## Naomichi Hatano

List of Publications by Year in descending order

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		159358	98622
156	5,067 citations	30	67
papers	citations	h-index	g-index
161	1.61	161	2001
161	161	161	3291
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Non-Hermitian Fabry-PÃ ©rot resonances in a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>P</mml:mi><mml:mi>T</mml:mi>-symmetric system. Physical Review Research, 2021, 3, .</mml:mrow></mml:math>	<b m&nl:mrc	ow <b>9</b>
2	Non-Markovian effect on quantum Otto engine: Role of system-reservoir interaction. Physical Review Research, 2021, 3, .	1.3	18
3	A chain of solvable non-Hermitian Hamiltonians constructed by a series of metric operators. Annals of Physics, 2021, 430, 168511.	1.0	6
4	Anomalous-order exceptional point and non-Markovian Purcell effect at threshold in one-dimensional continuum systems. Physical Review Research, 2021, 3, .	1.3	8
5	Delocalization of non-Hermitian quantum walk on random media in one dimension. Annals of Physics, 2021, 435, 168615.	1.0	7
6	What is the resonant state in open quantum systems?. Journal of Physics: Conference Series, 2021, 2038, 012013.	0.3	2
7	Statistical properties of eigenvalues of the non-Hermitian Su-Schrieffer-Heeger model with random hopping terms. Physical Review E, 2020, 102, 012101.	0.8	10
8	Discrete-time quantum walk on complex networks for community detection. Physical Review Research, 2020, 2, .	1.3	14
9	Null-eigenvalue localization of quantum walks on complex networks. Physical Review Research, 2020, 2, .	1.3	3
10	Editorial: Non-Hermitian quantum mechanics. Progress of Theoretical and Experimental Physics, 2020, 2020, .	1.8	0
11	Exceptional points of the Lindblad operator of a two-level system. Molecular Physics, 2019, 117, 2121-2127.	0.8	35
12	Time-Reversal Symmetry and Arrow of Time in Quantum Mechanics of Open Systems. Entropy, 2019, 21, 380.	1.1	6
13	Efficient communication dynamics on macro-connectome, and the propagation speed. Scientific Reports, 2018, 8, 2510.	1.6	7
14	Random multi-hopper model: super-fast random walks on graphs. Journal of Complex Networks, 2018, 6, 382-403.	1.1	30
15	Heating in Integrable Time-Periodic Systems. Physical Review Letters, 2018, 120, 220602.	2.9	13
16	Path Laplacian operators and superdiffusive processes on graphs. I. One-dimensional case. Linear Algebra and Its Applications, 2017, 523, 307-334.	0.4	33
17	Thermoelectricity near Anderson localization transitions. Physical Review B, 2017, 96, .	1.1	31
18	Irreversibility and the breaking of resonance-antiresonance symmetry. Chaos, 2017, 27, 104608.	1.0	5

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19	Quantum Jarzynski equality of measurement-based work extraction. Physical Review E, 2017, 95, 032147.	0.8	12
20	The arrow of time in open quantum systems and dynamical breaking of the resonance–anti-resonance symmetry. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 405304.	0.7	16
21	Exact scattering eigenstates in double quantum-dot systems with an interdot Coulomb interaction. Journal of Physics: Conference Series, 2016, 670, 012038.	0.3	0
22	Chebyshev-polynomial expansion of the localization length of Hermitian and non-Hermitian random chains. Physical Review E, 2016, 94, 063305.	0.8	13
23	Predicting the characteristics of the aetiological agent for Kawasaki disease from other paediatric infectious diseases in Japan. Epidemiology and Infection, 2016, 144, 478-492.	1.0	29
24	PT-symmetric graphene under a magnetic field. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160365.	1.0	7
25	Efficiency bounds on thermoelectric transport in magnetic fields: The role of inelastic processes. Physical Review B, 2016, 94, .	1.1	43
