne. <i>Physical Review B</i> , 2013 , 88,	3.3	55
81	Raman- and infrared-active phonons in YBaCuFeO ₅ : Experiment and lattice dynamics. <i>Physical Review B</i> , 1993 , 47, 15201-15207	3.3	48
80	Interaction between concentric tubes in DWCNTs. <i>European Physical Journal B</i> , 2004 , 42, 345-350	1.2	47
79	Lattice dynamics of single-walled boron nitride nanotubes. <i>Physical Review B</i> , 2003 , 67,	3.3	47
78	Phonons in CuGeO ₃ studied using polarized far-infrared and Raman-scattering spectroscopies. <i>Physical Review B</i> , 1995 , 52, 4185-4190	3.3	43
77	E33 and E44 optical transitions in semiconducting single-walled carbon nanotubes: Electron diffraction and Raman experiments. <i>Physical Review B</i> , 2007 , 75,	3.3	41
76	Intraband electron-phonon scattering in single-walled carbon nanotubes. <i>Physical Review B</i> , 2006 , 74,	3.3	41
75	Resonant Raman intensity of the totally symmetric phonons of single-walled carbon nanotubes. <i>Physical Review B</i> , 2006 , 73,	3.3	39
74	Optical properties of high-dielectric-constant CaCu ₃ Ti ₄ O ₁₂ films. <i>Physica Status Solidi A</i> , 2003 , 195, 453-458		37
73	Shell model parameters for layered copper oxides. <i>Journal of Physics Condensed Matter</i> , 1995 , 7, 1625-1638	6.38	36
72	Crystal structure, electric and magnetic properties, and Raman spectroscopy of Gd ₃ RuO ₇ . <i>Physical Review B</i> , 2000 , 62, 12235-12240	3.3	34
71	Detailed analysis of the Raman response of n-doped double-wall carbon nanotubes. <i>Physical Review B</i> , 2006 , 74,	3.3	31
70	Resonant Raman spectra of graphene with point defects. <i>Carbon</i> , 2009 , 47, 2448-2455	10.4	30

69	Influence of packing on the vibrational properties of infinite and finite bundles of carbon nanotubes. <i>Physical Review B</i> , 2001 , 64,	3.3	30
68	Theoretical Raman intensity of the G and 2D bands of strained graphene. <i>Carbon</i> , 2013 , 54, 86-93	10.4	27
67	Theoretical evidence for T1/2 specific heat behavior in carbon nanotube systems. <i>Carbon</i> , 2004 , 42, 991-995,	3.3	26
66	Temperature-dependent polarized Raman spectra of CaFe2O4. <i>Solid State Communications</i> , 2003 , 128, 153-155	1.6	26
65	Lattice vibrations in spin-Peierls compound NaV2O5. <i>Solid State Communications</i> , 1999 , 110, 381-386	1.6	26
64	Fröhlich-interaction-induced multiphonon Raman scattering in SrCuO2 and Sr0.5 Ca0.5 CuO2s. <i>Physical Review B</i> , 1997 , 55, R8638-R8641	3.3	25
63	Optical phonons probe of the SrLaAlO4 crystal structure. <i>Journal of Alloys and Compounds</i> , 1997 , 251, 7-10	5.7	25
62	Tube-tube interaction in double-wall carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 3268-3272	1.3	25
61	Phonon dynamics in AV2O5 (A=Na,Ca,Mg,Cs) oxides. <i>Physical Review B</i> , 2002 , 65,	3.3	25
60	Electronic and mechanical coupling of carbon nanotubes: a tunable resonant Raman study of systems with known structures. <i>Physical Review Letters</i> , 2008 , 101, 197403	7.4	24
59	Raman intensity mapping of single-walled carbon nanotubes. <i>Physical Review B</i> , 2007 , 75,	3.3	23
58	A symmetry-adapted force-constant lattice-dynamical model for single-walled carbon nanotubes. <i>Solid State Communications</i> , 2004 , 130, 657-661	1.6	20
57	Phonons and magnetic excitations in the Mott insulator LaTiO3. <i>Physical Review B</i> , 2004 , 69,	3.3	19
56	Comparative Raman studies of Sr2RuO4, Sr3Ru2O7 and Sr4Ru3O10. <i>Physica B: Condensed Matter</i> , 2005 , 358, 138-152	2.8	19
55	Theoretical 2D Raman band of strained graphene. <i>Physical Review B</i> , 2013 , 87,	3.3	18
54	Raman spectroscopy of CaRuO3. <i>Physical Review B</i> , 2002 , 66,	3.3	17
53	Photoluminescence from an individual double-walled carbon nanotube. <i>Physical Review B</i> , 2017 , 96,	3.3	16
52	Low-frequency phonons of few-layer graphene within a tight-binding model. <i>Physical Review B</i> , 2014 , 90,	3.3	15

