Giovanni Battista Bachelet

List of Publications by Citations

51 papers	5,759 citations	28 h-index	59 g-index
59 ext. papers	5,967 ext. citations	3.1 avg, IF	5.17 L-index

#	Paper	IF	Citations
51	Pseudopotentials that work: From H to Pu. *Physical Review B*, **1982**, 26, 4199-4228	3.3	2984
50	Correlation energy and spin polarization in the 2D electron gas. *Physical Review Letters*, **2002**, 88, 256601	7.4	340
49	Relativistic and core-relaxation effects on the energy bands of gallium arsenide and germanium. *Physical Review B*, **1985**, 31, 879-887	3.3	333
48	Relativistic norm-conserving pseudopotentials. *Physical Review B*, **1982**, 25, 2103-2108	3.3	201
47	Structural-energy calculations based on norm-conserving pseudopotentials and localized Gaussian orbitals. *Physical Review B*, **1981**, 24, 4745-4752	3.3	150
46	Analytic static structure factors and pair-correlation functions for the unpolarized homogeneous electron gas. *Physical Review B*, **2000**, 61, 7353-7363	3.3	143
45	Novel pseudo-Hamiltonian for quantum Monte Carlo simulations. *Physical Review Letters*, **1989**, 62, 2088-2091	7.4	124
44	Total-energy gradients and lattice distortions at point defects in semiconductors. *Physical Review B*, **1985**, 31, 6541-6551	3.3	120
43	Defects in diamond: The unrelaxed vacancy and substitutional nitrogen. *Physical Review B*, **1981**, 24, 4736-4744	3.3	102
42	Local-spin-density functional for multideterminant density functional theory. *Physical Review B*, **2006**, 73,	3.3	88
41	AsGaantisite defect in GaAs. *Physical Review B*, **1983**, 27, 2545-2547	3.3	73
40	Self-consistent calculations of the electronic structure for ideal Ga and As vacancies in GaAs. *Physical Review B*, **1981**, 24, 915-925	3.3	67
39	Chemical hardness, linear response, and pseudopotential transferability. *Physical Review B*, **1995**, 52, 11793-11804	3.3	58
38	Electron-phonon interaction in graphite intercalation compounds. *Physical Review B*, **2007**, 76,	3.3	55
37	Structural determination of Cl chemisorption on Si{111} and Ge{111} by total-energy minimization. *Physical Review B*, **1983**, 28, 2302-2304	3.3	55
36	Superconductivity in sodalite-like yttrium hydride clathrates. *Physical Review B*, **2019**, 99,	3.3	54
35	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	7.4	53

34	Electrons and phonons in the ternary alloy CaAl2Si2 as a function of composition. *Physical Review B*, **2005**, 72,	3.3	52
33	Small Fermi energy and phonon anharmonicity in MgB2 and related compounds. *Physical Review B*, **2002**, 65,	3.3	52
32	Pair-distribution functions of the two-dimensional electron gas. *Physical Review B*, **2004**, 70,	3.3	47
31	Local norm-conserving pseudo-Hamiltonians. *Physical Review A*, **1995**, 52, 236-257	2.6	47
30	Pseudojellium model with an application to lithium clusters. *Physical Review B*, **1993**, 48, 14708-14711	3.3	42
29	Nonlocal exchange and correlation and semiconductor band structure. *Physical Review B*, **1983**, 28, 6157-6160	3.3	41
28	Unresolved problems in superconductivity of CaC6. *Physica C: Superconductivity and Its Applications*, **2007**, 460-462, 116-120	1.3	35
27	Band-structure calculation for GaAs and Si beyond the local-density approximation. *Physical Review B*, **1985**, 31, 3680-3688	3.3	35
26	Phase separation in the two-dimensional Hubbard model: A fixed-node quantum Monte Carlo study. *Physical Review B*, **1998**, 58, R14685-R14688	3.3	29
25	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		29
24	Conduction Band Energy of Excess Electrons in Liquid Argon. *Europhysics Letters*, **1986**, 1, 455-460	1.6	28
23	Local density functional for the short-range part of the electron-electron interaction. *Physical Review B*, **2004**, 70,	3.3	27
22	Role of forms of exchange and correlation used in generating pseudopotentials. *Physical Review B*, **1990**, 42, 5057-5066	3.3	26
21	Variational quantum Monte Carlo calculation of the cohesive properties of cubic boron nitride. *Physical Review B*, **1997**, 56, 12201-12210	3.3	25
20	Long range order in Al0.5Ga0.5As: Local density calculation of the electronic structure. *Solid State Communications*, **1985**, 56, 125-126	1.6	25
19	Theory of exciton effects in semiconductor surface spectroscopy. *Journal of Vacuum Science and Technology*, **1979**, 16, 1370-1373		22
18	Absence of superconductivity in iron polyhydrides at high pressures. *Physical Review B*, **2018**, 97,	3.3	21
17	Viewpoint: the road to room-temperature conventional superconductivity. *Journal of Physics Condensed Matter*, **2019**, 31, 234002	1.8	19

16	Comment on Simulation of high-field transport in GaAs using a Monte Carlo method and pseudopotential band structures and on Band-structure dependent transport and impact ionization in GaAs *Journal of Applied Physics*, **1982**, 53, 3324-3326	2.5	19
15	Two-dimensional electron gas: Correlation energy versus density and spin polarization. *International Journal of Quantum Chemistry*, **2003**, 91, 126-130	2.1	13
14	Pseudopotentials and physical ions. *Physical Review B*, **1991**, 44, 8486-8495	3.3	11
13	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		9
12	Correlation energy, pair-distribution functions and static structure factors of jellium. *Physica A: Statistical Mechanics and Its Applications*, **2000**, 280, 199-205	3.3	6
11	Electron-core-hole interactions at surfaces: An exactly soluble model. *Surface Science*, **1983**, 129, 447-481	1.8	6
10	Alkali-metal plasmons, pseudopotentials, and optical sum rules. *Physical Review B*, **1997**, 55, 13835-13841	3.3	5
9	Lattice Defects in Semiconductors: Towards a Finite-Temperature Theory. *Physica Scripta*, **1987**, T19A, 311-319	2.6	5
8	The origin of phonon anharmonicity in MgB2 and related compounds. *Superconductor Science and Technology*, **2003**, 16, 143-146	3.1	3
7	Static Atomic Polarizabilities from Norm-Conserving Pseudopotentials. *Physica Status Solidi (B): Basic Research*, **1982**, 110, 313-322	1.3	3
6	Reply to "Comment on 'Pseudopotentials that work: From H to Pu' ". *Physical Review B*, **1988**, 37, 4798	3.3	2
5	Density functional theory and first-principles pseudopotentials: two important tools in solid-state theory **1989**, 119-160		2
4	NONADIABATIC EFFECTS AND THE ROLE OF SMALL FERMI ENERGY IN MgB2. *International Journal of Modern Physics B*, **2003**, 17, 560-566	1.1	1
3	Small Fermi energy effects in MgB2 and related compounds. *Physica C: Superconductivity and Its Applications*, **2004**, 408-410, 332-333	1.3	1
2	Green function approach to realistic calculations of the electronic structure of semiconductor interfaces. *Surface Science*, **1985**, 152-153, 1178-1184	1.8	1
1	Pseudopotential Portability in the QMC Framework. *Materials Research Society Symposia Proceedings*, **1992**, 291, 291		