

Vladimir U Nazarov

List of Publications by Year in descending order

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59
papers

732
citations

687363

13
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580821

25
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60
docs citations

60
times ranked

673
citing authors

#	ARTICLE	IF	CITATIONS
1	Optics of Semiconductors from Meta-Generalized-Gradient-Approximation-Based Time-Dependent Density-Functional Theory. <i>Physical Review Letters</i> , 2011, 107, 216402.	7.8	68
2	Theory of acoustic surface plasmons. <i>Physical Review B</i> , 2004, 70, .	3.2	65
3	Including nonlocality in the exchange-correlation kernel from time-dependent current density functional theory: Application to the stopping power of electron liquids. <i>Physical Review B</i> , 2007, 76, .	3.2	56
4	Dielectric screening and band-structure effects in low-energy photoemission. <i>Physical Review B</i> , 2010, 82, .	3.2	44
5	Time-dependent density-functional theory for the stopping power of an interacting electron gas for slow ions. <i>Physical Review B</i> , 2005, 71, .	3.2	40
6	Electronic excitations in quasi-2D crystals: what theoretical quantities are relevant to experiment?. <i>New Journal of Physics</i> , 2015, 17, 073018.	2.9	40
7	Energy bands in graphene: Comparison between the tight-binding model and <i>ab initio</i> calculations. <i>Physical Review B</i> , 2014, 89, .	3.2	36
8	Scattering resonances in two-dimensional crystals with application to graphene. <i>Physical Review B</i> , 2013, 87, .	3.2	35
9	Multipole surface-plasmon-excitation enhancement in metals. <i>Physical Review B</i> , 1999, 59, 9866-9869.	3.2	33
10	Symmetry classification of energy bands in graphene. <i>Physical Review B</i> , 2012, 85, .	3.2	32
11	Exact Dynamical Exchange-Correlation Kernel of a Weakly Inhomogeneous Electron Gas. <i>Physical Review Letters</i> , 2009, 102, 113001.	7.8	18
12	Analytical properties of dielectric response of semi-infinite systems and the surface electron energy loss function. <i>Surface Science</i> , 1995, 331-333, 1157-1162.	1.9	14
13	Surface dielectric response: Exact solution in the semiclassical infinite-barrier model with diffuse scattering. <i>Physical Review B</i> , 1997, 56, 2198-2207.	3.2	13
14	Resolving the wave vector and the refractive index from the coefficient of reflectance. <i>Optics Letters</i> , 2007, 32, 2939.	3.3	13
15	Nanostructured metamaterials with broadband optical properties. <i>Optical Materials Express</i> , 2013, 3, 143.	3.0	13
16	Time-dependent density functional theory of coupled electronic lattice motion in quasi-two-dimensional crystals. <i>Physical Review B</i> , 2014, 89, .	3.2	13
17	Bulk and surface dielectric response of a superlattice with an arbitrary varying dielectric function: A general analytical solution in the local theory in the long-wave limit. <i>Physical Review B</i> , 1994, 49, 17342-17350.	3.2	12
18	TIME-DEPENDENT CURRENT-DENSITY FUNCTIONAL THEORY FOR THE FRICTION OF IONS IN AN INTERACTING ELECTRON GAS. <i>International Journal of Modern Physics B</i> , 2008, 22, 3813-3839.	2.0	12

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19	Role of the kinematics of probing electrons in electron energy-loss spectroscopy of solid surfaces. Physical Review B, 2016, 93, .	3.2	12
20	Dynamical many-body corrections to the residual resistivity of metals. Physical Review B, 2014, 89, .	3.2	11
21	Surface energy-loss function of a semi-infinite spatially dispersive solid. Physical Review B, 1994, 49, 10663-10667.	3.2	10
22	Inelastic low energy electron diffraction at metal surfaces. Surface Science, 2001, 482-485, 640-647.	1.9	9
23	Exact exact-exchange potential of two- and one-dimensional electron gases beyond the asymptotic limit. Physical Review B, 2016, 93, .	3.2	9
24	Probing mesoscopic crystals with electrons: One-step simultaneous inelastic and elastic scattering theory. Physical Review B, 2017, 96, .	3.2	9
25	Antidiabatic limit of the exchange-correlation kernels of an inhomogeneous electron gas. Physical Review B, 2010, 81, .	3.2	8
26	Development of metamaterials with desired broadband optical properties. Applied Physics Letters, 2012, 101, 071907.	3.3	8
27	Nonlinear mechanism of plasmon damping in electron gas. Physical Review B, 2002, 66, .	3.2	7
28	Spin polarization of light atoms in jellium: Detailed electronic structures. Physical Review B, 2005, 72, .	3.2	7
29	Z3-order theory of quantum inelastic scattering of charges by solids. Physical Review B, 2002, 65, .	3.2	6
30	Negative static permittivity and violation of Kramers-Kronig relations in quasi-two-dimensional crystals. Physical Review B, 2015, 92, .	3.2	6
31	Derivative discontinuity with localized Hartree-Fock potential. Journal of Chemical Physics, 2015, 143, 064111.	3.0	6
32	Indirect bulk plasmon generation by electrons reflected above the solid surface. Physical Review B, 1995, 52, 12414-12418.	3.2	5
33	Time-dependent effective potential and exchange kernel of homogeneous electron gas. Physical Review B, 2013, 87, .	3.2	5
34	Low-energy dielectric screening in Pd and PdHx systems. Journal of Physics Condensed Matter, 2015, 27, 055501.	1.8	5
35	Temperature effect on acoustic plasmons. Physical Review B, 2016, 94, .	3.2	5
36	Surface dielectric response of uniaxial crystals: Application to graphite. Physical Review B, 1994, 50, 11151-11155.	3.2	4