51	Raman study of twin-free ortho-II YBa ₂ Cu ₃ O _{6.5} single crystals. <i>Physical Review B</i> , 2008 , 77,	3-3	15
50	Multiple-order Raman scattering from rare-earth manganites: Oxygen isotope and rare-earth substitution effects. <i>Physical Review B</i> , 2007 , 75,	3-3	15
49	Evidence for the existence of two breathinglike phonon modes in infinite bundles of single-walled carbon nanotubes. <i>Physical Review B</i> , 2001 , 63,	3-3	15
48	Theoretical polarization dependence of the two-phonon double-resonant Raman spectra of graphene. <i>European Physical Journal B</i> , 2012 , 85, 1	1.2	14
47	Excitonic optical transitions characterized by Raman excitation profiles in single-walled carbon nanotubes. <i>Physical Review B</i> , 2016 , 94,	3-3	13
46	Two-phonon Raman bands of bilayer graphene: Revisited. <i>Carbon</i> , 2015 , 91, 436-444	10.4	13
45	Phonons in Ca _{2-x} Sr _x CuO ₃ (x=0, 0.2 and 0.4): Raman and infrared spectroscopy, and lattice dynamics calculation. <i>Journal of Physics Condensed Matter</i> , 1992 , 4, 8543-8550	1.8	12
44	Dynamic and charge doping effects on the phonon dispersion of graphene. <i>Physical Review B</i> , 2010 , 82,	3-3	11
43	Raman spectroscopy of (n,m)-identified individual single-walled carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 3986-3991	1-3	11
42	Theoretical resonant Raman spectra of nanotube (7,0) with point defects. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 2602-2605	1-3	10
41	Optical phonons in the orthorhombic double-chain Sr _{1-x} CaxCuO ₂ (x=0, 0.5). <i>Physical Review B</i> , 1997 , 55, 9136-9141	3-3	10
40	Raman spectroscopy of Ca ₃ Ru ₂ O ₇ : Phonon line assignment and electron scattering. <i>Physical Review B</i> , 2005 , 71,	3-3	9
39	Optical conductivity and infrared-active phonons in RuSr ₂ GdCu ₂ O ₈ . <i>Physical Review B</i> , 2000 , 62, 9709-9713	3-3	9
38	2D Raman band of single-layer and bilayer graphene. <i>Journal of Physics: Conference Series</i> , 2016 , 682, 012013	0-3	9
37	Raman bands of twisted bilayer graphene. <i>Journal of Raman Spectroscopy</i> , 2018 , 49, 31-35	2-3	9
36	Optical phonons in the NaTiSi ₂ O ₆ oxide with S=12 spin chains. <i>Physical Review B</i> , 2005 , 71,	3-3	8
35	Optical phonons in spin - Peierls compound. <i>Journal of Physics Condensed Matter</i> , 1998 , 10, L513-L519	1.8	8
34	Computational study of the shift of the G band of double-walled carbon nanotubes due to interlayer interactions. <i>Physical Review B</i> , 2018 , 97,	3-3	7

33	Interlayer Interaction Effects on the G Modes in Double-Walled Carbon Nanotubes With Different Electronic Configurations. <i>Physica Status Solidi (B): Basic Research</i> , 2017 , 254, 1700251	1.3	7
32	Non-adiabatic phonon dispersion of metallic single-walled carbon nanotubes. <i>Nano Research</i> , 2010 , 3, 822-829	10	6
31	Symmetry-adapted tight-binding calculations of the totally symmetric A1 phonons of single-walled carbon nanotubes and their resonant Raman intensity. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2007 , 37, 97-104	3	6
30	Raman phonons in RuSr ₂ GdCu ₂ O ₈ . <i>Physica C: Superconductivity and Its Applications</i> , 2000 , 341-348, 2209-2212	3	6
29	Phonon spectra of the Nd _{1.85} Ce _{0.15} CuO ₄ superconductor. <i>Physica C: Superconductivity and Its Applications</i> , 1990 , 172, 260-264	1.3	6
28	Interaction of Graphene with Out-of-Plane Aromatic Hydrocarbons. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 21448-21456	3.8	5
27	Theoretical phonon dispersion of armchair and metallic zigzag carbon nanotubes beyond the adiabatic approximation. <i>Physica Status Solidi (B): Basic Research</i> , 2010 , 247, 2784-2788	1.3	5
26	Multipole induced splitting of metal-cage vibrations in crystalline endohedral D _{2d} -M ₂ @C ₈₄ dimetallofullerenes. <i>Journal of Chemical Physics</i> , 2004 , 120, 1873-80	3.9	5
