Kevin E Schmidt

List of Publications by Year
in descending order

158	10,327	36303	32842
papers	citations	51 h-index	100 g-index

162	162	162	6680
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Femtosecond X-ray protein nanocrystallography. Nature, 2011, 470, 73-77.	27.8	1,771
2	Quantum Monte Carlo methods for nuclear physics. Reviews of Modern Physics, 2015, 87, 1067-1118.	45.6	553
3	Superfluid Fermi Gases with Large Scattering Length. Physical Review Letters, 2003, 91, 050401.	7.8	482
4	Gas dynamic virtual nozzle for generation of microscopic droplet streams. Journal Physics D: Applied Physics, 2008, 41, 195505.	2.8	416
5	Serial time-resolved crystallography of photosystem II using a femtosecond X-ray laser. Nature, 2014, 513, 261-265.	27.8	403
6	Correlated Monte Carlo wave functions for the atoms He through Ne. Journal of Chemical Physics, 1990, 93, 4172-4178.	3.0	286
7	Time-resolved protein nanocrystallography using an X-ray free-electron laser. Optics Express, 2012, 20, 2706.	3.4	219
8	Implementing the fast multipole method in three dimensions. Journal of Statistical Physics, 1991, 63, 1223-1235.	1.2	205
9	A new look at correlation energy in atomic and molecular systems. II. The application of the Greenâ€™s function Monte Carlo method to LiH. Journal of Chemical Physics, 1982, 77, 349-355.	3.0	197
10	Femtosecond protein nanocrystallographyâ€”data analysis methods. Optics Express, 2010, 18, 5713.	3.4	192
11	Quantum Monte Carlo studies of superfluid Fermi gases. Physical Review A, 2004, 70, .	2.5	189
12	Chiral Three-Nucleon Interactions in Light Nuclei, Neutron-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>Scattering, and Neutron Matter. Physical Review Letters, 2016, 116, 062501.	7.8	189
13	A path integral ground state method. Journal of Chemical Physics, 2000, 113, 1366-1371.	3.0	185
14	Stability and motion of intrinsic localized modes in nonlinear periodic lattices. Physical Review B, 1992, 46, 6161-6168.	3.2	167
15	Structure of the Ground State of a Fermion Fluid. Physical Review Letters, 1981, 47, 807-810.	7.8	157
16	Quantum Monte Carlo calculation of the equation of state of neutron matter. Physical Review C, 2009, 79, .	2.9	148
17	Green's Function Monte Carlo Method for LiquidHe3. Physical Review Letters, 1981, 46, 728-731.	7.8	139
18	Structure-factor analysis of femtosecond microdiffraction patterns from protein nanocrystals. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, 131-140.	0.3	128

