

Kevin E Schmidt

List of Publications by Year in descending order

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158
papers

10,327
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36303
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100
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162
all docs

162
docs citations

162
times ranked

6680
citing authors

#	ARTICLE	IF	CITATIONS
1	The 1SO Pairing Gap in Neutron Matter. Condensed Matter, 2022, 7, 19.	1.8	9
2	A Metropolis Monte Carlo algorithm for merging single-particle diffraction intensities. Acta Crystallographica Section A: Foundations and Advances, 2022, 78, 200-211.	0.1	1
3	A new solution to the curved Ewald sphere problem for 3D image reconstruction in electron microscopy. Ultramicroscopy, 2021, 224, 113234.	1.9	9
4	Initial Design of a W-Band Superconducting Kinetic Inductance Qubit. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	9
5	Imaging by intensity interferometry of x-ray fluorescence at a compact x-ray free-electron laser. Physical Review A, 2021, 104, .	2.5	2
6	Zero-range Fermi gas along the BCS-BEC crossover. Physical Review A, 2019, 100, .	2.5	3
7	Vortices in low-density neutron matter and cold Fermi gases. Physical Review C, 2019, 100, .	2.9	5
8	Shape transform phasing of edgy nanocrystals. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, 239-259.	0.1	4
9	Reconstruction of Objects from Their Averaged Finite Crystal Diffraction Intensity., 2019, , .		0
10	Auxiliary field diffusion Monte Carlo calculations of light and medium-mass nuclei with local chiral interactions. Physical Review C, 2018, 97, .	2.9	65
11	Properties of Nuclei up to $\text{A} \approx 16$ using Local Chiral Interactions. Physical Review Letters, 2018, 120, 122502.	7.8	79
12	Quantum Monte Carlo formalism for dynamical pions and nucleons. Physical Review C, 2018, 98, .	2.9	8
13	Core structure of two-dimensional Fermi gas vortices in the BEC-BCS crossover region. Physical Review A, 2017, 95, .	2.5	10
14	Quantum Monte Carlo calculations of light nuclei with local chiral two- and three-nucleon interactions. Physical Review C, 2017, 96, .	2.9	62
15	Variational and Diffusion Monte Carlo Approaches to the Nuclear Few- and Many-Body Problem. Lecture Notes in Physics, 2017, , 401-476.	0.7	2
16	Vortex line in the unitary Fermi gas. Physical Review A, 2016, 93, .	2.5	7
17	Chiral Three-Nucleon Interactions in Light Nuclei, Neutron- A Scattering, and Neutron Matter. Physical Review Letters, 2016, 116, 062501.	7.8	189
18	Contact interaction in a unitary ultracold Fermi gas. Physical Review A, 2015, 92, .	2.5	11