26	Non-Hermitian localization in biological networks. Physical Review E, 2016, 93, 042310.	0.8	73
27	Communicability Angle and the Spatial Efficiency of Networks. SIAM Review, 2016, 58, 692-715.	4.2	28
28	On walk entropies in graphs. Response to Dehmer and Mowshowitz. Complexity, 2016, 21, 15-18.	0.9	0
29	Bound states, scattering states, and resonant states in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script">PT</mml:mi></mml:math> -symmetric open quantum systems. Physical Review A, 2015, 92, .	1.0	53
30	Thermodynamics of the mesoscopic thermoelectric heat engine beyond the linear-response regime. Physical Review E, 2015, 92, 042165.	0.8	41
31	Universal electric current of interacting resonant-level models with asymmetric interactions: An extension of the Landauer formula. Physical Review B, 2015, 91, .	1.1	6
32	Eigenvalue problem of the Liouvillian of open quantum systems. AIP Conference Proceedings, 2015, , .	0.3	1
33	Time-reversal symmetric resolution of unity without background integrals in open quantum systems. Journal of Mathematical Physics, 2014, 55, 122106.	0.5	31
34	Viral spreading of daily information in online social networks. Physica A: Statistical Mechanics and Its Applications, 2014, 406, 34-41.	1.2	12
35	Walk entropies in graphs. Linear Algebra and Its Applications, 2014, 443, 235-244.	0.4	26
36	Equivalence of the effective Hamiltonian approach and the Siegert boundary condition for resonant states. Fortschritte Der Physik, 2013, 61, 238-249.	1.5	29

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37	Current-Induced Cooling Phenomenon in a Two-Dimensional Electron Gas Under a Magnetic Field. Journal of Low Temperature Physics, 2013, 172, 132-153.	0.6	2
38	Generation of Multiple Dirac Cones in Graphene under Double-Periodic and Quasiperiodic Potentials. Journal of the Physical Society of Japan, 2013, 82, 113706.	0.7	2
39	Analysis Technique for Exceptional Points in Open Quantum Systems and QPT Analogy for the Appearance of Irreversibility. International Journal of Theoretical Physics, 2012, 51, 3536-3550.	0.5	19
40	Transport-Coefficient Dependence of Current-Induced Cooling Effect in a Two-Dimensional Electron Gas. Journal of Electronic Materials, 2012, 41, 1535-1539.	1.0	0
41	Thermomagnetic Effect in the Quantum Hall System. Journal of Electronic Materials, 2012, 41, 1540-1545.	1.0	2
42	The physics of communicability in complex networks. Physics Reports, 2012, 514, 89-119.	10.3	242
43	Maximization of thermal entanglement of arbitrarily interacting two qubits. Physical Review A, 2011, 83, .	1.0	6
44	<mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>I</mml:mi><mml:mo>â^²</mml:mo><mml:mi>V</mml:mi></mml:mrow> of an open quantum dot with a Coulomb interaction: Extension of the Landauer formula with exact scattering eigenstates. Physical Review B, 2011, 83, .</mml:math>	· 1.1	ıth}character
45	Test of fluctuation theorems in non-Markovian open quantum systems. Physical Review E, 2011, 84, 031116.	0.8	14
46	Resonant-state Expansion of the Green's Function ofÂOpen Quantum Systems. International Journal of Theoretical Physics, 2011, 50, 1105-1115.	0.5	7
47	Nontrivial Eigenvalues of the Liouvillian of an Open Quantum System. International Journal of Theoretical Physics, 2011, 50, 1134-1142.	0.5	11
48	Temperature distribution in nano-devices under a strong magnetic field. Computer Physics Communications, 2011, 182, 90-92.	3.0	3
49	Temperature Distribution in Two-Dimensional Electron Gases under a Strong Magnetic Field. Journal of Electronic Materials, 2011, 40, 529-532.	1.0	3
50	Quantum Oscillations of Thermoelectric Effects in a Pseudo-one-dimensional Electron Gas With a Spinâ€"Orbit Interaction. Journal of Electronic Materials, 2011, 40, 601-605.	1.0	3