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19	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
20	Spin Susceptibility of Neutron Matter at Zero Temperature. Physical Review Letters, 2001, 87, .	7.8	116
21	Structure, Rotational Dynamics, and Superfluidity of Small OCS-Doped He Clusters. Physical Review Letters, 2003, 90, 143401.	7.8	111
22	Auxiliary-field quantum Monte Carlo method for strongly paired fermions. Physical Review A, 2011, 84, .	2.5	110
23	Pfaffian Pairing Wave Functions in Electronic-Structure Quantum MonteÂCarlo Simulations. Physical Review Letters, 2006, 96, 130201.	7.8	109
24	Magnetic Order in Two-Dimensional Arrays of Nanometer-Sized Superparamagnets. Physical Review Letters, 1996, 76, 1541-1544.	7.8	104
25	â€˜â€˜Inevitableâ€™â€™ nonstrange dibaryon. Physical Review C, 1989, 39, 1889-1895.	2.9	95
26	Greenâ€™s function Monte Carlo for few fermion problems. Journal of Chemical Physics, 1982, 77, 5562-5572.	3.0	93
27	Strangeness-3dibaryons. Physical Review Letters, 1987, 59, 627-629.	7.8	91
28	Applications of simulated annealing to the conformational analysis of flexible molecules. Journal of Computational Chemistry, 1991, 12, 342-349.	3.3	89
29	Pfaffian pairing and backflow wavefunctions for electronic structure quantum Monte Carlo methods. Physical Review B, 2008, 77, .	3.2	89
30	Theoretical investigation of alkali-metal doping in Si clathrates. Physical Review B, 1994, 50, 17001-17008.	3.2	88
31	Equation of State of Superfluid Neutron Matter and the Calculation of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi>S</mml:mi><mml:mn>0</mml:mn><mml:none /><mml:mprescripts /><mml:none /><mml:mn>1</mml:mn></mml:mmultiscripts></mml:math>Pairing Gap. Physical Review Letters, 2008, 101, 132501.	7.8	88
32	Variational Monte Carlo Calculations of LiquidHe4with Three-Body Correlations. Physical Review Letters, 1980, 45, 573-576.	7.8	86
33	Ab initiocalculation of the stoichiometry and structure of the (0001) surfaces of GaN and AlN. Physical Review B, 1998, 57, 15360-15371.	3.2	85
34	Phasing of coherent femtosecond X-ray diffraction from size-varying nanocrystals. Optics Express, 2011, 19, 2866.	3.4	82
35	Properties of Nuclei up to <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>A</mml:mi><mml:mo>=</mml:mo><mml:mn>16</mml:mn></mml:math> using Local Chiral Interactions. Physical Review Letters, 2018, 120, 122502.	7.8	79
36	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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37	Equilibrium structures and approximate HF vibrational red shifts for ArnHF (n=1â€“14) van der Waals clusters. Journal of Chemical Physics, 1994, 100, 7166-7181.	3.0	67
38	Auxiliary field diffusion Monte Carlo calculations of light and medium-mass nuclei with local chiral interactions. Physical Review C, 2018, 97, .	2.9	65
39	Comment on "High-Momentum-Transfer Inelastic Neutron Scattering from Liquid Helium-3". Physical Review Letters, 1985, 55, 2367-2367.	7.8	63
40	He2Cl2 and He3Cl2 van der Waals clusters: A quantum Monte Carlo study. Journal of Chemical Physics, 1992, 97, 6472-6480.	3.0	62
41	BEC-BCS crossover and universal relations in unitary Fermi gases. Physical Review A, 2011, 83, .	2.5	62
42	Quantum Monte Carlo calculations of light nuclei with local chiral two- and three-nucleon interactions. Physical Review C, 2017, 96, .	2.9	62
43	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
44	Using Renormalization-Group Ideas in Monte Carlo Sampling. Physical Review Letters, 1983, 51, 2175-2178.	7.8	59
45	Isomer dependence of HF vibrational frequency shift for ArnHF (n=4â€“14) van der Waals clusters: Quantum fiveâ€dimensional bound state calculations. Journal of Chemical Physics, 1995, 103, 1829-1841.	3.0	59
46	Beyond small-angle x-ray scattering: Exploiting angular correlations. Physical Review B, 2010, 81, .	3.2	59
47	Correlated Monte Carlo wave functions for some cations and anions of the first row atoms. Journal of Chemical Physics, 1992, 97, 3382-3385.	3.0	58
48	Equation of state of low-density neutron matter, and the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow /><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msup><mml:msub><mml:mi>S</mml:mi><mml:mrow><mml:mn>0</mml:mn><mml:m gap. Physical Review C, 2009, 80, .	2.9	56
49	S01Superfluid Phase Transition in Neutron Matter with Realistic Nuclear Potentials and Modern Many-Body Theories. Physical Review Letters, 2005, 95, 192501.	7.8	55
50	New variational wave function for liquidHe3. Physical Review B, 1979, 19, 2504-2519.	3.2	53
51	Heavy-Light Fermion Mixtures at Unitarity. Physical Review Letters, 2009, 103, 060403.	7.8	53
52	ArnHF (n = 1â€“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
53	Signal, noise, and resolution in correlated fluctuations from snapshot small-angle x-ray scattering. Physical Review E, 2011, 84, 011921.	2.1	49
54	Density-dependent nucleon-nucleon interaction from three-nucleon forces. Physical Review C, 2011, 83, .	2.9	49