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19	Quantum Monte Carlo methods for nuclear physics. <i>Reviews of Modern Physics</i> , 2015, 87, 1067-1118.	45.6	553
20	Data collection strategies for time-resolved X-ray free-electron laser diffraction, and 2-color methods. <i>Structural Dynamics</i> , 2015, 2, 041714.	2.3	7
21	Monte Carlo Calculations for Fermi Gases in the Unitary Limit with a Zero-Range Interaction. <i>Journal of Low Temperature Physics</i> , 2015, 180, 168-179.	1.4	10
22	From the lightest nuclei to the equation of state of asymmetric nuclear matter with realistic nuclear interactions. <i>Physical Review C</i> , 2014, 90, .	2.9	48
23	Expression, purification and crystallization of CTB-MPR, a candidate mucosal vaccine component against HIV-1. <i>IUCrJ</i> , 2014, 1, 305-317.	2.2	6
24	Serial time-resolved crystallography of photosystem II using a femtosecond X-ray laser. <i>Nature</i> , 2014, 513, 261-265.	27.8	403
25	Time-resolved protein nanocrystallography using an X-ray free-electron laser. <i>Optics Express</i> , 2012, 20, 2706.	3.4	219
26	Real-space imaginary-time propagators for non-local nucleon-nucleon potentials. <i>Physical Review C</i> , 2012, 86, .	2.9	12
27	Comparative study of three-nucleon potentials in nuclear matter. <i>Physical Review C</i> , 2012, 85, .	2.9	34
28	Determination of the finite temperature equation of state of dense matter. <i>Physics of Atomic Nuclei</i> , 2012, 75, 866-869.	0.4	2
29	Signal, noise, and resolution in correlated fluctuations from snapshot small-angle x-ray scattering. <i>Physical Review E</i> , 2011, 84, 011921.	2.1	49
30	Vortex lines distribution in inhomogeneous lattices. <i>Molecular Physics</i> , 2011, 109, 3037-3047.	1.7	0
31	Phasing of coherent femtosecond X-ray diffraction from size-varying nanocrystals. <i>Optics Express</i> , 2011, 19, 2866.	3.4	82
32	Density-dependent nucleon-nucleon interaction from Urbana UIX three-nucleon force. <i>Journal of Physics: Conference Series</i> , 2011, 336, 012016.	0.4	7
33	Recent progress on the accurate determination of the equation of state of neutron and nuclear matter. <i>Journal of Physics: Conference Series</i> , 2011, 336, 012014.	0.4	7
34	Femtosecond X-ray protein nanocrystallography. <i>Nature</i> , 2011, 470, 73-77.	27.8	1,771
35	Structure-factor analysis of femtosecond microdiffraction patterns from protein nanocrystals. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2011, 67, 131-140.	0.3	128
36	Publisher's Note: Signal, noise, and resolution in correlated fluctuations from snapshot small-angle x-ray scattering [Phys. Rev. E84, 011921 (2011)]. <i>Physical Review E</i> , 2011, 84, .	2.1	2

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37	Density-dependent nucleon-nucleon interaction from three-nucleon forces. Physical Review C, 2011, 83, .	2.9	49
38	Auxiliary-field quantum Monte Carlo method for strongly paired fermions. Physical Review A, 2011, 84, .	2.5	110
39	Publisher's Note: BEC-BCS crossover and universal relations in unitary Fermi gases [Phys. Rev. A83, 041601(R) (2011)]. Physical Review A, 2011, 83, .	2.5	1
40	BEC-BCS crossover and universal relations in unitary Fermi gases. Physical Review A, 2011, 83, .	2.5	62
41	Periodic box Fermi hypernetted chain calculations of neutron star crustal matter. Physical Review C, 2011, 84, .	2.9	10
42	Microscopic calculation of the equation of state of nuclear matter and neutron star structure. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 404, L35-L39.	3.3	60
43	Beyond small-angle x-ray scattering: Exploiting angular correlations. Physical Review B, 2010, 81, .	3.2	59
44	Structure of a single particle from scattering by many particles randomly oriented about an axis: toward structure solution without crystallization? New Journal of Physics, 2010, 12, 035014.	2.9	43
45	Femtosecond protein nanocrystallography—data analysis methods. Optics Express, 2010, 18, 5713.	3.4	192
46	Heavy-Light Fermion Mixtures at Unitarity. Physical Review Letters, 2009, 103, 060403.	7.8	53
47	Equation of state of low-density neutron matter, and the $\int_{-\infty}^{\infty} \frac{1}{\sqrt{1-x^2}} dx$ problem. Physical Review C, 2009, 80, .	2.9	56
48	Quantum Monte Carlo calculation of the equation of state of neutron matter. Physical Review C, 2009, 79, .	2.9	148
49	S-pairing in neutron matter: I. Correlated basis function theory. Nuclear Physics A, 2008, 803, 137-158.	1.5	15
50	Dose, exposure time and resolution in serial X-ray crystallography. Journal of Synchrotron Radiation, 2008, 15, 62-73.	2.4	42
51	Powder diffraction from a continuous microjet of submicrometer protein crystals. Journal of Synchrotron Radiation, 2008, 15, 593-599.	2.4	43
52	Monte Carlo approach to nuclei and nuclear matter. AIP Conference Proceedings, 2008, , .	0.4	5
53	Gas dynamic virtual nozzle for generation of microscopic droplet streams. Journal Physics D: Applied Physics, 2008, 41, 195505.	2.8	416
54	Pfaffian pairing and backflow wavefunctions for electronic structure quantum Monte Carlo methods. Physical Review B, 2008, 77, .	3.2	89