25	Valence electronic charge density of distorted C ₆₀ - monomers in polymerized KC ₆₀ and RbC ₆₀ . <i>Journal of Chemical Physics</i> , 2004 , 121, 321-7	3.9	5
24	Comparative study of the two-phonon Raman bands of silicene and graphene. <i>2D Materials</i> , 2016 , 3, 025014	5.9	5
23	Raman Spectroscopic Study of As-Deposited and Exfoliated Defected Graphene Grown on (001) Si Substrates by CVD. <i>Journal of Spectroscopy</i> , 2017 , 2017, 1-8	1.5	4
22	Investigations of the new high temperature superconductor BiSrCaCu ₂ O _x . <i>Physica C: Superconductivity and Its Applications</i> , 1988 , 153-155, 627-628	1.3	4
21	Theoretical evidence of a significant modification of the electronic structure of double-walled carbon nanotubes due to the interlayer interaction. <i>Carbon</i> , 2020 , 170, 30-36	10.4	4
20	Two-phonon Raman bands of single-walled carbon nanotubes: A case study. <i>Physical Review B</i> , 2018 , 98,	3.3	3
19	Theoretical Raman intensity of the radial breathing mode of single-walled carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 4269-4274	1.3	3
18	Deposition of defected graphene on (001) Si substrates by thermal decomposition of acetone. <i>Superlattices and Microstructures</i> , 2017 , 111, 45-56	2.8	2
17	Theoretical study of the doping effect on the phonon dispersion of metallic carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012 , 44, 1032-1035	3	2
16	Raman spectroscopy and lattice-dynamics calculations of mixed layered copper-titanium oxides. <i>Physica C: Superconductivity and Its Applications</i> , 1997 , 274, 141-148	1.3	2

15	Surface chemistry of reduced graphene oxide: H-atom transfer reactions. <i>Applied Surface Science</i> , 2021 , 567, 150815	6.7	2
14	Double-resonant Raman scattering with optical and acoustic phonons in carbon nanotubes. <i>Physical Review B</i> , 2018 , 97,	3.3	1
13	Intermediate frequency Raman spectra of defective single-walled carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2010 , 247, 892-895	1.3	1
12	Temperature dependence of Raman active modes in CuGeO ₃ . <i>Solid State Communications</i> , 1997 , 102, 599-604	1.6	1
11	Symmetry-adapted tight-binding calculations of the phonon dispersion and the resonant Raman intensity of the totally symmetric phonons of single-walled carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 3480-3484	1.3	1
10	Resonant Raman Intensity Of The Radial-Breathing Mode Of Single-Walled Carbon Nanotubes. <i>AIP Conference Proceedings</i> , 2005 ,	0	1
9	Carrier dynamics and infrared-active phonons in c-axis oriented RuSr ₂ GdCu ₂ O ₈ film. <i>Physica C: Superconductivity and Its Applications</i> , 2001 , 361, 234-238	1.3	1
8	Raman-active phonons in the quasi-one-dimensional conductor (x= 1.6, 2.0): polarized Raman spectroscopy and lattice dynamical calculations. <i>Journal of Physics Condensed Matter</i> , 1998 , 10, 1643-1654	1.8	1
7	Raman-active phonons in La ₄ BaCu ₅ O ₁₃ : polarized Raman spectroscopy and lattice dynamical calculations. <i>Journal of Physics Condensed Matter</i> , 1995 , 7, 4967-4973	1.8	1
6	VIBRATIONAL AND RELATED PROPERTIES OF CARBON NANOTUBES 2006 , 69-88		1
5	Optical Properties of Single-Walled Carbon Nanotubes Within a Nonorthogonal Tight-Binding Model. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2005 , 13, 45-52	1.8	
4	Estimation of the cleavage force of crystalline semiconductors with diamond and zinc-blende structure. <i>Journal of Physics and Chemistry of Solids</i> , 2003 , 64, 159-160	3.9	
3	Optical Properties of Small-Radius SWNTs within a Tight-Binding Model 2004 , 1-10		
2	LATTICE DYNAMICS OF CARBON NANOTUBES 2005 , 113-150		
1	Two-phonon Raman scattering in graphene for laser excitation beyond the plasmon energy. <i>Journal of Physics: Conference Series</i> , 2016 , 764, 012008	0.3	