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55	From the lightest nuclei to the equation of state of asymmetric nuclear matter with realistic nuclear interactions. Physical Review C, 2014, 90, .	2.9	48
56	Quantum MonteÂCarlo Calculations of Symmetric Nuclear Matter. Physical Review Letters, 2007, 98, 102503.	7.8	44
57	Single-Particle Spectrum and Specific Heat of LiquidHe3. Physical Review Letters, 1982, 48, 878-881.	7.8	43
58	Powder diffraction from a continuous microjet of submicrometer protein crystals. Journal of Synchrotron Radiation, 2008, 15, 593-599.	2.4	43
59	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
60	Dose, exposure time and resolution in serial X-ray crystallography. Journal of Synchrotron Radiation, 2008, 15, 62-73.	2.4	42
61	Monte Carlo variational study of Be: A survey of correlated wave functions. Journal of Chemical Physics, 1982, 76, 1064-1067.	3.0	40
62	HF vibrational redshift for the icosahedral Ar12HF van der Waals cluster is the same as in an Ar matrix: Quantum fiveâ€dimensional bound state calculations. Journal of Chemical Physics, 1994, 101, 6359-6361.	3.0	40
63	Auxiliary Field Diffusion MonteÂCarlo Calculation of Nuclei with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>A</mml:mi><mml:mo>â‰</mml:mo><mml:mn>40</mml:mn></mml:math>with Tensor Interactions. Physical Review Letters, 2007, 99, 022507.	7.8	40
64	Variational calculations of simple Bose systems. Physical Review A, 1977, 15, 2486-2495.	2.5	38
65	Auxiliary field diffusion Monte Carlo calculation of ground state properties of neutron drops. Nuclear Physics A, 2004, 742, 255-268.	1.5	38
66	The domain Greenâ€™s function method. Journal of Chemical Physics, 1986, 85, 2868-2874.	3.0	37
67	Size dependence of HF vibrational frequency shift for ArnHF (n=1â€“14) van der Waals clusters via quantum fiveâ€dimensional bound state calculations. Journal of Chemical Physics, 1994, 101, 10181-10184.	3.0	37
68	Exact ground states of few-body nuclei with and without three-body forces. Physical Review C, 1982, 25, 1111-1113.	2.9	36
69	The importance of nucleon substructure in nuclear ground states. Nuclear Physics A, 1988, 481, 621-667.	1.5	36
70	High-accuracy Trotter-formula method for path integrals. Physical Review E, 1995, 51, 5495-5498.	2.1	34
71	Comparative study of three-nucleon potentials in nuclear matter. Physical Review C, 2012, 85, .	2.9	34
72	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

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73	Optimization ofHe4wave functions for the liquid and solid phases. Physical Review B, 1992, 46, 5442-5447.	3.2	32
74	Monte Carlo calculations of atoms and molecules. Journal of Statistical Physics, 1986, 43, 1027-1041.	1.2	31
75	Tomographic Femtosecond X-Ray Diffractive Imaging. Physical Review Letters, 2008, 101, 115507.	7.8	30
76	Auxiliary field diffusion Monte Carlo calculation of properties of oxygen isotopes. Physical Review C, 2006, 73, .	2.9	26
77	Ground-state properties of the free surface of liquidHe4. Physical Review B, 1988, 38, 2879-2882.	3.2	25
78	Neutron matter: a superfluid gas. Nuclear Physics A, 2004, 746, 215-221.	1.5	25
79	Fermi hypernetted chain calculations in a periodic box. Nuclear Physics A, 2001, 690, 456-470.	1.5	22
80	HF Dimer in Small Helium Clusters: Interchange-Tunneling Dynamics in a Quantum Environment. Physical Review Letters, 2002, 88, 123401.	7.8	22
81	Few-and Many-Fermion Problems. Topics in Current Physics, 1984, , 125-143.	0.5	22
82	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. Chemical Research in Toxicology, 1994, 7, 239-253.	3.3	21
83	Variational Monte Carlo Calculations for Spin-Aligned Deuterium. Physical Review Letters, 1982, 48, 1675-1677.	7.8	20
84	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
85	Quantum simulation of the electronic structure of diatomic molecules. Journal of Chemical Physics, 1992, 97, 2600-2608.	3.0	20
86	Damped and thermal motion of laser-aligned hydrated macromolecule beams for diffraction. Journal of Chemical Physics, 2005, 123, 244304.	3.0	20
87	Microscopic calculations ofHe5with realistic interactions. Physical Review C, 1987, 36, 27-31.	2.9	19
88	The application of simulated annealing to problems of molecular mechanics. International Journal of Quantum Chemistry, 1988, 34, 611-617.	2.0	19
89	First-principles local-orbital study of the boron-induced reconstruction of Si(001). Physical Review B, 1998, 57, 9745-9756.	3.2	19
90	The solution of the SchrÃ¶dinger 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