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55	Tomographic Femtosecond X-Ray Diffractive Imaging. Physical Review Letters, 2008, 101, 115507.	7.8	30
56	Equation of State of Superfluid Neutron Matter and the Calculation of the $S \approx 40$ Pairing Gap. Physical Review Letters, 2008, 101, 132501.	7.8	88
57	QUANTUM MONTE CARLO CALCULATIONS FOR NUCLEI AND NUCLEAR MATTER. , 2008, , .	0	
58	Auxiliary Field Diffusion Monte Carlo Calculation of Nuclei with $A \approx 40$ Tensor Interactions. Physical Review Letters, 2007, 99, 022507.	7.8	40
59	Quantum Monte Carlo Calculations of Symmetric Nuclear Matter. Physical Review Letters, 2007, 98, 102503.	7.8	44
60	QUANTUM MONTE CARLO CALCULATIONS OF SYMMETRIC NUCLEAR MATTER. , 2007, , .	0	
61	Pfaffian Pairing Wave Functions in Electronic-Structure Quantum Monte Carlo Simulations. Physical Review Letters, 2006, 96, 130201.	7.8	109
62	Auxiliary field diffusion Monte Carlo calculation of properties of oxygen isotopes. Physical Review C, 2006, 73, .	2.9	26
63	Green's function Monte Carlo method with exact imaginary-time propagation. Physical Review E, 2005, 71, 016707.	2.1	12
64	S01Superfluid Phase Transition in Neutron Matter with Realistic Nuclear Potentials and Modern Many-Body Theories. Physical Review Letters, 2005, 95, 192501.	7.8	55
65	Damped and thermal motion of laser-aligned hydrated macromolecule beams for diffraction. Journal of Chemical Physics, 2005, 123, 244304.	3.0	20
66	Quantum Monte Carlo studies of superfluid Fermi gases. Physical Review A, 2004, 70, .	2.5	189
67	Auxiliary field diffusion Monte Carlo calculation of ground state properties of neutron drops. Nuclear Physics A, 2004, 742, 255-268.	1.5	38
68	Neutron matter: a superfluid gas. Nuclear Physics A, 2004, 746, 215-221.	1.5	25
69	Superfluid Fermi Gases with Large Scattering Length. Physical Review Letters, 2003, 91, 050401.	7.8	482
70	Structure, Rotational Dynamics, and Superfluidity of Small OCS-Doped He Clusters. Physical Review Letters, 2003, 90, 143401.	7.8	111
71	Spin-orbit induced backflow in neutron matter with auxiliary field diffusion Monte Carlo method. Physical Review C, 2003, 67, .	2.9	15
72	Neutron matter at zero temperature with an auxiliary field diffusion Monte Carlo method. Physical Review C, 2003, 68, .	2.9	78

