

# Bedřich Velický<sup>1/2</sup>

## List of Publications by Year in descending order

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86  
papers

4,303  
citations

331538

21  
h-index

102432

66  
g-index

88  
all docs

88  
docs citations

88  
times ranked

1274  
citing authors

#	ARTICLE	IF	CITATIONS
1	Single-Site Approximations in the Electronic Theory of Simple Binary Alloys. <i>Physical Review</i> , 1968, 175, 747-766.	2.7	1,417
2	Theory of Electronic Transport in Disordered Binary Alloys: Coherent-Potential Approximation. <i>Physical Review</i> , 1969, 184, 614-627.	2.7	544
3	Generalized Kadanoff-Baym ansatz for deriving quantum transport equations. <i>Physical Review B</i> , 1986, 34, 6933-6942.	1.1	363
4	Ultrasound Propagation in Externally Stressed Granular Media. <i>Physical Review Letters</i> , 1999, 82, 1863-1866.	2.9	238
5	Paramagnetic NiCu Alloys: Electronic Density of States in the Coherent-Potential Approximation. <i>Physical Review B</i> , 1970, 1, 3250-3263.	1.1	230
6	Electronic structure of $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ . <i>Physical Review B</i> , 1983, 27, 1088-1100.	1.1	179
7	Excitonic Effects in the Interband Absorption of Semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , 1966, 16, 147-157.	0.7	161
8	Self-consistent LCAO-CPA method for disordered alloys. <i>Physical Review B</i> , 1997, 55, 5717-5729.	1.1	122
9	Electronic Transport in Alloys: Coherent-Potential Approximation. <i>Physical Review B</i> , 1970, 2, 1771-1788.	1.1	89
10	Simplification of Green's-function calculations through analytic continuation. <i>Physical Review B</i> , 1984, 29, 3697-3699.	1.1	59
11	Surface Green function by matching. <i>Journal of Physics C: Solid State Physics</i> , 1971, 4, L104-L107.	1.5	50
12	Pressure dependence of the sound velocity in a two-dimensional lattice of Hertz-Mindlin balls: Mean-field description. <i>Physical Review E</i> , 2002, 65, 021307.	0.8	49
13	The use of the kramers-kronig relations in determining optical constants. <i>European Physical Journal D</i> , 1961, 11, 787-798.	0.4	48
14	Analytic properties and accuracy of the generalized Blackman-Esterling-Berk coherent-potential approximation. <i>Physical Review B</i> , 1998, 58, 6944-6962.	1.1	46
15	Optical Constants of Disordered Binary Alloys: Intraband Transitions in the Coherent-Potential Approximation. <i>Physical Review B</i> , 1970, 2, 938-947.	1.1	40
16	Electronic structure of semiinfinite crystals with substitutional disorder in surface layer. <i>Surface Science</i> , 1977, 64, 411-424.	0.8	34
17	Optical constants of single-crystal GeS in the photon energy range 0.04–4 eV. <i>Journal of Physics and Chemistry of Solids</i> , 1976, 37, 785-794.	1.9	32
18	Minimum Polarity Models in the Theory of Magnetic Properties of NiCu Alloys. <i>Journal of Applied Physics</i> , 1969, 40, 1283-1284.	1.1	28

