Vijay A Singh

List of Publications by Year
in descending order

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73	1,142	430874	414414
papers	citations	18 h-index	32 g-index

73	73	73	548
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Vibrational and Electronic Structure of Hydrogenâ€Related Defects in Silicon Calculated by the Extended HÃ¼ckel Theory. Physica Status Solidi (B): Basic Research, 1977, 81, 637-646.	1.5	137
2	Theory of the photoluminescence spectra of porous silicon. Physical Review B, 1994, 50, 5329-5334.	3.2	89
3	Path integrals with a periodic constraint: Entangled strings. Journal of Mathematical Physics, 1978, 19, 2318-2323.	1.1	56
4	Shallow-deep transitions of impurities in semiconductor nanostructures. Journal of Applied Physics, 2001, 89, 6415-6421.	2.5	52
5	Effective exponent for the size dependence of luminescence in semiconductor nanocrystallites. Physical Review B, 1998, 58, 1158-1161.	3.2	51
6	Origin of the anomalous temperature dependence of luminescence in semiconductor nanocrystallites. Physical Review B, 2000, 61, 1941-1945.	3.2	45
7	Model for the photoluminescence behavior of porous silicon. Physical Review B, 1996, 54, 4416-4419.	3.2	43
8	Feynman path-integral approach to the Aharonov-Bohm effect. Physical Review D, 1979, 20, 2550-2554.	4.7	42
9	Electronic structure of substitutional chalcogen impurities in silicon. Physical Review B, 1983, 27, 4909-4923.	3.2	36
10	Phenomenology of solid solubilities and ion-implantation sites: An orbital-radii approach. Physical Review B, 1982, 25, 907-922.	3.2	32
11	Spin waves in amorphous ferromagnets. Journal of Applied Physics, 1978, 49, 1642-1644.	2.5	30
12	Temperatureâ€time duality and deep level spectroscopies. Journal of Applied Physics, 1995, 77, 3155-3161.	2.5	30
13	Semi-empirical calculations of hydrogen defects in silicon. Physics Letters, Section A: General, Atomic and Solid State Physics, 1978, 65, 261-263.	2.1	29
14	An inventory on rotational kinematics of a particle: unravelling misconceptions and pitfalls in reasoning. European Journal of Physics, 2012, 33, 1301-1312.	0.6	28
15	Correlation between the observed infrared stretching frequency and the bond character of the Siâ€“H bond. Journal of Chemical Physics, 1982, 77, 4330-4332.	3.0	27
16	Unified model for the luminescence and transport data in self-supporting porous silicon. Journal of Applied Physics, 1998, 83, 2235-2240.	2.5	24
17	The band gap in silicon nanocrystallites. Journal of Physics Condensed Matter, 2002, 14, 6647-6655.	1.8	20
18	Rotational kinematics of a rigid body about a fixed axis: development and analysis of an inventory. European Journal of Physics, 2015, 36, 045020.	0.6	20

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19	Revisiting elementary quantum mechanics with the BenDaniel-Duke boundary condition. American Journal of Physics, 2006, 74, 412-418.	0.7	19
20	Muffin-tin model in amorphous and liquid metals: General formalism and calculations for ans-phase-shift model. Physical Review B, 1980, 21, 4403-4412.	3.2	18
21	Diffusion-induced nucleation model for the formation of porous silicon. Physical Review B, 1995, 52, 11125-11131.	3.2	18
22	Conductivity of liquid metals: Vertex corrections in the effective-medium approximation. Physical Review B, 1982, 25, 2522-2531.	3.2	17
23	THE ROLE OF THE CARRIER MASS IN SEMICONDUCTOR QUANTUM DOTS. International Journal of Modern Physics B, 2000, 14, 1753-1765.	2.0	17
24	Evaluation of tight-binding models for deep defect levels in semiconductors. Physical Review B, 1982, 25, 2781-2785.	3.2	16
25	Origin of anE3-like defect in GaAs andGaAs1â^'xSbxalloys. Physical Review B, 1984, 29, 4807-4810.	3.2	16
26	Self-capacitance of a quantum dot: Dependence on the shape of the confining potential. Physical Review B, 2002, 65, .	3.2	11
27	Scaling of Coulomb and exchange-correlation effects with quantum dot size. Physical Review B, 2003, 67, .	3.2	11
28	Shallowâ€“deep transitions of neutral and charged donor states in semiconductor quantum dots. Physical Review B, 2004, 70, .	3.2	11
29	Rotational kinematics of a particle in rectilinear motion: Perceptions and pitfalls. American Journal of Physics, 2012, 80, 720-723.	0.7	11
30	Path-integral formulation of scattering theory: Central potentials. Physical Review D, 1980, 21, 2979-2985.	4.7	10
31	Reversal in the order of impurity binding energies with atomic energies. Physical Review B, 1983, 27, 1420-1423.	3.2	10
32	Time analyzed transient spectroscopy and multipleDXrelated emission centers in silicon doped AlxGa1â^'xAs. Journal of Applied Physics, 1995, 77, 5725-5729.	2.5	10
33	Self-consistent approach to the electronic structure of a one-dimensional correlated liquid metal. Physical Review B, 1977, 15, 3694-3699.	3.2	9
34	Path integrals and constraints: Particle in a box. Physics Letters, Section A: General, Atomic and Solid State Physics, 1980, 80, 105-108.	2.1	9
35	Helium-like donors in semiconductor quantum dots. Journal of Physics Condensed Matter, 2004, 16, 1769-1776.	1.8	9
36	Analytic (unitarity-preserving) approximation for the electronic structure of amorphous systems. Physical Review B, 1981, 24, 4852-4854.	3.2	8