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73	HF Dimer in Small Helium Clusters: Interchange-Tunneling Dynamics in a Quantum Environment. Physical Review Letters, 2002, 88, 123401.	7.8	22
74	Electronic structures of polar and nonpolar GaN surfaces. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 88, 40-46.	3.5	33
75	QUANTUM MONTE CARLO FOR NUCLEAR ASTROPHYSICS. , 2002, , .	0	
76	Fermi hypernetted chain calculations in a periodic box. Nuclear Physics A, 2001, 690, 456-470.	1.5	22
77	A CONSTRAINED PATH MONTE CARLO METHOD FOR NUCLEON SYSTEMS. International Journal of Modern Physics B, 2001, 15, 1510-1518.	2.0	2
78	Relative stabilities of the two isomers of the methanol-water dimer: The effects of the internal rotations of the hydroxyl and methyl groups of methanol. Journal of Chemical Physics, 2001, 114, 10294-10299.	3.0	14
79	Spin Susceptibility of Neutron Matter at Zero Temperature. Physical Review Letters, 2001, 87, .	7.8	116
80	NUCLEAR MATTER WITH THE AUXILIARY FIELD DIFFUSION MONTE CARLO METHOD. , 2001, , .	1	
81	A new quantum Monte Carlo method for nucleon systems. Progress in Particle and Nuclear Physics, 2000, 44, 63-73.	14.4	6
82	Constraint dynamics for quantum Monte Carlo calculations. Journal of Chemical Physics, 2000, 113, 44-47.	3.0	17
83	A path integral ground state method. Journal of Chemical Physics, 2000, 113, 1366-1371.	3.0	185
84	A CONSTRAINED PATH MONTE CARLO METHOD FOR NUCLEON SYSTEMS. , 2000, , .	0	
85	First-principles local-orbital calculation of the structural and electronic properties of ordered and random alloys of GaN and AlN. Journal of Physics Condensed Matter, 1999, 11, 2351-2361.	1.8	17
86	Variational methods for He using a modern He-He potential. Physical Review B, 1999, 60, 12342-12348.	3.2	13
87	From atomic helium to nuclear matter. Nuclear Physics A, 1999, 649, 14-20.	1.5	0
88	An Isotropic Hopping Model for Singly Charged Xe Clusters. Journal of Physical Chemistry A, 1998, 102, 1615-1624.	2.5	4
89	Ab initio calculation of the stoichiometry and structure of the (0001) surfaces of GaN and AlN. Physical Review B, 1998, 57, 15360-15371.	3.2	85
90	First-principles local-orbital study of the boron-induced reconstruction of Si(001). Physical Review B, 1998, 57, 9745-9756.	3.2	19

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91	Coherent State Wave Function for Systems with Spin-Dependent Correlations. Physical Review Letters, 1997, 78, 1846-1849.	7.8	3
92	Theoretical study of the Coulombic explosion in doubly charged Xe clusters. Journal of Chemical Physics, 1997, 107, 9894-9898.	3.0	2
93	Stoichiometry and Structure of Polar Group-III Nitride Semiconductor Surfaces. Materials Research Society Symposia Proceedings, 1997, 492, 67.	0.1	1
94	Possible equivalence of Feynman's backflow and spin-dependent correlations. Physical Review B, 1997, 55, 5647-5650.	3.2	9
95	Multipole Ewald sums for the fast multipole method. Journal of Statistical Physics, 1997, 89, 411-424.	1.2	14
96	Model fermion Monte Carlo with correlated pairs. II. Journal of Statistical Physics, 1997, 89, 425-443.	1.2	10
97	Magnetic Order in Two-Dimensional Arrays of Nanometer-Sized Superparamagnets. Physical Review Letters, 1996, 76, 1541-1544.	7.8	104
98	A study of spin dependent correlations and Feynmanâ€™s backflow. European Physical Journal D, 1996, 46, 267-268.	0.4	1
99	Coherent state wavefunction for spin-dependent systems. European Physical Journal D, 1996, 46, 269-270.	0.4	1
100	ArnHF ($n = 1\text{--}4$) van der Waals clusters: a quantum Monte Carlo study of ground state energies, structures and HF vibrational frequency shifts. Chemical Physics Letters, 1996, 252, 23-32.	2.6	49
101	High-accuracy Trotter-formula method for path integrals. Physical Review E, 1995, 51, 5495-5498.	2.1	34
102	Isomer dependence of HF vibrational frequency shift for ArnHF ($n=4\text{--}14$) van der Waals clusters: Quantum five-dimensional bound state calculations. Journal of Chemical Physics, 1995, 103, 1829-1841.	3.0	59
103	Enhanced superparamagnetism in two-dimensional arrays of nanometer-sized Fe islands. Applied Physics Letters, 1995, 67, 2878-2880.	3.3	16
104	ArnH ₂ O ($n=1\text{--}14$) van der Waals clusters: Size evolution of equilibrium structures. Journal of Chemical Physics, 1994, 101, 8310-8320.	3.0	17
105	Equilibrium structures and approximate HF vibrational red shifts for ArnHF ($n=1\text{--}14$) van der Waals clusters. Journal of Chemical Physics, 1994, 100, 7166-7181.	3.0	67
106	Size dependence of HF vibrational frequency shift for ArnHF ($n=1\text{--}14$) van der Waals clusters via quantum five-dimensional bound state calculations. Journal of Chemical Physics, 1994, 101, 10181-10184.	3.0	37
107	HF vibrational redshift for the icosahedral Ar ₁₂ H ₁₂ van der Waals cluster is the same as in an Ar matrix: Quantum five-dimensional bound state calculations. Journal of Chemical Physics, 1994, 101, 6359-6361.	3.0	40
108	Theoretical investigation of alkali-metal doping in Si clathrates. Physical Review B, 1994, 50, 17001-17008.	3.2	88