#	ARTICLE	IF	CITATIONS
19	Long and short time quantum dynamics: I. Between Green's functions and transport equations. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 154-174.	1.3	28
20	ac-conductance of an infinite ideal quantum wire in an electric field with arbitrary spatial distribution. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 140, 447-450.	0.9	22
21	Long and short time quantum dynamics: III. Transients. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 196-212.	1.3	22
22	Dispersion relation for complex reflectivity. European Physical Journal D, 1961, 11, 541-543.	0.4	21
23	A tight binding study of the electronic structure of MnTe. Journal of Physics C: Solid State Physics, 1987, 20, 59-68.	1.5	20
24	Electron systems out of equilibrium: Nonequilibrium Green's function approach. International Journal of Modern Physics B, 2014, 28, 1430013.	1.0	20
25	Electronic Sliding Friction of Atoms Physisorbed at Superconductor Surface. Physical Review Letters, 1999, 83, 4112-4115.	2.9	19
26	Between Green's functions and transport equations: reconstruction theorems and the role of initial conditions. Journal of Physics: Conference Series, 2006, 35, 1-16.	0.3	19
27	Ward identity for nonequilibrium Fermi systems. Physical Review B, 2008, 77, .	1.1	19
28	Electronic states in mixed Cd <sub>1-x</sub> Pb <sub>x</sub> F <sub>2</sub> crystals. Solid State Communications, 1986, 58, 663-666.	0.9	18
29	Refractive Index of Crystalline and Amorphous GeS. Physica Status Solidi (B): Basic Research, 1981, 104, K95.	0.7	17
30	Long and short time quantum dynamics: II. Kinetic regime. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 175-195.	1.3	17
31	Correlated motion of a pair of electrons in a random alloy. Journal of Physics and Chemistry of Solids, 1976, 37, 655-668.	1.9	16
32	Correlated initial condition for an embedded process by time partitioning. Physical Review B, 2010, 81, .	1.1	16
33	LCAO approach to the coherent potential approximation: electronic structure of substitutionally disordered CuNi alloys. Journal of Physics F: Metal Physics, 1987, 17, 351-372.	1.6	15
34	On the band structure of CdSb. European Physical Journal D, 1965, 15, 43-58.	0.4	14
35	Coherent electronic transport properties of quasi-one-dimensional systems. Surface Science, 1990, 229, 316-320.	0.8	13
36	Interband quantum kinetics with static disorder scattering I: Direct CPA solution for a rectangular-pulse-excited semiconductor. European Physical Journal B, 1994, 94, 273-279.	0.6	13

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37	Quasiparticle states of electron systems out of equilibrium. <i>Physical Review B</i> , 2007, 75, .	1.1	13
38	Optical Properties of Liquid Germanium. <i>Physica Status Solidi (B): Basic Research</i> , 1963, 3, 767-772.	0.7	12
39	Theory of chemisorption. <i>European Physical Journal D</i> , 1985, 35, 1017-1032.	0.4	12
40	A numerical method of analytical continuation of Green-function-like expressions. <i>Journal of Physics C: Solid State Physics</i> , 1986, 19, 7173-7181.	1.5	11
41	The chemical bond in CdSb. <i>European Physical Journal D</i> , 1963, 13, 594-598.	0.4	10
42	Surface Green function for systems with two interfaces. <i>European Physical Journal D</i> , 1974, 24, 981-984.	0.4	9
43	Electrical conductivity of electrons in a model binary disordered alloy with long range order. <i>European Physical Journal D</i> , 1977, 27, 71-87.	0.4	9
44	Mn 3d states in photoelectron spectra from Cd <sub>1-x</sub> Mn <sub>x</sub> Te. <i>Physica Status Solidi (B): Basic Research</i> , 1987, 140, 135-140.	0.7	9
45	AC conductance of quantum wires with inelastic scattering. I. <i>Journal of Physics Condensed Matter</i> , 1990, 2, 1569-1581.	0.7	9
46	Influence of alloy disorder on the vibrational properties of Si/Ge superlattices. <i>Physical Review B</i> , 1990, 41, 3769-3777.	1.1	9
47	Single molecule bridge as a testing ground for using NGF outside of the steady current regime. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010, 42, 539-549.	1.3	9
48	Conductance of quantum ballistic channels with inelastic phonon scattering. <i>Solid State Communications</i> , 1989, 72, 981-985.	0.9	8
49	Buildup and decoherence of optical transients in disordered semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , 1995, 188, 515-529.	0.7	8
50	Fast Transient Current Response to Switching Events in Short Chains of Molecular Islands. <i>Journal of Superconductivity and Novel Magnetism</i> , 2013, 26, 773-777.	0.8	8
51	Beyond the Generalized Kadanoff-Baym Ansatz. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1800594.	0.7	8
52	Electronic Structure of Si <sub>x</sub> with Arbitrary Hydrogen Concentration. <i>Physica Status Solidi (B): Basic Research</i> , 1986, 135, 309-319.	0.7	7
53	Photoexcited transients in disordered semiconductors: Quantum coherence at very short to intermediate times. <i>Physical Review B</i> , 2002, 65, .	1.1	7
54	Anomalous acoustic reflection on a sliding interface or a shear band. <i>Physical Review E</i> , 2003, 67, 061301.	0.8	7

