Masahiko Okumura

List of Publications by Year
in descending order

81	970	567281 15	477307 29
papers	citations	h-index	g-index

82	82	82	1056
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Construction of machine-learning Zr interatomic potentials for identifying the formation process of c-type dislocation loops. Computational Materials Science, 2022, 202, 110865.	3.0	7
2	Machine learning potentials of kaolinite based on the potential energy surfaces of GGA and meta-GGA density functional theory. Applied Clay Science, 2022, 228, 106596.	5.2	6
3	Machine learning potentials for tobermorite minerals. Computational Materials Science, 2021, 188, 110173.	3.0	15
4	Hydration structures of barium ions: Ab initio molecular dynamics simulations using the SCAN meta-GGA density functional and EXAFS spectroscopy studies. Chemical Physics Letters, 2021, 780, 138945.	2.6	5
5	Self-learning hybrid Monte Carlo: A first-principles approach. Physical Review B, 2020, 102, .	3.2	15
6	Self-learning Monte Carlo method with Behler-Parrinello neural networks. Physical Review B, 2020, 101, .	3.2	19
7	Development of the ReaxFF Methodology for Electrolyteâ€“Water Systems. Journal of Physical Chemistry A, 2019, 123, 2125-2141.	2.5	48
8	Radiocesium interaction with clay minerals: Theory and simulation advances Postâ€“Fukushima. Journal of Environmental Radioactivity, 2019, 210, 105809.	1.7	7
9	Radiocesium interaction with clay minerals: Theory and simulation advances Postâ€“Fukushima. Journal of Environmental Radioactivity, 2018, 189, 135-145.	1.7	60
10	Molecular dynamics simulations of cesium adsorption on illite nanoparticles. Journal of Colloid and Interface Science, 2017, 490, 608-620.	9.4	115
11	Transmutation effects on long-term Cs retention in phyllosilicate minerals from first principles. Physical Chemistry Chemical Physics, 2017, 19, 27007-27014.	2.8	4
12	Localization of cesium on montmorillonite surface investigated by frequency modulation atomic force microscopy. Surface Science, 2017, 665, 32-36.	1.9	14
13	Origin of 6-fold coordinated aluminum at (010)-type pyrophyllite edges. AIP Advances, 2017, 7, 055211.	1.3	6
14	Reply to ''Comments on Radiation-damage Resistance In Phyllosilicate Minerals from First Principles and Implications For Radiocesium and Strontium Retention in Soils''. Clays and Clay Minerals, 2017, 65, 371-375.	1.3	2
15	Radiation-Damage Resistance in Phyllosilicate Minerals From First Principles and Implications for Radiocesium and Strontium Retention in Soils. Clays and Clay Minerals, 2016, 64, 108-114.	1.3	6
16	Molecular Simulation of Cesium Adsorption at the Basal Surface of Phyllosilicate Minerals. Clays and Clay Minerals, 2016, 64, 389-400.	1.3	30
17	Superconductivity in repulsively interacting fermions on a diamond chain: Flat-band-induced pairing. Physical Review B, 2016, 94, .	3.2	61
18	Redistribution and export of contaminated sediment within eastern Fukushima Prefecture due to typhoon flooding. Earth Surface Processes and Landforms, 2016, 41, 1708-1726.	2.5	19

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19	Evaluation of ambient dose equivalent rates influenced by vertical and horizontal distribution of radioactive cesium in soil in Fukushima Prefecture. Journal of Environmental Radioactivity, 2016, 151, 38-49.	1.7	45
20	Mathematical Modeling of Radioactive Contaminants in the Fukushima Environment. Nuclear Science and Engineering, 2015, 179, 104-118.	1.1	9
21	Quantum phases in degenerate-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>p</mml:mi></mml:math>-orbital attractive one-dimensional fermionic optical lattices. Physical Review A, 2014, 89, .	2.5	7
22	Monte Carlo simulation studies of cation selectivity in ion exchange of zeolites. RSC Advances, 2014, 4, 52757-52761.	3.6	8
23	First-Principles Studies on Cesium Adsorption of Clay Minerals. Atomos, 2014, 56, 372-377.	0.0	0
24	Ferromagnetism in Multi-Orbital Fermi Gas Loaded on a One-Dimensional Optical Lattice. , 2014, , .		0
25	Kernel Polynomial Method on GPU. International Journal of Parallel Programming, 2013, 41, 59-88.	1.5	1
26	First-Principles Calculation Study of Mechanism of Cation Adsorption Selectivity of Zeolites: A Guideline for Effective Removal of Radioactive Cesium. Journal of the Physical Society of Japan, 2013, 82, 023801.	1.6	15
27	Mechanism of Strong Affinity of Clay Minerals to Radioactive Cesium: First-Principles Calculation Study for Adsorption of Cesium at Frayed Edge Sites in Muscovite. Journal of the Physical Society of Japan, 2013, 82, 033802.	1.6	71
28	Cs Adsorption in Clay Minerals and Zeolites: First Principle Calculation Studies toward Understanding Their Microscopic Mechanism. Hyomen Kagaku, 2013, 34, 135-142.	0.0	5
29	Interference Pattern Formation between Bound Solitons and Radiation in Momentum Space: Possible Detection of Radiation from Bound Solitons with Boseâ€“Einstein Condensate of Neutral Atoms. Journal of the Physical Society of Japan, 2012, 81, 104003.	1.6	1
30	Nontrivial Haldane Phase of an Atomic Two-Component Fermi Gas Trapped in a 1D Optical Lattice. Physical Review Letters, 2012, 109, 235302.	7.8	26
31	Performance Impact Applying Compression Format to Sparse Matrix on Kernel Polynomial Method Using GPU. , 2011, , .		1
32	Decay of Resonance Structure and Trapping Effect in Potential Scattering Problem of Self-Focusing Wave Packet. Journal of the Physical Society of Japan, 2011, 80, 084003.	1.6	2
33	Direct extension of the density-matrix renormalization group method toward two-dimensional large quantum lattices and related high-performance computing. Japan Journal of Industrial and Applied Mathematics, 2011, 28, 141-151.	0.9	3
34	Spectral properties of trapped one-dimensional ultracold fermions loaded on optical lattices. Physical Review A, 2011, 84, .	2.5	6
35	Phase-separated ferromagnetism in a spin-imbalanced system of Fermi atoms loaded in an optical ladder: A density-matrix renormalization-group study. Physical Review A, 2011, 83, .	2.5	14
36	Performance Acceleration of Kernel Polynomial Method Applying Graphics Processing Units. , 2011, , .		5

