

# Guo-Qiang Hai

## List of Publications by Year in descending order

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100  
papers

1,464  
citations

331538

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360920

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103  
all docs

103  
docs citations

103  
times ranked

978  
citing authors

#	ARTICLE	IF	CITATIONS
1	Path-integral Monte Carlo simulations on the thermodynamic properties of single-layer hexagonal boron nitride. Computational Condensed Matter, 2022, 31, e00660.	0.9	3
2	Quantum effects on elastic constants of diamond by path-integral Monte Carlo simulations. Computational Materials Science, 2020, 173, 109387.	1.4	8
3	Electronic structure of metal-doped aluminum clusters by quantum Monte Carlo method. Journal of Physics: Conference Series, 2020, 1483, 012005.	0.3	0
4	Quantum Monte Carlo simulation for the many-body decomposition of the interaction energy and electron correlation of small superalkali lithium clusters. Journal of Chemical Physics, 2019, 151, 014303.	1.2	7
5	Anharmonic Quantum Effects in Cubic Boron Nitride Crystal by Path Integral Monte Carlo Simulations. Physica Status Solidi (B): Basic Research, 2019, 256, 1900164.	0.7	8
6	Topology Driven $\langle \mathbf{g} \rangle$ -Factor Tuning in Type-II Quantum Dots. Physical Review Applied, 2019, 11, .	1.5	8
7	Thermodynamic properties of solid molecular hydrogen by path integral Monte Carlo simulations. Chemical Physics Letters, 2018, 691, 330-335.	1.2	7
8	Quantum Monte Carlo study on the structures and energetics of cyclic and linear carbon clusters $C_n$ ( $n = 3-10$ ). Physical Review A, 2018, 98, .	1.2	10
9	Quantum Monte Carlo study of the electron binding energies and aromaticity of small neutral and charged boron clusters. Journal of Chemical Physics, 2018, 149, 214303.	1.2	7
10	Analysis of the ionization potentials of small superalkali lithium clusters based on quantum Monte Carlo simulations. Chemical Physics Letters, 2018, 708, 54-60.	1.2	11
11	Electron pairing: from metastable electron pair to bipolaron. Journal of Physics Communications, 2018, 2, 035017.	5.2	123
12	Colossal permittivity with ultralow dielectric loss in In + Ta co-doped rutile $TiO_2$ . Journal of Materials Chemistry A, 2017, 5, 5436-5441.	1.1	24
13	Quantum effects in a free-standing graphene lattice: Path-integral against classical Monte Carlo simulations. Physical Review B, 2015, 92, .	0.6	2
14	Hamiltonian of a many-electron system with single-electron and electron-pair states in a two-dimensional periodic potential. European Physical Journal B, 2015, 88, 1.	0.7	4
15	Metastable electron-pair states in a two-dimensional crystal. Journal of Physics Condensed Matter, 2014, 26, 115502.	1.2	34
16	A quantum Monte Carlo study on electron correlation in all-metal aromatic clusters $MA_4^{\sim}$ ( $M = Li$ ). Physical Review B, 2014, 89, 160401.	1.5	14
17	Binding energies of small lithium clusters: A comparison of different theoretical calculations. Chemical Physics Letters, 2014, 616-617, 212-216.		
18	Spin- and valley-dependent commensurability oscillations and electric-field-induced quantum Hall plateaux in periodically modulated silicene. Applied Physics Letters, 2014, 104, 213109.		

