Giovanni Battista Bachelet

List of Publications by Year
in descending order

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55 papers	6,302 citations	172386 29 h-index	155592 55 g-index
59 all docs	59 docs citations	59 times ranked	2833 citing authors

#	Article	IF	Citations
1	Pseudopotentials that work: From H to Pu. Physical Review B, 1982, 26, 4199-4228.	1.1	3,178
2	Correlation Energy and Spin Polarization in the 2D Electron Gas. Physical Review Letters, 2002, 88, 256601.	2.9	366
3	Relativistic and core-relaxation effects on the energy bands of gallium arsenide and germanium. Physical Review B, 1985, 31, 879-887.	1.1	363
4	Relativistic norm-conserving pseudopotentials. Physical Review B, 1982, 25, 2103-2108.	1.1	213
5	Analytic static structure factors and pair-correlation functions for the unpolarized homogeneous electron gas. Physical Review B, 2000, 61, 7353-7363.	1.1	178
6	Structural-energy calculations based on norm-conserving pseudopotentials and localized Gaussian orbitals. Physical Review B, 1981, 24, 4745-4752.	1.1	166
7	Novel pseudo-Hamiltonian for quantum Monte Carlo simulations. Physical Review Letters, 1989, 62, 2088-2091.	2.9	154
8	Total-energy gradients and lattice distortions at point defects in semiconductors. Physical Review B, 1985, 31, 6541-6551.	1.1	125
9	Defects in diamond: The unrelaxed vacancy and substitutional nitrogen. Physical Review B, 1981, 24, 4736-4744.	1.1	108
10	Local-spin-density functional for multideterminant density functional theory. Physical Review B, 2006, 73, .	1.1	98
11	Superconductivity in sodalite-like yttrium hydride clathrates. Physical Review B, 2019, 99, .	1.1	92
12	Chemical hardness, linear response, and pseudopotential transferability. Physical Review B, 1995, 52, 11793-11804.	1.1	83
13	AsGaantisite defect in GaAs. Physical Review B, 1983, 27, 2545-2547.	1.1	76
14	Local norm-conserving pseudo-Hamiltonians. Physical Review A, 1995, 52, 236-257.	1.0	71
15	Self-consistent calculations of the electronic structure for ideal Ga and As vacancies in GaAs. Physical Review B, 1981, 24, 915-925.	1.1	69
16	Electron-phonon interaction in graphite intercalation compounds. Physical Review B, 2007, 76, .	1.1	59
17	Small Fermi energy and phonon anharmonicity inMgB2and related compounds. Physical Review B, 2002, 65, .	1.1	56
18	Tractable Approach for Calculating Lattice Distortions around Simple Defects in Semiconductors: Application to the Single Donor Ge in GaP. Physical Review Letters, 1982, 49, 1765-1768.	2.9	55

#	Article	IF	Citations
19	Structural determination of Cl chemisorption on Si{111} and Ge{111} by total-energy minimization. Physical Review B, 1983, 28, 2302-2304.	1.1	55
20	Electrons and phonons in the ternary alloyCaAl2â^'xSixas a function of composition. Physical Review B, 2005, 72, .	1.1	54
21	Pair-distribution functions of the two-dimensional electron gas. Physical Review B, 2004, 70, .	1.1	47
22	Pseudojellium model with an application to lithium clusters. Physical Review B, 1993, 48, 14708-14711.	1.1	44
23	Nonlocal exchange and correlation and semiconductor band structure. Physical Review B, 1983, 28, 6157-6160.	1.1	42
24	Band-structure calculation for GaAs and Si beyond the local-density approximation. Physical Review B, 1985, 31, 3680-3688.	1.1	37
25	Unresolved problems in superconductivity of CaC6. Physica C: Superconductivity and Its Applications, 2007, 460-462, 116-120.	0.6	37
26	Phase separation in the two-dimensional Hubbard model: A fixed-node quantum Monte Carlo study. Physical Review B, 1998, 58, R14685-R14688.	1.1	31
27	Viewpoint: the road to room-temperature conventional superconductivity. Journal of Physics Condensed Matter, 2019, 31, 234002.	0.7	31
28	Surface and size effects on the electronic states of small metallic clusters: a model calculation. Journal of Physics C: Solid State Physics, 1983, 16, 4305-4320.	1.5	29
29	Conduction Band Energy of Excess Electrons in Liquid Argon. Europhysics Letters, 1986, 1, 455-460.	0.7	28
30	Local density functional for the short-range part of the electron-electron interaction. Physical Review B, 2004, 70, .	1.1	28
31	Absence of superconductivity in iron polyhydrides at high pressures. Physical Review B, 2018, 97, .	1.1	28
32	Role of forms of exchange and correlation used in generating pseudopotentials. Physical Review B, 1990, 42, 5057-5066.	1.1	26
33	Variational quantum Monte Carlo calculation of the cohesive properties of cubic boron nitride. Physical Review B, 1997, 56, 12201-12210.	1.1	26
34	Long range order in Al0.5Ga0.5As: Local density calculation of the electronic structure. Solid State Communications, 1985, 56, 125-126.	0.9	25
35	Comment on â€™â€™Simulation of highâ€field transport in GaAs using a Monte Carlo method and pseudopotential band structuresâ€™â€™ and on â€™â€™Bandâ€structure dependent transport and impact ionization in GaAsâ€™â€™. Journal of Applied Physics, 1982, 53, 3324-3326.	1.1	23
36	High- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:ma superconductivity in doped boron-carbon clathrates. Physical Review B, 2022, 105, .	1.1	23