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37	Anomalous non-equilibrium electron transport in one-dimensional quantum nano wire at half-filling: time dependent density renormalization group study. Journal of Physics: Conference Series, 2010, 248, 012031.	0.4	0
38	Derivation of non-Markovian transport equations for trapped cold atoms in nonequilibrium thermal field theory. Annals of Physics, 2010, 325, 426-441.	2.8	5
39	Density-matrix renormalization-group studies for one-dimensional polarized Andersonâ€“Hubbard model. Physica C: Superconductivity and Its Applications, 2010, 470, S952-S954.	1.2	0
40	Dynamics of attractively interacting fermi atoms in one-dimensional optical lattices: Non-equilibrium simulations of fermion superfluidity. Physica C: Superconductivity and Its Applications, 2010, 470, S949-S951.	1.2	3
41	High-Performance Quantum Simulation for Coupled Josephson Junctions on the Earth Simulator: a Challenge To the SchrÃ¶dinger Equation On 256⁴ Grids. International Journal of High Performance Computing Applications, 2010, 24, 319-334.	3.7	1
42	Ground-state properties of the one-dimensional attractive Hubbard model with confinement: A comparative study. Physical Review B, 2010, 82, .	3.2	16
43	Direct Extension of Density-Matrix Renormalization Group to Two-Dimensional Quantum Lattice Systems: Studies of Parallel Algorithm, Accuracy, and Performance. Journal of the Physical Society of Japan, 2009, 78, 094004.	1.6	15
44	Magnetic localization in the spin-polarized one-dimensional Anderson-Hubbard model. Physical Review B, 2009, 79, .	3.2	2
45	Polarization plateau in an atomic Fermi gas loaded on a three-leg triangular optical lattice. Physical Review A, 2009, 79, .	2.5	2
46	First-principle electronic structure calculations for magnetic moment in iron-based superconductors: An LSDA+negative U study. Physica C: Superconductivity and Its Applications, 2009, 469, 908-911.	1.2	26
47	Stripe Formation in Fermionic Atoms on 2-D Optical Lattice: DMRG Studies for n-Leg Repulsive Hubbard Ladder. Journal of Superconductivity and Novel Magnetism, 2009, 22, 275-279.	1.8	1
48	Exact diagonalization studies on two-band minimal model for iron-based superconductors. Physica C: Superconductivity and Its Applications, 2009, 469, 932-935.	1.2	8
49	Quantum synchronization effects in intrinsic Josephson junctions. Physica C: Superconductivity and Its Applications, 2008, 468, 689-694.	1.2	17
50	Hole localization in strongly correlated and disordered systems: DMRG studies for 1-D and 3-leg ladder random Hubbard models. Physica C: Superconductivity and Its Applications, 2008, 468, 1241-1244.	1.2	0
51	Vortex core structure in strongly correlated superfluidity. Physica C: Superconductivity and Its Applications, 2008, 468, 1237-1240.	1.2	1
52	Stripe formation in repulsive 4-leg Hubbard ladder: Directly-extended DMRG studies. Physica C: Superconductivity and Its Applications, 2008, 468, 1141-1144.	1.2	1
53	DMRG studies for 1-D random Hubbard chain close to the half-filling. Journal of Physics and Chemistry of Solids, 2008, 69, 3324-3326.	4.0	0
54	Quantum effects on capacitively coupled intrinsic Josephson junctions. Journal of Physics and Chemistry of Solids, 2008, 69, 3221-3224.	4.0	6