51	Resonant Spectrum Analysis of the Conductance of an Open Quantum System and Three Types of Fano Parameter. Journal of the Physical Society of Japan, 2011, 80, 104707.	0.7	29
52	Resonance theory for discrete models: Methodology and isolated resonances. Journal of Chemical Physics, 2011, 134, 154111.	1.2	9
53	A Graph Theoretic Approach to Atomic Displacements in Fullerenes. Carbon Materials, 2011, , 171-185.	0.2	0
54	A vibrational approach to node centrality and vulnerability in complex networks. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3648-3660.	1.2	34

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55	Topological atomic displacements, Kirchhoff and Wiener indices of molecules. Chemical Physics Letters, 2010, 486, 166-170.	1.2	35
56	Hofstadter's Butterfly Type of Singular Spectrum of a Collision Operator for a Model of Molecular Chains. Progress of Theoretical Physics Supplement, 2010, 184, 457-465.	0.2	3
57	Resonant States of Open Quantum Systems. Progress of Theoretical Physics Supplement, 2010, 184, 497-515.	0.2	9
58	Resistance Distance, Information Centrality, Node Vulnerability and Vibrations in Complex Networks., 2010, , 13-29.		20
59	Communicability and Communities in Complex Socio-Economic Networks. , 2010, , 271-288.		1
60	Entanglement generation through an open quantum dot: Exact two-electron scattering state in the Anderson model. Physical Review B, 2009, 80, .	1.1	19
61	Quantum Nernst effect in a bismuth single crystal. Physical Review B, 2009, 80, .	1.1	11
62	Fundamental relation between longitudinal and transverse conductivities in the quantum Hall system. Journal of Physics Condensed Matter, 2009, 21, 345803.	0.7	8
63	Two-channel quantum wire with an adatom impurity: Role of the van Hove singularity in the quasibound state in continuum, decay rate amplification, and the Fano effect. Physical Review B, 2009, 80, .	1.1	39
64	Exact Scattering Eigenstates, Many-Body Bound States, and Nonequilibrium Current in an Open Quantum Dot System. Physical Review Letters, 2009, 102, 146803.	2.9	45
65	Existence and nonexistence of an intrinsic tunneling time. Physical Review A, 2009, 79, .	1.0	11
66	Probabilistic interpretation of resonant states. Pramana - Journal of Physics, 2009, 73, 553-564.	0.9	22
67	Communicability betweenness in complex networks. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 764-774.	1.2	103
68	Returnability in complex directed networks (digraphs). Linear Algebra and Its Applications, 2009, 430, 1886-1896.	0.4	12
69	Communicability graph and community structures in complex networks. Applied Mathematics and Computation, 2009, 214, 500-511.	1.4	62
70	Vortex generation in the RSP game on the triangular lattice. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 1319-1337.	1.2	3
71	Communicability in complex networks. Physical Review E, 2008, 77, 036111.	0.8	512
72	â€~Clumpiness' mixing in complex networks. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P03008.	0.9	8

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73	Communicability and multipartite structures in complex networks at negative absolute temperatures. Physical Review E, 2008, 78, 026102.	0.8	24
74	Some Properties of the Resonant State in Quantum Mechanics and Its Computation. Progress of Theoretical Physics, 2008, 119, 187-222.	2.0	67
75	Transient Oscillation of Currents in Quantum Hall Effect of Bloch Electrons. Journal of the Physical Society of Japan, 2008, 77, 024713.	0.7	O
76	Calculation of the Self-Energy of Open Quantum Systems. Journal of the Physical Society of Japan, 2008, 77, 025003.	0.7	11
77	Non-Abelian gauge field theory of the spin-orbit interaction and a perfect spin filter. Physical Review A, 2007, 75, .	1.0	100