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91	ArnH2O (n=1â€“14) van der Waals clusters: Size evolution of equilibrium structures. Journal of Chemical Physics, 1994, 101, 8310-8320.	3.0	17
92	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
93	Constraint dynamics for quantum Monte Carlo calculations. Journal of Chemical Physics, 2000, 113, 44-47.	3.0	17
94	Enhanced superparamagnetism in twoâ€dimensional arrays of nanometerâ€sized Fe islands. Applied Physics Letters, 1995, 67, 2878-2880.	3.3	16
95	Spin-orbit induced backflow in neutron matter with auxiliary field diffusion Monte Carlo method. Physical Review C, 2003, 67, .	2.9	15
96	S-pairing in neutron matter: I. Correlated basis function theory. Nuclear Physics A, 2008, 803, 137-158.	1.5	15
97	Model Hamiltonians for atomic and molecular systems. Journal of Chemical Physics, 1989, 90, 1003-1006.	3.0	14
98	Multipole Ewald sums for the fast multipole method. Journal of Statistical Physics, 1997, 89, 411-424.	1.2	14
99	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
100	Green's Function Monte Carlo. Computers in Physics, 1992, 6, 192-197.	0.5	13
101	Variational methods for4Heusing a modern He-He potential. Physical Review B, 1999, 60, 12342-12348.	3.2	13
102	Improved variational wave functions for simple quantum liquids. Nuclear Physics A, 1979, 328, 240-252.	1.5	12
103	Greenâ€™s function Monte Carlo method with exact imaginary-time propagation. Physical Review E, 2005, 71, 016707.	2.1	12
104	Real-space imaginary-time propagators for non-local nucleon-nucleon potentials. Physical Review C, 2012, 86, .	2.9	12
105	Contact interaction in a unitary ultracold Fermi gas. Physical Review A, 2015, 92, .	2.5	11
106	Monte Carlo techniques for quantum fluids, solids and droplets. Topics in Applied Physics, 1992, , 205-248.	0.8	10
107	Model fermion Monte Carlo with correlated pairs. II. Journal of Statistical Physics, 1997, 89, 425-443.	1.2	10
108	Periodic box Fermi hypernetted chain calculations of neutron star crustal matter. Physical Review C, 2011, 84, .	2.9	10

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109	Monte Carlo Calculations for Fermi Gases in the Unitary Limit with a Zero-Range Interaction. Journal of Low Temperature Physics, 2015, 180, 168-179.	1.4	10
110	Core structure of two-dimensional Fermi gas vortices in the BEC-BCS crossover region. Physical Review A, 2017, 95, .	2.5	10
111	Possible equivalence of Feynman's backflow and spin-dependent correlations. Physical Review B, 1997, 55, 5647-5650.	3.2	9
112	A new solution to the curved Ewald sphere problem for 3D image reconstruction in electron microscopy. Ultramicroscopy, 2021, 224, 113234.	1.9	9
113	Initial Design of a W-Band Superconducting Kinetic Inductance Qubit. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	9
114	The 1S0 Pairing Gap in Neutron Matter. Condensed Matter, 2022, 7, 19.	1.8	9
115	Variational and green's function Monte Carlo calculations of few-body systems. , 1987, , 363-407.		8
116	Quantum Monte Carlo formalism for dynamical pions and nucleons. Physical Review C, 2018, 98, .	2.9	8
117	Accurate First Principles Calculation of Many-Body Interactions. The International Journal of Supercomputer Applications, 1991, 5, 57-71.	0.5	7
118	Density-dependent nucleon-nucleon interaction from Urbana UIX three-nucleon force. Journal of Physics: Conference Series, 2011, 336, 012016.	0.4	7
119	Recent progress on the accurate determination of the equation of state of neutron and nuclear matter. Journal of Physics: Conference Series, 2011, 336, 012014.	0.4	7
120	Data collection strategies for time-resolved X-ray free-electron laser diffraction, and 2-color methods. Structural Dynamics, 2015, 2, 041714.	2.3	7
121	Vortex line in the unitary Fermi gas. Physical Review A, 2016, 93, .	2.5	7
122	A new quantum Monte Carlo method for nucleon systems. Progress in Particle and Nuclear Physics, 2000, 44, 63-73.	14.4	6
123	Expression, purification and crystallization of CTB-MPR, a candidate mucosal vaccine component against HIV-1. IUCrJ, 2014, 1, 305-317.	2.2	6
124	Monte Carlo approach to nuclei and nuclear matter. AIP Conference Proceedings, 2008, , .	0.4	5
125	Vortices in low-density neutron matter and cold Fermi gases. Physical Review C, 2019, 100, .	2.9	5
126	Few- and Many-Fermion Problems. Topics in Current Physics, 1987, , 125-143.	0.5	5

