

Niels R Walet

List of Publications by Year in descending order

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123
papers

2,209
citations

331670

21
h-index

254184

43
g-index

125
all docs

125
docs citations

125
times ranked

1426
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrostatic interactions in twisted bilayer graphene. Nano Materials Science, 2022, 4, 27-35.	8.8	13
2	Rotating Majorana zero modes in a disk geometry. Physical Review B, 2022, 105, .	3.2	1
3	Flat bands, strains, and charge distribution in twisted bilayer $h\bar{c}$ BN. Physical Review B, 2021, 103, .	12.8	23
4	Magnetization Signature of Topological Surface States in a Non-Centrosymmetric Superconductor. Advanced Materials, 2021, 33, e2103257.	21.0	3
5	Narrow bands, electrostatic interactions and band topology in graphene stacks. 2D Materials, 2021, 8, 044006.	4.4	11
6	Charge-polarized interfacial superlattices in marginally twisted hexagonal boron nitride. Nature Communications, 2021, 12, 347.	12.8	132
7	Thermodynamics of Bose gases from functional renormalization with a hydrodynamic low-energy effective action. Annals of Physics, 2020, 412, 168006.	2.8	4
8	The emergence of one-dimensional channels in marginal-angle twisted bilayer graphene. 2D Materials, 2020, 7, 015023.	4.4	30
9	Tunable terahertz oscillation arising from Bloch-point dynamics in chiral magnets. Physical Review Research, 2020, 2, .	3.6	13
10	Continuum models for twisted bilayer graphene: Effect of lattice deformation and hopping parameters. Physical Review B, 2019, 99, .	3.2	116
11	Twists and the Electronic Structure of Graphitic Materials. Nano Letters, 2019, 19, 8683-8689.	9.1	52
12	Electronic band structure and pinning of Fermi energy to Van Hove singularities in twisted bilayer graphene: A self-consistent approach. Physical Review B, 2019, 100, .	3.2	79
13	Edge Modes and Nonlocal Conductance in Graphene Superlattices. Physical Review Letters, 2018, 120, 026802.	7.8	17
14	Effective interactions in a graphene layer induced by the proximity to a ferromagnet. 2D Materials, 2018, 5, 014004.	4.4	24
15	The role of attitudinal factors in mathematical on-line assessments: a study of undergraduate STEM students. Assessment and Evaluation in Higher Education, 2018, 43, 710-726.	5.6	14
16	Electrostatic effects, band distortions, and superconductivity in twisted graphene bilayers. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 13174-13179.	7.1	222
17	Application of the functional renormalization group to Bose gases: From linear to hydrodynamic fluctuations. Physical Review B, 2018, 98, .	3.2	5
18	Effect of layered water structures on the anomalous transport through nanoscale graphene channels. Journal of Physics Communications, 2018, 2, 085015.	1.2	12

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19	Electronic correlations in the Hubbard model on a bi-partite lattice. <i>Annals of Physics</i> , 2017, 378, 280-302.	2.8	0
20	Majorana zero modes in a two-dimensional p -wave superconductor. <i>Physical Review B</i> , 2017, 96, .	3.2	14
21	Description of light nuclei in pionless effective field theory using the stochastic variational method. <i>Physical Review C</i> , 2016, 94, .	2.9	13
22	Nature of phase transitions in two-dimensional type-II superconductors. <i>Physical Review B</i> , 2013, 88, .	3.2	0
23	Functional renormalization group for few-nucleon systems: SU(4) symmetry and its breaking. <i>Physical Review C</i> , 2013, 87, .	2.9	5
24	Gender differences in conceptual understanding of Newtonian mechanics: a UK cross-institution comparison. <i>European Journal of Physics</i> , 2013, 34, 421-434.	0.6	32
25	Convergence of a renormalization-group approach to dimer-dimer scattering. <i>Physical Review A</i> , 2011, 83, .	2.5	13
26	Renormalization group, dimer-dimer scattering, and three-body forces. <i>Physical Review A</i> , 2010, 81, .	2.5	14
27	An Integrated Approach to Encourage Student-Centred Learning: a First Course in Dynamics. <i>New Directions in the Teaching of Physical Sciences</i> , 2008, , 21-26.	0.4	1
28	THE EXACT RENORMALIZATION GROUP AND PAIRING IN MANY-FERMION SYSTEMS. , 2008, , .		0
29	TOWARDS A COUPLED-CLUSTER TREATMENT OF SU(N) LATTICE GAUGE FIELD THEORY. , 2006, , .		0
30	TOWARDS A COUPLED-CLUSTER TREATMENT OF SU(N) LATTICE GAUGE FIELD THEORY. <i>International Journal of Modern Physics B</i> , 2006, 20, 4992-5007.	2.0	5
31	Pairing in many-fermion systems: an exact renormalisation group treatment. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2005, 605, 287-294.	4.1	61
32	Exact Renormalisation Group and pairing in many-fermion systems. <i>Nuclear Physics A</i> , 2005, 749, 134-137.	1.5	7
33	Removal of spurious admixture in a self-consistent theory of adiabatic large amplitude collective motion. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2005, 31, 1067-1081.	3.6	0
34	Large amplitude collective motion and the structure of low-lying states in ^{68}Se . <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2005, 31, S1523-S1526.	3.6	2
35	A simple model of the charge transfer in DNA-like substances. <i>Nonlinearity</i> , 2005, 18, 2615-2636.	1.4	3
36	EXACT RENORMALIZATION GROUP AND MANY-FERMION SYSTEMS. <i>International Journal of Modern Physics A</i> , 2005, 20, 596-598.	1.5	4