78	The Entanglement of the $\langle i \rangle X \langle i \rangle Y \langle i \rangle Spin$ Chain in a Random Magnetic Field. Journal of the Physical Society of Japan, 2007, 76, 094001.	0.7	8
79	Quasibound States in the Continuum in a Two Channel Quantum Wire with an Adatom. Physical Review Letters, 2007, 99, 210404.	2.9	54
80	Resonance in an Open Quantum Dot System with a Coulomb Interaction: a Bethe-Ansatz Approach. Journal of the Physical Society of Japan, 2007, 76, 063002.	0.7	12
81	Gap-mediated magnetization of a pseudo-one-dimensional system with a spin–orbit interaction. Solid State Communications, 2007, 141, 79-83.	0.9	3
82	Statistical-mechanical approach to subgraph centrality in complex networks. Chemical Physics Letters, 2007, 439, 247-251.	1.2	146
83	Tight-binding â€~dihedral orbitals' approach to electronic communicability in macromolecular chains. Chemical Physics Letters, 2007, 449, 216-220.	1.2	5
84	A Non-Hermitian Critical Point and the Correlation Length of Strongly Correlated Quantum Systems. Journal of the Physical Society of Japan, 2006, 75, 104001.	0.7	8
85	Temporal Oscillation of Conductances in Quantum Hall Effect of Bloch Electrons. Journal of the Physical Society of Japan, 2006, 75, 063704.	0.7	1
86	A microscopic model of triangular arbitrage. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 572-584.	1.2	5
87	A non-Hermitian analysis of strongly correlated quantum systems. Physica B: Condensed Matter, 2006, 378-380, 292-293.	1.3	1
88	Triangular Arbitrage as an Interaction in Foreign Exchange Markets., 2006,, 133-142.		0
89	Strong Resonance of Light in a Cantor Set. Journal of the Physical Society of Japan, 2005, 74, 3093-3111.	0.7	14
90	Quantum interference effect of resonant transport in nano-scale systems. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 609-613.	1.3	16

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91	Quantum Nernst effect. Solid State Communications, 2005, 135, 510-514.	0.9	14
92	Impurity Effect in the Quantum Nernst Effect. E-Journal of Surface Science and Nanotechnology, 2005, 3, 518-523.	0.1	7
93	Triangular Arbitrage in the Foreign Exchange Market. , 2004, , 18-23.		2
94	Triangular arbitrage in the foreign exchange market. Physica A: Statistical Mechanics and Its Applications, 2004, 344, 174-177.	1.2	15
95	A wind tunnel experiment of sand transport and its comparison with the Werner model. Journal of Geophysical Research, 2004, 109, .	3.3	4
96	Formula for the resuspension factor and estimation of the date of surface contamination. Atmospheric Environment, 2003, 37, 3475-3480.	1.9	13
97	Triangular arbitrage and negative auto-correlation of foreign exchange rates. Physica A: Statistical Mechanics and Its Applications, 2003, 324, 253-257.	1.2	20
98	Universality of Zipf's Law. Journal of the Physical Society of Japan, 2003, 72, 1594-1594.	0.7	0
99	Localization, Resonance, and Non-Hermitian Quantum Mechanics. Journal of the Physical Society of Japan, 2003, 72, 201-202.	0.7	0
100	Evidence for the double degeneracy of the ground state in the three-dimensional±Jspin glass. Physical Review B, 2002, 66, .	1.1	9
101	Universality of Zipf's Law. Journal of the Physical Society of Japan, 2002, 71, 1211-1213.	0.7	19
102	Triangular arbitrage as an interaction among foreign exchange rates. Physica A: Statistical Mechanics and Its Applications, 2002, 310, 467-479.	1.2	33
103	Localization, resonance and non-Hermitian quantum mechanics. Physica A: Statistical Mechanics and Its Applications, 2002, 314, 170-176.	1.2	3
104	A new algorithm of analyzing the metal-insulator transition of the Anderson model. Computer Physics Communications, 2002, 147, 263-266.	3.0	3
105	Double degeneracy in the ground state of the 3D $\hat{A}\pm J$ spin glass. Computer Physics Communications, 2002, 147, 414-418.	3.0	0