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37	Theory of exciton effects in semiconductor surface spectroscopy. Journal of Vacuum Science and Technology, 1979, 16, 1370-1373.	1.9	22
38	Two-dimensional electron gas: Correlation energy versus density and spin polarization. International Journal of Quantum Chemistry, 2003, 91, 126-130.	1.0	13
39	Pseudopotentials and physical ions. Physical Review B, 1991, 44, 8486-8495.	1.1	11
40	Bonding geometries of Cl on Si{111} and Ge{111}. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1983, 1, 726.	1.6	10
41	Electron-core-hole interactions at surfaces: An exactly soluble model. Surface Science, 1983, 129, 447-481.	0.8	8
42	Alkali-metal plasmons, pseudopotentials, and optical sum rules. Physical Review B, 1997, 55, 13835-13841.	1.1	6
43	Correlation energy, pair-distribution functions and static structure factors of jellium. Physica A: Statistical Mechanics and Its Applications, 2000, 280, 199-205.	1.2	6
44	Reply to â€˜â€˜Comment on â€˜Pseudopotentials that work: From H to Puâ€™ â€™â€™. Physical Review B, 1988, 37, 4798-4798.	1.1	5
45	Lattice Defects in Semiconductors: Towards a Finite-Temperature Theory. Physica Scripta, 1987, T19A, 311-319.	1.2	5
46	Static Atomic Polarizabilities from Normâ€Conserving Pseudopotentials. Physica Status Solidi (B): Basic Research, 1982, 110, 313-322.	0.7	3
47	The origin of phonon anharmonicity in MgB2 and related compounds. Superconductor Science and Technology, 2003, 16, 143-146.	1.8	3
48	Density functional theory and first-principles pseudopotentials: two important tools in solid-state theory. , 1989, , 119-160.		2
49	Green function approach to realistic calculations of the electronic structure of semiconductor interfaces. Surface Science, 1985, 152-153, 1178-1184.	0.8	1
50	NONADIABATIC EFFECTS AND THE ROLE OF SMALL FERMI ENERGY IN MgB2. International Journal of Modern Physics B, 2003, 17, 560-566.	1.0	1
51	Small Fermi energy effects in MgB2 and related compounds. Physica C: Superconductivity and Its Applications, 2004, 408-410, 332-333.	0.6	1
52	GREEN'S FUNCTION MATCHING METHOD FOR REALISTIC CALCULATIONS OF INTERFACES. Journal De Physique Colloque, 1985, 46, C4-321-C4-329.	0.2	1
53	Pseudopotential Portability in the Qmc Framework. Materials Research Society Symposia Proceedings, 1992, 291, 291.	0.1	0
54	Model static structure factors and pair-correlation functions for the unpolarized homogeneous electron gas. AIP Conference Proceedings, 2001, , .	0.3	0

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55	Alkali clusters : beyond the jellium sphere. European Physical Journal Special Topics, 1993, 03, C7-1965-C7-1969.	0.2	0