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37	Photoluminescence spectra of InAs quantum dots embedded in GaAs heterostructure. Journal of Luminescence, 2013, 136, 401-406.	3.1	8
38	Semiâ€Empirical Calculations of the Configuration and Electronic Structure of Lithiumâ€Related Defects in Silicon. Physica Status Solidi (B): Basic Research, 1980, 100, 533-539.	1.5	7
39	Multiple-scattering approach to the electronic structure of amorphous and liquid metals. Physical Review B, 1980, 22, 4089-4091.	3.2	7
40	On the experimental consequences of the winding numbers of the Aharonov-Bohm effect. Physics Letters, Section A: General, Atomic and Solid State Physics, 1982, 92, 11-12.	2.1	7
41	Semiconductor quantum dots: Theory and phenomenology. Bulletin of Materials Science, 1999, 22, 563-569.	1.7	7
42	Shallow impurities and Î´-doping in quantum dotâ€“quantum well systems. Journal of Physics Condensed Matter, 2001, 13, 8105-8119.	1.8	7
43	Approximate approaches to the one-dimensional finite potential well. European Journal of Physics, 2011, 32, 1701-1710.	0.6	7
44	Self-consistent approach to an inhomogeneous, elastic medium. Physical Review B, 1982, 26, 1456-1458.	3.2	6
45	Self-organization in porous silicon formation. Physical Review B, 1997, 56, 4638-4641.	3.2	6
46	Depletion of interstitial oxygen in silicon and the thermal donor model. Journal of Applied Physics, 1987, 62, 1287-1289.	2.5	5
47	Two-scale model for aggregation and etching. Physical Review E, 1996, 53, 3920-3924.	2.1	5
48	Effective mass theory of a two-dimensional quantum dot in the presence of magnetic field. Pramana - Journal of Physics, 2009, 73, 573-580.	1.8	5
49	An entropic measure for the teachingâ€“learning process. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4453-4458.	2.6	5
50	New method for self-consistency in disordered systems. Physical Review B, 1983, 27, 6464-6468.	3.2	4
51	Broadening in the deep-level transient spectra of defects in GaAs1-xSbxalloys. Journal of Physics C: Solid State Physics, 1987, 20, 3603-3611.	1.5	4
52	Evaluation of some effective-medium theories for liquid and amorphous metals. Physical Review B, 1987, 35, 7898-7901.	3.2	4
53	Transition-metal impurities in semiconductors and the Haldane-Anderson model. Physical Review B, 1984, 30, 3527-3528.	3.2	3
54	Inversion of chalcogen defect levels in silicon: An MNDO study. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 112, 175-177.	2.1	3

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55	Vibrational spectra of defects in silicon: An orbital radii approach. Physical Review B, 1996, 53, 9831-9837.	3.2	3
56	Simple scheme for the numerical evaluation of nearly singular integrals. Computers in Physics, 1997, 11, 293.	0.5	3
57	A PHENOMENOLOGICAL STUDY OF THE Siâ€“H INFRARED SPECTRA IN POROUS AND AMORPHOUS SILICON. Modern Physics Letters B, 1999, 13, 703-708.	1.9	3
58	The vacancy in cubic tetrahedrally coordinated materials. Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 83, 291-293.	2.1	2
59	A Theoretical Study of the Semiinsulating Behaviour of Fe in InP. Physica Status Solidi (B): Basic Research, 1986, 136, 715-719.	1.5	2
60	AmpÃ©re versus Biot-Savart. Resonance, 2000, 5, 84-91.	0.3	2
61	Many electron effects in semiconductor quantum dots. Bulletin of Materials Science, 2003, 26, 63-67.	1.7	2
62	Impurity density of states of the oxygen thermal donor in silicon. Formalism and application. Materials Letters, 1986, 4, 447-450.	2.6	1
63	The Magnetohydrodynamic Generator A Physics Olympiad problem (2001). Resonance, 2002, 7, 68-75.	0.3	1
64	Preuniversity science education in India: Insights and cross cultural comparison. Physical Review Physics Education Research, 2019, 15, .	2.9	1
65	Universal features of point defect spectrum in graphene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 430, 127971.	2.1	1
66	Phenomenological approach to the electronic structure of glassy transition-metal alloys. Physical Review B, 1985, 32, 8384-8386.	3.2	0
67	MEAN FIELD APPROACH TO THE GAP OF A MODEL INTERACTING SYSTEM. International Journal of Modern Physics B, 1988, 02, 87-101.	2.0	0
68	Transient spectroscopy and disorder. Radiation Effects and Defects in Solids, 1989, 111-112, 385-392.	1.2	0
69	Carrier Dynamics in Porous and Nanocrystalline Silicon. , 1998, , 250-256.		0
70	Spin-blockade effects in spherical quantum dots. Physical Review B, 2006, 73, .	3.2	0
71	Defects in semiconductor nanostructures. Pramana - Journal of Physics, 2008, 70, 255-261.	1.8	0
72	A mean field approach to Coulomb blockade for a disordered assembly of quantum dots. Pramana - Journal of Physics, 2008, 70, 279-284.	1.8	0

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73	Mean-field theory of Coulomb blockade distribution for a disordered ensemble of quantum dots. Physical Review B, 2008, 77, .	3.2	0