106	A Multicanonical Monte Carlo Study of the 3D $\hat{A}_{\pm < i > J < / i > Spin Glass}$ . Progress of Theoretical Physics Supplement, 2000, 138, 442-447.	0.2	11
107	ARK: A Pentium II/Linux Cluster. Progress of Theoretical Physics Supplement, 2000, 138, 757-758.	0.2	2
108	The multicanonical Monte Carlo method. Computing in Science and Engineering, 2000, 2, 95-102.	1.2	13

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109	Non-adiabatic transition in spin-boson model and generalization of the Landau–Zener formula. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 565-583.	1.2	12
110	Non-Hermitian quantum mechanics and localization in physical systems., 1999,, 319-322.		0
111	Localization in non-Hermitian quantum mechanics and flux-line pinning in superconductors. Physica A: Statistical Mechanics and Its Applications, 1998, 254, 317-331.	1.2	29
112	Aerosol migration near chernobyl. Atmospheric Environment, 1998, 32, 2587-2594.	1.9	15
113	Goldberg's theorem and the Baker–Campbell–Hausdorff formula. Physica A: Statistical Mechanics and Its Applications, 1998, 250, 535-548.	1.2	9
114	Dispersive transport of ions in column experiments: An explanation of long-tailed profiles. Water Resources Research, 1998, 34, 1027-1033.	1.7	201
115	Non-Hermitian delocalization and eigenfunctions. Physical Review B, 1998, 58, 8384-8390.	1.1	198
116	Extrapolation-CAM theory for critical exponents. Journal of Physics A, 1997, 30, 6299-6311.	1.6	0
117	Vortex pinning and non-Hermitian quantum mechanics. Physical Review B, 1997, 56, 8651-8673.	1.1	435
118	Six-Vertex Model with an Frustrated Impurity. Journal of the Physical Society of Japan, 1997, 66, 3048-3052.	0.7	0
119	Fractal fluctuation of aerosol concentration near Chernobyl. Atmospheric Environment, 1997, 31, 2297-2303.	1.9	17
120	Localization Transitions in Non-Hermitian Quantum Mechanics. Physical Review Letters, 1996, 77, 570-573.	2.9	951
121	Relaxation from a metastable state due to quantum fluctuation. Physica A: Statistical Mechanics and Its Applications, 1996, 226, 137-151.	1.2	2
122	MONTE CARLO SIMULATION OF RANDOM BOSON HUBBARD MODEL. International Journal of Modern Physics C, 1996, 07, 449-456.	0.8	2
123	Hidden Orders and RVB Formation of the Four-Leg Heisenberg Ladder Model. Journal of the Physical Society of Japan, 1996, 65, 560-568.	0.7	7
124	Dynamic analysis of nuclide diffusion with illitization of the buffer material. Waste Management, 1995, 15, 495-500.	3.7	4
125	Monte Carlo study of superfluid-insulator transitions in Boson Hubbard models. Physica B: Condensed Matter, 1995, 206-207, 157-159.	1.3	1
126	CFT estimates of the universal Binder parameter for one-dimensional quantum transitions. Journal of Magnetism and Magnetic Materials, 1995, 140-144, 1481-1482.	1.0	0

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127	Phenomenological perturbation theory on quantum ground-state phase diagrams. Journal of Magnetism and Magnetic Materials, 1995, 140-144, 1483-1484.	1.0	0
128	A critical-amplitude relation for quantum transitions in one dimension. Journal of Magnetism and Magnetic Materials, 1995, 140-144, 1485-1486.	1.0	0
129	Universal Finite-Size Scaling Function of the Ferromagnetic Heisenberg Chain in a Magnetic Field. Journal of the Physical Society of Japan, 1995, 64, 1955-1966.	0.7	6
130	Reentrant Superfluid-Insulator Transitions of Random Boson Hubbard Models. Journal of the Physical Society of Japan, 1995, 64, 1529-1551.	0.7	8
131	Isotropic spin-1 chains with bond alternation: analytic and numerical studies. Journal of Physics Condensed Matter, 1995, 7, 4895-4920.	0.7	53
132	Study on dynamical critical exponents of the Ising model using the damage spreading method. Journal of Physics A, 1995, 28, 4543-4552.	1.6	41