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109	Conformation of Amine-Modified DNA: 2-Aminofluorene- and 2-(Acetylamino)fluorene-Modified Deoxydinucleoside Monophosphates with All Possible Nearest Neighbors. A Comparison of Search and Optimization Methods. <i>Chemical Research in Toxicology</i> , 1994, 7, 239-253.	3.3	21
110	Green's Function Monte Carlo. <i>Computers in Physics</i> , 1992, 6, 192-197.	0.5	13
111	Monte Carlo techniques for quantum fluids, solids and droplets. <i>Topics in Applied Physics</i> , 1992, , 205-248.	0.8	10
112	Optimization of He4 wave functions for the liquid and solid phases. <i>Physical Review B</i> , 1992, 46, 5442-5447.	3.2	32
113	Monte Carlo calculation of interaction energies for van der Waals complexes. <i>Molecular Physics</i> , 1992, 77, 477-489.	1.7	2
114	He2Cl2 and He3Cl2 van der Waals clusters: A quantum Monte Carlo study. <i>Journal of Chemical Physics</i> , 1992, 97, 6472-6480.	3.0	62
115	Quantum simulation of the electronic structure of diatomic molecules. <i>Journal of Chemical Physics</i> , 1992, 97, 2600-2608.	3.0	20
116	Stability and motion of intrinsic localized modes in nonlinear periodic lattices. <i>Physical Review B</i> , 1992, 46, 6161-6168.	3.2	167
117	Correlated Monte Carlo wave functions for some cations and anions of the first row atoms. <i>Journal of Chemical Physics</i> , 1992, 97, 3382-3385.	3.0	58
118	Recent developments in the Monte Carlo simulation of condensed matter. <i>Topics in Applied Physics</i> , 1992, , 385-410.	0.8	1
119	Monte Carlo Calculations of Atoms, Molecules, and Ions. , 1992, , 305-314.	0	
120	Monte Carlo Techniques for Quantum Fluids, Solids and Droplets. <i>Topics in Applied Physics</i> , 1992, , 205-248.	0.8	2
121	Applications of simulated annealing to the conformational analysis of flexible molecules. <i>Journal of Computational Chemistry</i> , 1991, 12, 342-349.	3.3	89
122	Implementing the fast multipole method in three dimensions. <i>Journal of Statistical Physics</i> , 1991, 63, 1223-1235.	1.2	205
123	Accurate First Principles Calculation of Many-Body Interactions. <i>The International Journal of Supercomputer Applications</i> , 1991, 5, 57-71.	0.5	7
124	The Effects of Substituent Groups and Structure on the Electronic Hyperpolarizability of Aromatic Liquid Crystal Cores. <i>Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics</i> , 1990, 179, 335-348.	0.3	3
125	Correlated Monte Carlo wave functions for the atoms He through Ne. <i>Journal of Chemical Physics</i> , 1990, 93, 4172-4178.	3.0	286
126	Model Hamiltonians for atomic and molecular systems. <i>Journal of Chemical Physics</i> , 1989, 90, 1003-1006.	3.0	14