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19	Dc and ac transport in silicene. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 345303.	0.7	36
20	Anharmonic effects on thermodynamic properties of a graphene monolayer. <i>Europhysics Letters</i> , 2014, 107, 56004.	0.7	24
21	Plasmon modes and screening in double metallic armchair graphene nanoribbons. <i>Physical Review B</i> , 2013, 88, .	1.1	16
22	Correlation effects on aromaticity of cluster: A quantum Monte Carlo study. <i>Chemical Physics Letters</i> , 2013, 586, 108-110.	1.2	16
23	Sorting the modes contributing to guidance in strain-induced graphene waveguides. <i>New Journal of Physics</i> , 2013, 15, 023015.	1.2	4
24	Quantum Monte Carlo study of small aluminum clusters $Al_n$ . <i>Physical Review B</i> , 2012, 85, .	1.1	44
25	Mechanism of point-defect diffusion in a two-dimensional colloidal crystal. <i>Applied Physics Letters</i> , 2011, 99, 031904.	1.5	5
26	Effect of long cyclic exchanges on the magnetic properties of bcc3He. <i>Physical Review B</i> , 2011, 84, .	1.1	5
27	Energy States of Phosphorous Donor in Silicon in Fields up to 18ÅT. <i>Journal of Low Temperature Physics</i> , 2010, 159, 226-229.	0.6	4
28	Continuous structural transitions in quasi-one-dimensional classical Wigner crystals. <i>Physical Review B</i> , 2010, 81, .	1.1	39
29	Two-dimensional electron states bound to an off-plane donor in a magnetic field. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 125801.	0.7	1
30	Artificial molecular quantum rings under magnetic field influence. <i>Journal of Applied Physics</i> , 2009, 106, 073702.	1.1	5
31	CALCULATION OF MAGNETODONOR STATES IN $InP$ AND POLARON EFFECTS. <i>International Journal of Modern Physics B</i> , 2009, 23, 3014-3018.	1.0	2
32	Ground-state energy of a classical artificial molecule. <i>European Physical Journal B</i> , 2008, 64, 81-86.	0.6	0
33	Anomalous Rashba spin-orbit interaction in $InAs/GaSb$ quantum wells. <i>Applied Physics Letters</i> , 2008, 92, 152107.	1.5	15
34	Control of the persistent currents in two interacting quantum rings through the Coulomb interaction and interring tunneling. <i>Physical Review B</i> , 2008, 78, .	1.1	26
35	Exchange effects on electron scattering through a quantum dot embedded in a two-dimensional semiconductor structure. <i>Physical Review B</i> , 2007, 76, .	1.1	5
36	Electron-acoustic-phonon scattering and electron relaxation in two-coupled quantum rings. <i>Journal of Applied Physics</i> , 2007, 101, 124308.	1.1	14

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37	Phonon-induced electron relaxation in quantum rings. <i>Physical Review B</i> , 2007, 75, .	1.1	12
38	Electron scattering through a quantum dot. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 466-468.	0.8	1
39	Ground state configurations of vertically coupled quantum rings. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 560-562.	0.8	1
40	Electron relaxation induced by electronâ€“longitudinal-acoustic-phonon scattering in single and coupled quantum dots in external magnetic and electric fields. <i>Physical Review B</i> , 2006, 74, .	1.1	5
41	Intersubband excitations at finite temperatures and their roles in different quasi-one-dimensional systems. <i>Brazilian Journal of Physics</i> , 2006, 36, 415-418.	0.7	0
42	Comment on â€œField-controlled suppression of phonon-induced transitions in coupled quantum dotsâ€• [Appl. Phys. Lett. 85, 4729 (2004)]. <i>Applied Physics Letters</i> , 2006, 88, 196101.	1.5	4
43	Artificial molecular quantum rings: Spin density functional theory calculations. <i>Physical Review B</i> , 2006, 74, .	1.1	25
44	Phonon-assisted tunneling in coupled semiconductor quantum dots. <i>Physical Review B</i> , 2005, 71, .	1.1	15
45	The eutectic composition on Cd x Pb 1 - x F 2 phase diagram: A molecular-dynamics study. <i>Europhysics Letters</i> , 2005, 71, 770-775.	0.7	5
46	Low-temperature electron mobilities due to ionized-impurity scattering in multisubband two-dimensional semiconductor systems. <i>Physical Review B</i> , 2004, 70, .	1.1	4
47	Magnetoresistance of nondegenerate quantum electron channels formed on the surface of superfluid helium. <i>Physical Review B</i> , 2004, 69, .	1.1	3
48	Zeeman effect and magnetic field induced spin-hybridization in semiconductor quantum dots. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 6949-6960.	0.7	4
49	Interwire element of an impurity spectral function in coupled asymmetric quantum wires. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004, 21, 479-482.	1.3	0
50	Correlation energy of coupled double electron layers. <i>Microelectronics Journal</i> , 2003, 34, 569-570.	1.1	0
51	Spin-polarized current produced by a double barrier resonant tunneling diode. <i>Solid State Communications</i> , 2003, 127, 489-492.	0.9	1
52	Tunneling effects on the impurity spectral function in coupled asymmetric quantum wires. <i>Physical Review B</i> , 2003, 68, .	1.1	3
53	Intersubband plasmons in quasi-one-dimensional electron systems on a liquid helium surface. <i>Physical Review B</i> , 2003, 68, .	1.1	3
54	Multiband electron resonant Raman scattering in quantum wells in a magnetic field. <i>Physical Review B</i> , 2003, 67, .	1.1	4