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37	Time-dependent density-functional theory approach to nonlinear particle–solid interactions in comparison with scattering theory. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 8621-8631.	1.8	4
38	Quasi-Low-Dimensional Electron Gas with One Populated Band as a Testing Ground for Time-Dependent Density-Functional Theory of Mesoscopic Systems. <i>Physical Review Letters</i> , 2017, 118, 236802.	7.8	4
39	Breakdown of the ionization potential theorem of density functional theory in mesoscopic systems. <i>Journal of Chemical Physics</i> , 2021, 155, 194105.	3.0	4
40	Time-dependent variational principle and self-consistent field equations. <i>Mathematical Proceedings of the Cambridge Philosophical Society</i> , 1985, 98, 373-379.	0.4	3
41	Plasmon confinement in atomically thin and flat metallic films. , 2007, , .		3
42	Reply to comment on “Resolving the wave vector and the refractive index from the coefficient of reflectance”. <i>Optics Letters</i> , 2008, 33, 1829.	3.3	3
43	Communications: On the relation between the scalar and tensor exchange-correlation kernels of the time-dependent density-functional theory. <i>Journal of Chemical Physics</i> , 2010, 133, 021101.	3.0	3
44	Reciprocal space approach to effective constitutive parameters of periodic composites. <i>Computational Materials Science</i> , 2020, 171, 109257.	3.0	3
45	Analytical inversion of dielectric matrix of electron gas with one-dimensional inhomogeneity. <i>Solid State Communications</i> , 1986, 60, 115-117.	1.9	2
46	Analytical inversion of the dielectric matrix of a metallic superlattice of varying charge density: The angular dependence in the long-wave limit. <i>Superlattices and Microstructures</i> , 1992, 11, 11-16.	3.1	2
47	Variational approach to the scattering of charged particles by a many-electron system. <i>Physical Review B</i> , 2005, 71, .	3.2	2
48	Resolving the wave-vector and the refractive index from the coefficient of reflectance: erratum. <i>Optics Letters</i> , 2007, 32, 3345.	3.3	2
49	Design of metamaterials with predetermined optical properties for broadband applications. , 2012, , .		2
50	Giant nonlocal lossless permittivity at optical frequencies. <i>Optics Express</i> , 2015, 23, 20439.	3.4	2
51	Many-Body Quantum Dynamics by the Reduced Density Matrix Based on Time-Dependent Density-Functional Theory. <i>Physical Review Letters</i> , 2019, 123, 095302.	7.8	2
52	Publisher's Note: Symmetry classification of energy bands in graphene [<i>Phys. Rev. B</i> 85, 115418 (2012)]. <i>Physical Review B</i> , 2012, 85, .	3.2	1
53	Crossover between collective and independent-particle excitations in quasi-2D electron gas with one filled subband. <i>European Physical Journal B</i> , 2018, 91, 1.	1.5	1
54	Exact surface-plasmon dispersion relation for spatially dispersive solid with an abrupt surface. <i>Vacuum</i> , 1997, 48, 249-251.	3.5	0

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55	Inelastic electron scattering at metal surfaces: the role of elastic scattering. <i>Vacuum</i> , 2001, 63, 151-155.	3.5	0
56	Nonlinear, Band-Structure, and Surface Effects in the Interaction of Charged Particles with Solids. <i>Advances in Quantum Chemistry</i> , 2004, , 247-275.	0.8	0
57	Spatial Distribution of Potential Created by an External Perturbation in Pd and PdH. <i>Advanced Materials Research</i> , 2015, 1084, 708-712.	0.3	0
58	Theoretical approach to embed nanocrystallites into a bulk crystalline matrix and the embedding influence on the electronic band structure and optical properties of the resulting heterostructures. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 245301.	1.8	0
59	Electron Energy-Loss and Photoelectron Spectroscopies of Surfaces and Two-Dimensional Crystals. <i>Springer Handbooks</i> , 2020, , 501-530.	0.6	0