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37	Splitting the gluon?. Physical Review D, 2005, 72, .	4.7	17
38	Towards a practical approach for self-consistent large amplitude collective motion. Physical Review C, 2004, 69, .	2.9	9
39	VARIATIONAL MONTE CARLO FOR MICROSCOPIC CLUSTER MODELS. International Journal of Modern Physics C, 2004, 15, 1329-1351.	1.7	1
40	Relativistic Faddeev approach to a non-local NJL model. AIP Conference Proceedings, 2004, , .	0.4	0
41	Baryon structure in a quark-confining nonlocal Nambuâ€“Jonaâ€“Lasinio model. Physical Review C, 2004, 70, .	2.9	23
42	Shape coexistence in 72Kr at finite angular momentum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 604, 163-169.	4.1	16
43	Linked-cluster Tammâ€“Dancoff field theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 570, 129-136.	4.1	4
44	Off-shell effects and consistency of many-body treatments of dense matter. Physical Review C, 2003, 67, .	2.9	16
45	COLOUR SUPERCONDUCTIVITY IN FINITE SYSTEMS. International Journal of Modern Physics B, 2003, 17, 5185-5189.	2.0	2
46	SKYRMIONS IN QUANTUM HALL SYSTEMS. International Journal of Modern Physics B, 2003, 17, 5007-5010.	2.0	1
47	COUPLED CLUSTER CALCULATIONS OF THE SCHWINGER MODEL IN HAMILTONIAN LATTICE GAUGE THEORY. International Journal of Modern Physics B, 2003, 17, 5393-5396.	2.0	1
48	FOREWORD BY THE EDITORS. International Journal of Modern Physics B, 2003, 17, xvii-xvii.	2.0	0
49	Renormalization of hamiltonian field theory; a non-perturbative and non-unitarity approach. Journal of High Energy Physics, 2003, 2003, 040-040.	4.7	4
50	Off-shell effects in nuclear matter from an EFT point of view. AIP Conference Proceedings, 2003, , .	0.4	0
51	Color superconductivity in finite systems. Physical Review D, 2002, 65, .	4.7	43
52	Translationally invariant coupled cluster method in coordinate space for nuclei. Journal of Physics G: Nuclear and Particle Physics, 2002, 28, 1209-1222.	3.6	5
53	Finite size effects in colour superconductivity. AIP Conference Proceedings, 2002, , .	0.4	0
54	Colour Superconductivity in Finite Systems. Acta Physica Hungarica A Heavy Ion Physics, 2002, 16, 163-168.	0.4	2