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55	Bloch-Kohn and Wannier-Kohn functions in one dimension. <i>Journal of Physics Condensed Matter</i> , 2003, 15, 6701-6714.	0.7	9
56	Effective conductivity of two-dimensional electrons in heterostructures with nonuniform doping. <i>Physical Review B</i> , 2002, 65, .	1.1	1
57	Collective and single-particle excitations in coupled quantum wires in magnetic fields. <i>Physical Review B</i> , 2002, 65, .	1.1	4
58	Raman spectra of a two-dimensional electron gas in narrow-gap semiconductor quantum wells in magnetic fields: Spin-flip and anisotropic effects. <i>Physical Review B</i> , 2002, 66, .	1.1	3
59	Channel magnetotransport of surface electrons on superfluid helium. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 12, 950-952.	1.3	2
60	Fast electron relaxation times in coupled double quantum well structures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 13, 794-797.	1.3	2
61	High-frequency magnetoconductivity of electrons in non-uniform heterostructures. <i>Solid State Communications</i> , 2002, 122, 89-93.	0.9	2
62	Inelastic light scattering spectra due to coupled plasmon modes in parallel quantum wires. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 6421-6432.	0.7	3
63	Intrasubband and intersubband electron relaxation in semiconductor quantum wire structures. <i>Physical Review B</i> , 2001, 63, .	1.1	7
64	Quantum interference effects on the conductance of a finite antidot array in a quantum wire. <i>Solid State Communications</i> , 2001, 117, 723-726.	0.9	0
65	High-energy transitions of shallow magnetodons in a GaAs/Al <sub>0.3</sub> Ga <sub>0.7</sub> As multiple quantum well. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 9761-9772.	0.7	6
66	Collective excitations and inelastic Coulomb scattering rate of coupled Q1D electron gases in semiconductor quantum wires. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000, 7, 541-544.	1.3	0
67	Tunneling-assisted acoustic-plasmon quasiparticle excitation resonances in coupled quasi-one-dimensional electron gases. <i>Physical Review B</i> , 2000, 61, 1704-1707.	1.1	7
68	Mode damping of layered <sup>3</sup> He- <sup>4</sup> He films over a solid substrate. <i>Physical Review B</i> , 2000, 62, 584-591.	1.1	1
69	Inelastic Coulomb scattering rates due to acoustic and optical plasmon modes in coupled quantum wires. <i>Physical Review B</i> , 2000, 61, 7564-7570.	1.1	11
70	Optically detected magnetophonon resonances in GaAs. <i>Physical Review B</i> , 1999, 60, 16513-16518.	1.1	19
71	Magnetopolaron effect in parabolic quantum wells in tilted magnetic fields. <i>Physical Review B</i> , 1999, 60, 8984-8991.	1.1	38
72	Effects of intersubband coupling on Friedel oscillations in quasi-two-dimensional electron systems. <i>Superlattices and Microstructures</i> , 1999, 25, 185-189.	1.4	2