#	Article	IF	Citations
55	Quantum field theoretical analysis on unstable behavior of Boseâ€“Einstein condensates in optical lattices. Annals of Physics, 2008, 323, 1247-1270.	2.8	0
56	Nuclear magnetic relaxation and superfluid density in Fe-pnictide superconductors: an anisotropic Â±s-wave scenario. New Journal of Physics, 2008, 10, 103026.	2.9	79
57	Mott phase in polarized two-component atomic Fermi lattice gas. Physical Review B, 2008, 78, .	3.2	9
58	Correlation effects on atom-density profiles of one- and two-dimensional polarized atomic Fermi gases loaded on an optical lattice. Physical Review A, 2008, 77, .	2.5	14
59	Condition for emergence of complex eigenvalues in the Bogoliubovâ€“de Gennes equations. Physical Review A, 2008, 77, .	2.5	20
60	Stripe formation in fermionic atoms on a two-dimensional optical lattice inside a box trap: Density-matrix renormalization-group studies for the repulsive Hubbard model with open boundary conditions. Physical Review A, 2008, 77, .	2.5	9
61	Hole Localization in the One-Dimensional Doped Anderson-Hubbard Model. Physical Review Letters, 2008, 101, 016407.	7.8	7
62	High Performance Computing for Eigenvalue Solver in Density-Matrix Renormalization Group Method: Parallelization of the Hamiltonian Matrix-Vector Multiplication. Lecture Notes in Computer Science, 2008, , 39-45.	1.3	3
63	Condition for the existence of complex modes in a trapped Bose-Einstein condensate with a highly quantized vortex. Physical Review A, 2007, 76, .	2.5	5
64	Publisher's Note: Condition for the existence of complex modes in a trapped Bose-Einstein condensate with a highly quantized vortex [Phys. Rev. A76, 043608 (2007)]. Physical Review A, 2007, 76, .	2.5	0
65	Quantum field theoretical description of unstable behavior of trapped Boseâ€“Einstein condensates with complex eigenvalues of Bogoliubovâ€“de Gennes equations. Annals of Physics, 2007, 322, 2327-2349.	2.8	14
66	Quantum field theoretical description of unstable behavior of a Bose-Einstein condensate with a highly quantized vortex in a harmonic potential. Laser Physics, 2007, 17, 211-214.	1.2	0
67	Quantum Field Theoretical Description of Dynamical Instability of Trapped Boseâ€“Einstein Condensates. Journal of Low Temperature Physics, 2007, 148, 331-336.	1.4	3
68	The Condition for Existence of Complex Modes inÂTrapped Boseâ€“Einstein Condensate withÂaÂHighlyÂQuantized Vortex. Journal of Low Temperature Physics, 2007, 148, 381-386.	1.4	2
69	Effect of Zero Mode on the Response of Trapped Bose-Condensed Atoms. Journal of Physics: Conference Series, 2006, 31, 211-212.	0.4	0
70	Goldstone theorem, Hugenholtzâ€“Pines theorem, and Wardâ€“Takahashi relation in finite volume Boseâ€“Einstein condensed gases. Annals of Physics, 2006, 321, 1892-1917.	2.8	6
71	Unitarily inequivalent vacua in Boseâ€“Einstein condensation of trapped gases. Physica A: Statistical Mechanics and Its Applications, 2006, 365, 429-445.	2.6	2
72	Effect of the Zero-Mode on the Response of a Trapped Bose-Condensed Gas. Progress of Theoretical Physics, 2006, 115, 683-700.	2.0	3

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73	Wardâ€“Takahashi relation at finite temperature in Boseâ€“Einstein condensation of trapped neutral atoms. Physica A: Statistical Mechanics and Its Applications, 2005, 348, 157-172.	2.6	4
74	Relation between generalized Bogoliubov and Bogoliubovâ€“de Gennes approaches including Nambuâ€“Goldstone mode. Journal of Mathematical Physics, 2005, 46, 042307.	1.1	8
75	Nambu-Goldstone mode in trapped bose-einstein condensation. Journal of Modern Optics, 2004, 51, 1101-1101.	1.3	0
76	Effects of Quantum Coordinates on Condensate Density in a Trapped Bose-Einstein Condensate. Progress of Theoretical Physics, 2004, 111, 199-211.	2.0	5
77	Response of trapped Bose-Einstein condensates under time-dependent perturbation. Journal of Modern Optics, 2004, 51, 1103-1104.	1.3	0
78	Response of trapped Bose-Einstein condensates under time-dependent perturbation. Journal of Modern Optics, 2004, 51, 1103-1104.	1.3	1
79	Nambu-Goldstone mode in trapped Bose-Einstein condensation. Journal of Modern Optics, 2004, 51, 1101-1101.	1.3	0
80	Proper treatment of the zero mode in quantum field theory for trapped Bose-Einstein condensation. Physical Review A, 2003, 68, .	2.5	13
81	Role of Nambuâ€“Goldstone Mode in Trapped Boseâ€“Einstein Condensation. Journal of the Physical Society of Japan, 2003, 72, 152-155.	1.6	0