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127	Variational calculations of the excited states of liquidHe4. Physical Review B, 1980, 21, 3945-3955.	3.2	4
128	An Isotropic Hopping Model for Singly Charged Xe Clusters. Journal of Physical Chemistry A, 1998, 102, 1615-1624.	2.5	4
129	Shape transform phasing of edgy nanocrystals. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, 239-259.	0.1	4
130	The Effects of Substituent Groups and Structure on the Electronic Hyperpolarizability of Aromatic Liquid Crystal Cores. Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics, 1990, 179, 335-348.	0.3	3
131	Coherent State Wave Function for Systems with Spin-Dependent Correlations. Physical Review Letters, 1997, 78, 1846-1849.	7.8	3
132	Zero-range Fermi gas along the BCS-BEC crossover. Physical Review A, 2019, 100, .	2.5	3
133	Monte Carlo calculation of interaction energies for van der Waals complexes. Molecular Physics, 1992, 77, 477-489.	1.7	2
134	Theoretical study of the Coulombic explosion in doubly charged Xe clusters. Journal of Chemical Physics, 1997, 107, 9894-9898.	3.0	2
135	A CONSTRAINED PATH MONTE CARLO METHOD FOR NUCLEON SYSTEMS. International Journal of Modern Physics B, 2001, 15, 1510-1518.	2.0	2
136	Publisher's Note: Signal, noise, and resolution in correlated fluctuations from snapshot small-angle x-ray scattering [Phys. Rev. E84, 011921 (2011)]. Physical Review E, 2011, 84, .	2.1	2
137	Determination of the finite temperature equation of state of dense matter. Physics of Atomic Nuclei, 2012, 75, 866-869.	0.4	2
138	Imaging by intensity interferometry of x-ray fluorescence at a compact x-ray free-electron laser. Physical Review A, 2021, 104, .	2.5	2
139	Variational and Diffusion Monte Carlo Approaches to the Nuclear Few- and Many-Body Problem. Lecture Notes in Physics, 2017, , 401-476.	0.7	2
140	Droplets of 3He Atoms. , 1984, , 33-39.		2
141	Monte Carlo Techniques for Quantum Fluids, Solids and Droplets. Topics in Applied Physics, 1992, , 205-248.	0.8	2
142	A study of spin dependent correlations and Feynmanâ€™s backflow. European Physical Journal D, 1996, 46, 267-268.	0.4	1
143	Coherent state wavefunction for spin-dependent systems. European Physical Journal D, 1996, 46, 269-270.	0.4	1
144	Stoichiometry and Structure of Polar Group-III Nitride Semiconductor Surfaces. Materials Research Society Symposia Proceedings, 1997, 492, 67.	0.1	1

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145	Publisherâ€™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
146	Recent developments in the Monte Carlo simulation of condensed matter. Topics in Applied Physics, 1992, , 385-410.	0.8	1
147	NUCLEAR MATTER WITH THE AUXILIARY FIELD DIFFUSION MONTE CARLO METHOD. , 2001, , .		1
148	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
149	Application of Green's function Monte Carlo to one-dimensional lattice fermions. , 1984, , 391-397.		0
150	From atomic helium to nuclear matter. Nuclear Physics A, 1999, 649, 14-20.	1.5	0
151	Vortex lines distribution in inhomogeneous lattices. Molecular Physics, 2011, 109, 3037-3047.	1.7	0
152	Reconstruction of Objects from Their Averaged Finite Crystal Diffraction Intensity. , 2019, , .		0
153	A CONSTRAINED PATH MONTE CARLO METHOD FOR NUCLEON SYSTEMS. , 2000, , .		0
154	QUANTUM MONTE CARLO FOR NUCLEAR ASTROPHYSICS. , 2002, , .		0
155	QUANTUM MONTE CARLO CALCULATIONS OF SYMMETRIC NUCLEAR MATTER. , 2007, , .		0
156	QUANTUM MONTE CARLO CALCULATIONS FOR NUCLEI AND NUCLEAR MATTER. , 2008, , .		0
157	Can Monte Carlo Methods Achieve Chemical Accuracy?. , 1984, , 59-70.		0
158	Monte Carlo Calculations of Atoms, Molecules, and Ions. , 1992, , 305-314.		0