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55	Dynamics of mesoscopic systems: Non-equilibrium Green's functions approach. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 525-538.	1.3	7
56	Simple Two-Band s-d Model for Ferromagnetic Semiconductors with Hybridization. II. Further Development and Optical Properties. Physica Status Solidi (B): Basic Research, 1981, 103, 139-149.	0.7	6
57	Optical Response of Electrons in Disordered Systems. Physica Scripta, 1987, T19B, 558-564.	1.2	6
58	Fast dynamics of molecular bridges. Physica Scripta, 2012, T151, 014037.	1.2	6
59	The role of auger effect in thermostimulated phenomena in ionic crystals. Zeitschrift für Physik A, 1972, 251, 289-299.	0.9	5
60	Soft X-ray transition matrix elements: The role of approximation of the valence states. European Physical Journal D, 1975, 25, 785-793.	0.4	5
61	On the Ultimate Distribution of Impurity in the Zone Melting Process. Physica Status Solidi (B): Basic Research, 1964, 5, 207-212.	0.7	4
62	Index of refraction of the glassy As <sub>x</sub> Te <sub>100-x</sub> system. Solar Energy Materials and Solar Cells, 1982, 8, 33-39.	0.4	4
63	Local environment effects in electronic structure: a-GeS contrasted to a-SiH <sub>x</sub> . Journal of Non-Crystalline Solids, 1985, 77-78, 87-90.	1.5	4
64	Theory of photoexcitation by ultrafast light pulses in disordered solids. Journal of Non-Crystalline Solids, 1987, 90, 49-52.	1.5	4
65	Transient Quasiparticle Dynamics. Physica Status Solidi (B): Basic Research, 1998, 206, 341-348.	0.7	4
66	Surface green function method in surface studies. Surface Science, 1975, 47, 495-500.	0.8	3
67	The analytical deconvolution technique for the green function recursion expansion. Physica Status Solidi (B): Basic Research, 1986, 134, 659-669.	0.7	3
68	Fast transients in mesoscopic systems. , 2011, , .		3
69	Polaron Effect on the Optical Absorption Edge of Semiconductors. Physica Status Solidi (B): Basic Research, 1967, 19, K39.	0.7	2
70	The composition dependence of activation energy in the As <sub>x</sub> Te <sub>100-x</sub> and As <sub>2</sub> Te <sub>3</sub> + Tl <sub>x</sub> glassy systems. Physica Status Solidi A, 1978, 47, 271-276.	1.7	2
71	Electronic States on Point Defects in Glassy As <sub>2</sub> Se <sub>3</sub> . Physica Status Solidi (B): Basic Research, 1980, 100, K67.	0.7	2
72	Theory of chemisorption. European Physical Journal D, 1985, 35, 1163-1179.	0.4	2

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73	Vibronic Koster-Slater impurity: Exactly soluble model of deep levels in semiconductors. Physical Review B, 1992, 46, 9408-9418.	1.1	2
74	Interband quantum kinetics with static disorder scattering. Zeitschrift für Physik B-Condensed Matter, 1997, 103, 33-40.	1.1	2
75	Dynamical response of electrons in a disordered solid to a very fast light pulse. Journal of Non-Crystalline Solids, 1987, 97-98, 455-458.	1.5	1
76	Field emission from the vibronic Koster-Slater impurity. Physical Review B, 1994, 49, 5353-5361.	1.1	1
77	Optically Induced Gaps in Disordered Semiconductors. Acta Physica Polonica A, 1996, 90, 837-842.	0.2	1
78	BÄ¶er's Theory of Electronic Conduction in Chalcogenide Glasses: Study of the Band Models. Physica Status Solidi (B): Basic Research, 1971, 46, K59.	0.7	0
79	Density of localized states and linear specific heat for anderson model of amorphous semiconductors. European Physical Journal D, 1982, 32, 69-75.	0.4	0
80	a CBLM approach to the electronic structure of transition metal impurities in silicon. Physica Status Solidi (B): Basic Research, 1986, 133, K111.	0.7	0
81	The Electronic Structure of Polysilane Alloys. Physica Status Solidi (B): Basic Research, 1986, 136, K113.	0.7	0
82	The electronic structure of a-SiHx alloys. Journal of Non-Crystalline Solids, 1987, 90, 99-102.	1.5	0
83	Electronic structure of 5d transition metal impurities in amorphous silicon. Journal of Non-Crystalline Solids, 1987, 97-98, 491-494.	1.5	0
84	Jan Tauc 1922â€“2010. Journal of Non-Crystalline Solids, 2012, 358, 1944-1945.	1.5	0
85	Electron Systems Out of Equilibrium: Nonequilibrium Green's Function Approach. , 2014, , 83-192.		0
86	Quasiparticle Formation and Decay in Pulsed Photoexcitation of Disordered Semiconductors. Acta Physica Polonica A, 1997, 92, 809-814.	0.2	0