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73	Resonant magnetopolaron effects in GaAs/AlGaAs multiple quantum well structures. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 161-165.	1.3	0
74	Effects of intersubband interaction on multisubband electron transport in single and double quantum wells. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 222-227.	1.3	3
75	Optical properties of $\hat{\Gamma}$ -doped semiconductors: Plasmon-phonon coupling and Raman spectra. Physica E: Low-Dimensional Systems and Nanostructures, 1998, 2, 267-271.	1.3	3
76	High-field cyclotron resonance and electron-phonon interaction in modulation-doped multiple quantum well structures. Physica B: Condensed Matter, 1998, 256-258, 292-299.	1.3	4
77	Polaron effect on $D^{\sim}$ centers in weakly polar semiconductors. Physical Review B, 1998, 57, 3900-3904.	1.1	23
78	Level-broadening effects on the inelastic light-scattering spectrum due to coupled plasmon-phonon modes in $\hat{\Gamma}$ -doped semiconductors. Physical Review B, 1998, 57, 2276-2279.	1.1	5
79	Interface effects on magnetopolarons in GaAs/Al <sub>x</sub> Ga <sub>1-x</sub> As quantum wells at high magnetic fields. Physical Review B, 1998, 58, 7822-7828.	1.1	6
80	Plasmon-phonon coupling in $\hat{\Gamma}$ -doped polar semiconductors. Physical Review B, 1997, 55, 1554-1562.	1.1	9
81	Capillary waves in $^4\text{He}$ solutions and the properties of localized electrons on the helium surface. Physical Review B, 1997, 55, R3370-R3373.	1.1	6
82	Resonant Magnetopolaron Effects due to Interface Phonons in GaAs/AlGaAs Multiple Quantum Well Structures. Physical Review Letters, 1997, 79, 3226-3229.	2.9	38
83	Damping of interfacial waves in $^3\text{He}/^4\text{He}$ layered mixtures. Physical Review B, 1997, 56, 8988-8996.	1.1	4
84	Quantum transport in $\hat{\Gamma}$ -doped quantum wells. Physical Review B, 1997, 55, 6708-6711.	1.1	5
85	Mobility of electrons in a quasi-one-dimensional conducting channel on the liquid helium surface in the presence of a magnetic field. Low Temperature Physics, 1997, 23, 487-491.	0.2	4
86	Mobility of electrons in a quasi-one-dimensional conducting channel on the liquid helium surface. European Physical Journal D, 1996, 46, 309-310.	0.4	0
87	Energy states and kinetic properties of electrons in a quasi-one-dimensional channel over liquid helium in the presence of a transverse magnetic field. European Physical Journal D, 1996, 46, 311-312.	0.4	1
88	Intersubband coupling and screening effects on the electron transport in a quasi-two-dimensional $\hat{\Gamma}$ -doped semiconductor system. Journal of Applied Physics, 1996, 80, 5809-5814.	1.1	38
89	Electron mobility in Si delta doped GaAs. Physica B: Condensed Matter, 1995, 211, 462-465.	1.3	10
90	Electron mobility in two coupled $\hat{\Gamma}$ layers. Physical Review B, 1995, 52, 11273-11276.	1.1	21

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91	Mobility of electrons in a quasi-one-dimensional conducting channel on the liquid-helium surface. Physical Review B, 1995, 51, 5977-5988.	1.1	50
92	Nonlinear transport of electrons in a quasi-one-dimensional channel on the liquid-helium surface. Physical Review B, 1995, 52, 15509-15516.	1.1	8
93	Multisubband electron transport in $\delta$ -doped semiconductor systems. Physical Review B, 1995, 52, 8363-8371.	1.1	61
94	Interband magneto-optical studies of resonant polaron coupling in CdTe/Cd $_{1-x}$ MnxTe quantum wells. Physical Review B, 1994, 50, 7596-7601.	1.1	10
95	Interface optical phonon mode coupling in GaAs/AlAs quantum wells at high magnetic fields. Physica B: Condensed Matter, 1993, 184, 289-292.	1.3	4
96	Electron optical-phonon coupling in GaAs/Al $_x$ Ga $_{1-x}$ As quantum wells due to interface, slab, and half-space modes. Physical Review B, 1993, 48, 4666-4674.	1.1	78
97	Polaron-cyclotron-resonance spectrum resulting from interface- and slab-phonon modes in a GaAs/AlAs quantum well. Physical Review B, 1993, 47, 10358-10374.	1.1	54
98	Screening of the electron-phonon interaction in quasi-one-dimensional semiconductor structures. Physical Review B, 1993, 48, 12016-12022.	1.1	37
99	Donor transition energy in GaAs superlattices in a magnetic field along the growth axis. Physical Review B, 1991, 44, 5692-5702.	1.1	84
100	Polaron energy and effective mass in a quantum well. Physical Review B, 1990, 42, 11063-11072.	1.1	99