133	Scaling theory of antiferromagnetic Heisenberg ladder models. Journal of Physics A, 1995, 28, 3911-3923.	1.6	17
134	Universal Finite-Size Scaling Function of the Ferromagnetic Heisenberg Chain in a Magnetic Field. II –Nonlinear Susceptibility–. Journal of the Physical Society of Japan, 1995, 64, 4142-4155.	0.7	5
135	Real-Space Renormalization-Group Analysisof the S=2 Antiferromagnetic Heisenberg Chain. Journal of the Physical Society of Japan, 1995, 64, 414-422.	0.7	34
136	Phase Transition and Hidden Orders of the Heisenberg Ladder Model in the Ground State. Journal of the Physical Society of Japan, 1995, 64, 1967-1979.	0.7	49
137	Data Analysis for Quantum Monte Carlo Simulations with the Negative-Sign Problem. Journal of the Physical Society of Japan, 1994, 63, 1691-1697.	0.7	6
138	CFT estimates of the universal Binder parameter for quantum ground-state transitions in one dimension. Journal of Physics A, 1994, 27, L223-L230.	1.6	7
139	A critical-amplitude relation for one-dimensional quantum transitions and determination of the exponent eta. Journal of Physics A, 1994, 27, 6077-6089.	1.6	7
140	Study of correction terms for higher-order decompositions of exponential operators. Physica A: Statistical Mechanics and Its Applications, 1994, 211, 234-254.	1.2	13
141	Phenomenological perturbation theory of quantum ground-state phase transitions. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 185, 46-50.	0.9	4
142	Numerical-Diagonalization Analyses of an Effective Hamiltonian for the Haldane System. Journal of the Physical Society of Japan, 1994, 63, 3249-3262.	0.7	1
143	Universal parabola of interface deviation in two dimensions. Physica A: Statistical Mechanics and Its Applications, 1993, 199, 318-334.	1.2	0
144	Quantum Monte Carlo Calculation of the J1-J2Model. Journal of the Physical Society of Japan, 1993, 62, 3062-3070.	0.7	23

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145	QUANTUM MONTE CARLO AND RELATED METHODS â€" RECENT DEVELOPMENTS â€". , 1993, , 13-47.		13
146	Ground-State Quantum Monte Carlo Method Applied to Alternating-Bond Spin Chains. Journal of the Physical Society of Japan, 1993, 62, 847-850.	0.7	4
147	Correlation Length of theS=2Antiferromagnetic Heisenberg Chain. Journal of the Physical Society of Japan, 1993, 62, 1346-1353.	0.7	31
148	Critical behaviour of the two-dimensional EA model with a Gaussian bond distribution. Journal of Physics A, 1992, 25, 4985-5003.	1.6	28
149	Effective-field theory of spin glasses and the coherent-anomaly method. II. Double-Cluster approximation. Journal of Statistical Physics, 1992, 66, 897-911.	0.5	10
150	Representation basis in quantum Monte Carlo calculations and the negative-sign problem. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 163, 246-249.	0.9	21
151	Reweighting Method for Quantum Monte Carlo Simulations with the Negative-Sign Problem. Journal of the Physical Society of Japan, 1992, 61, 3494-3502.	0.7	22
152	Canonicality of the Double-Cluster Approximationin the CAM Theory. Journal of the Physical Society of Japan, 1991, 60, 3990-3992.	0.7	13
153	Correction-term theorem concerning decompositions of exponential operators. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 153, 191-194.	0.9	10
154	Effective-field theory of spin glasses and the coherent-anomaly method. I. Journal of Statistical Physics, 1991, 63, 25-46.	0.5	10
155	Transfer-Matrix Calculations of the Spin $1/2$ Antiferromagnetic XXZ Model on the 4 x2 Triangular Lattice Using the Fractal Decomposition. Progress of Theoretical Physics, 1991, 85, 481-492.	2.0	11
156	Transfer-Matrix Calculations of the Spin 1/2 Antiferromagnetic XXZ Model on the 4 ×2 Triangular		13