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55	COUPLED CLUSTER CALCULATIONS OF THE SCHWINGER MODEL IN HAMILTONIAN LATTICE GAUGE THEORY. , 2002, , .		0
56	COLOUR SUPERCONDUCTIVITY IN FINITE SYSTEMS. , 2002, , .		0
57	Towards a phase diagram of the 2D Skyrme model. Europhysics Letters, 2001, 55, 633-639.	2.0	17
58	Quantum phase transitions and the extended coupled cluster method. Physical Review E, 2001, 63, 037103.	2.1	1
59	Toward a Many-Body Treatment of Hamiltonian Lattice SU(N) Gauge Theory. Annals of Physics, 2000, 284, 215-262.	2.8	23
60	Self-consistent theory of large-amplitude collective motion: applications to approximate quantization of nonseparable systems and to nuclear physics. Physics Reports, 2000, 335, 93-274.	25.6	31
61	The translationally-invariant coupled cluster method in coordinate space. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 480, 61-64.	4.1	6
62	Phase transitions in finite density baryonic matter. AIP Conference Proceedings, 2000, , .	0.4	0
63	Nucleons or diquarks: Competition between clustering and color superconductivity in quark matter. Physical Review C, 2000, 61, .	2.9	22
64	Microscopic and translationally-invariant calculations with tensor forces and tensor correlations. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, 945-947.	3.6	4
65	A basis of cranking operators for the pairing-plus-quadrupole model. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, L23-L28.	3.6	3
66	Self-consistent collective subspaces and diabatic/adiabatic motion in nuclei. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, 815-817.	3.6	0
67	Local harmonic approaches with approximate cranking operators. Physical Review C, 1999, 61, .	2.9	8
68	Algebraic approaches in nuclear physics. European Physical Journal D, 1999, 49, 89-130.	0.4	1
69	Jastrow-Correlated Configuration-Interaction Description of Light Nuclei. Few-Body Systems, 1999, , 53-56.	0.2	2
70	Algebraic approaches in nuclear physics. European Physical Journal D, 1998, 48, 773-781.	0.4	0
71	Title is missing!. European Physical Journal D, 1998, 48, 813-816.	0.4	1
72	A Coupled-Cluster Formulation of Hamiltonian Lattice Field Theory: The Nonlinear Sigma Model. Annals of Physics, 1998, 267, 97-133.	2.8	16

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73	Translationally invariant treatment of pair correlations in nuclei II. Tensor correlations. Nuclear Physics A, 1998, 643, 243-258.	1.5	21
74	Diabatic and adiabatic collective motion in a model pairing system. Physical Review C, 1998, 57, 1192-1203.	2.9	13
75	Collective coordinates, shape transitions, and shape coexistence: A microscopic approach. Physical Review C, 1998, 58, 3397-3406.	2.9	8
76	The three nucleon system in the Skyrme model. , 1997, , .		0
77	Algebraic Method for Large-Nc QCD. Australian Journal of Physics, 1997, 50, 211.	0.6	2
78	Quantising the B = 2 and B = 3 skyrmion systems. Nuclear Physics A, 1996, 606, 429-458.	1.5	32
79	Translationally invariant treatment of pair correlations in nuclei: I. Spin and isospin dependent correlations. Nuclear Physics A, 1996, 609, 218-236.	1.5	34
80	Application of a semimicroscopic core-particle coupling method to the backbending in odd deformed nuclei. Physical Review C, 1996, 54, 638-645.	2.9	5
81	Further application of a semimicroscopic core-particle coupling method to the properties of Gd155,157 and Dy159. Physical Review C, 1996, 53, 1655-1659.	2.9	8
82	The large-Nc limit and the behavior of $g_A(0)$ and g_A . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 358, 184-190.	4.1	2
83	The kinetic energy and the geometric structure in the B = 2 sector of the Skyrme model: A study using the Atiyah-Manton ansatz. Nuclear Physics A, 1995, 586, 649-681.	1.5	12
84	Nuclear transparency in quasifree electron scattering. Physical Review C, 1995, 51, R1616-R1618.	2.9	7
85	Calculation of the properties of the rotational bands of Gd155,157. Physical Review C, 1994, 50, 245-256.	2.9	13
86	Quantum theory of large amplitude collective motion: Natural fit between the Born-Oppenheimer and Kerman-Klein methods. Physical Review C, 1994, 49, 1428-1438.	2.9	3
87	Classical mappings of the symplectic model and their application to the theory of large-amplitude collective motion. Physical Review C, 1994, 49, 840-851.	2.9	7
88	Quantum theory of large amplitude collective motion: Bosonization of all degrees of freedom. Physical Review C, 1994, 49, 1439-1448.	2.9	3
89	Extracting nuclear transparency from $p, 2p-A$ and e, e^2p-A cross sections. Nuclear Physics A, 1994, 580, 595-613.	1.5	16
90	Generation of collective subspaces and self-consistent cranking operators. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 322, 11-16.	4.1	4