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127	â€œInevitableâ€™ nonstrange dibaryon. Physical Review C, 1989, 39, 1889-1895.	2.9	95
128	The application of simulated annealing to problems of molecular mechanics. International Journal of Quantum Chemistry, 1988, 34, 611-617.	2.0	19
129	Conformational Analysis of Flexible Molecules: Location of the Global Minimum Energy Conformation by the Simulated Annealing Method. Tetrahedron Letters, 1988, 29, 4373-4376.	1.4	121
130	The importance of nucleon substructure in nuclear ground states. Nuclear Physics A, 1988, 481, 621-667.	1.5	36
131	Ground-state properties of the free surface of liquidHe4. Physical Review B, 1988, 38, 2879-2882.	3.2	25
132	Microscopic calculations of He5 with realistic interactions. Physical Review C, 1987, 36, 27-31.	2.9	19
133	Strangeness-3dibaryons. Physical Review Letters, 1987, 59, 627-629.	7.8	91
134	Variational and green's function Monte Carlo calculations of few-body systems. , 1987, , 363-407.		8
135	Few- and Many-Fermion Problems. Topics in Current Physics, 1987, , 125-143.	0.5	5
136	Monte Carlo calculations of atoms and molecules. Journal of Statistical Physics, 1986, 43, 1027-1041.	1.2	31
137	The domain Greenâ€™s function method. Journal of Chemical Physics, 1986, 85, 2868-2874.	3.0	37
138	Comment on "High-Momentum-Transfer Inelastic Neutron Scattering from Liquid Helium-3". Physical Review Letters, 1985, 55, 2367-2367.	7.8	63
139	The solution of the Schrödinger equation in imaginary time by Greenâ€™s function Monte Carlo. The rigorous sampling of the attractive Coulomb singularity. Journal of Chemical Physics, 1985, 83, 4668-4672.	3.0	18
140	Ground State of the Extended One-Dimensional Hubbard Model: A Green's Function Monte Carlo Algorithm. Physical Review Letters, 1984, 53, 1191-1194.	7.8	20
141	Application of Green's function Monte Carlo to one-dimensional lattice fermions. , 1984, , 391-397.		0
142	Few-and Many-Fermion Problems. Topics in Current Physics, 1984, , 125-143.	0.5	22
143	Droplets of 3He Atoms. , 1984, , 33-39.		2
144	Can Monte Carlo Methods Achieve Chemical Accuracy?. , 1984, , 59-70.		0

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145	Using Renormalization-Group Ideas in Monte Carlo Sampling. <i>Physical Review Letters</i> , 1983, 51, 2175-2178.	7.8	59	
146	Greenâ€™s function Monte Carlo for few fermion problems. <i>Journal of Chemical Physics</i> , 1982, 77, 5562-5572.	3.0	93	
147	Single-Particle Spectrum and Specific Heat of LiquidHe3. <i>Physical Review Letters</i> , 1982, 48, 878-881.	7.8	43	
148	A new look at correlation energy in atomic and molecular systems. II. The application of the Greenâ€™s function Monte Carlo method to LiH. <i>Journal of Chemical Physics</i> , 1982, 77, 349-355.	3.0	197	
149	Variational Monte Carlo Calculations for Spin-Aligned Deuterium. <i>Physical Review Letters</i> , 1982, 48, 1675-1677.	7.8	20	
150	Monte Carlo variational study of Be: A survey of correlated wave functions. <i>Journal of Chemical Physics</i> , 1982, 76, 1064-1067.	3.0	40	
151	Exact ground states of few-body nuclei with and without three-body forces. <i>Physical Review C</i> , 1982, 25, 1111-1113.	2.9	36	
152	Structure of the Ground State of a Fermion Fluid. <i>Physical Review Letters</i> , 1981, 47, 807-810.	7.8	157	
153	Green's Function Monte Carlo Method for LiquidHe3. <i>Physical Review Letters</i> , 1981, 46, 728-731.	7.8	139	
154	Variational calculations of the excited states of liquidHe4. <i>Physical Review B</i> , 1980, 21, 3945-3955.	3.2	4	
155	Variational Monte Carlo Calculations of LiquidHe4with Three-Body Correlations. <i>Physical Review Letters</i> , 1980, 45, 573-576.	7.8	86	
156	New variational wave function for liquidHe3. <i>Physical Review B</i> , 1979, 19, 2504-2519.	3.2	53	
157	Improved variational wave functions for simple quantum liquids. <i>Nuclear Physics A</i> , 1979, 328, 240-252.	1.5	12	
158	Variational calculations of simple Bose systems. <i>Physical Review A</i> , 1977, 15, 2486-2495.	2.5	38	