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91	The Skyrme model of the spin-orbit force. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 314, 159-162.	4.1	11
92	Dynamics of antibaryon-baryon annihilation in the Skyrme model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 303, 1-4.	4.1	15
93	Mean-field approach to the algebraic treatment of molecules: Bent molecules. Physical Review A, 1993, 47, 2064-2074.	2.5	11
94	A boson-quasiboson mapping and Dirac quantization. Journal of Physics A, 1993, 26, L1047-L1051.	1.6	0
95	Inertial parameters of the Skyrmion-Skyrmion system with the product ansatz. Physical Review C, 1993, 48, 2498-2509.	2.9	2
96	Cane+eâ~ peaks be explained as resonances in Bhabha scattering?. Physical Review D, 1993, 47, 844-852.	4.7	3
97	Quantization of the Skyrmion. Physical Review D, 1993, 47, 2113-2131.	4.7	5
98	Skyrmions and the nuclear force. Physical Review C, 1993, 47, 498-511.	2.9	17
99	Quantum theory of large amplitude collective motion and the Born-Oppenheimer method. Physical Review C, 1993, 48, 178-191.	2.9	8
100	From Skyrmions to NNphase shifts. Physical Review C, 1993, 48, 2222-2229.	2.9	9
101	Recoil effects in a quantum theory of the Skyrmion. Journal of Physics C: Nuclear and Particle Physics, 1992, 18, 499-520.	3.6	7
102	QUANTUM CORRECTIONS TO THE CRANKING MODEL. International Journal of Modern Physics E, 1992, 01, 95-130.	1.0	1
103	Quantum corrections to the potential energy for large amplitude collective motion. Physical Review C, 1992, 45, 249-260.	2.9	11
104	Skyrmions and the nuclear force. Physical Review Letters, 1992, 68, 3849-3852.	7.8	21
105	Mean-field approach to the algebraic treatment of molecules: Linear molecules. Physical Review A, 1992, 46, 4037-4047.	2.5	12
106	Ground-state correlations and restoration of broken symmetry to nuclear mean field theory. Nuclear Physics A, 1991, 535, 1-22.	1.5	23
107	On the occurrence of particle-antiparticle resonances in scalar QED. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 273, 1-5.	4.1	10
108	Classical theory of collective motion in the large amplitude, small velocity regime. Annals of Physics, 1991, 208, 90-148.	2.8	42

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109	Theory of large-amplitude collective motion applied to the structure of ^{28}Si . <i>Physical Review C</i> , 1991, 43, 2254-2267.	2.9	13
110	Thermal boson expansions and dynamical symmetry. <i>Nuclear Physics A</i> , 1990, 510, 261-284.	1.5	14
111	Generalization of the quantized Bogoliubov-Valatin transformation and relation to the method of the vector coherent state: The case of $U(3)$. <i>Nuclear Physics A</i> , 1990, 515, 207-225.	1.5	5
112	Generalized valley approximation applied to a schematic model of the monopole excitation. <i>Physical Review C</i> , 1990, 41, 318-328.	2.9	9
113	Lifetime of a hydrogen atom in an intense radiation field. <i>Physical Review A</i> , 1990, 41, 3905-3915.	2.5	5
114	Radiative distortion of the hydrogen atom in superintense, high-frequency fields of linear polarization. <i>Physical Review A</i> , 1990, 41, 477-494.	2.5	130
115	Adiabatic time-dependent Hartree-Fock theory in the generalized valley approximation. <i>Physical Review C</i> , 1989, 40, 945-959.	2.9	12
116	Reaction paths and generalized valley approximation. <i>Journal of Chemical Physics</i> , 1989, 91, 2848-2858.	3.0	27
117	The doubly-magic character of ^{146}Gd and its relation to ^{208}Pb . <i>Zeitschrift für Physik A, Atomic Nuclei</i> , 1989, 332, 9-16.	0.3	1
118	Collective-pair structure of $K^\pi = 0^+, 1^+, 2^+$ bands in deformed nuclei. <i>Nuclear Physics A</i> , 1988, 486, 235-252.	1.5	5
119	Boson image of the quadrupole operator in deformed nuclei. <i>Nuclear Physics A</i> , 1988, 483, 295-306.	1.5	2
120	Dichotomy of the Hydrogen Atom in Superintense, High-Frequency Laser Fields. <i>Physical Review Letters</i> , 1988, 61, 939-942.	7.8	317
121	A study of the $SU(3)$ limit of IBM-2. <i>Nuclear Physics A</i> , 1987, 474, 61-76.	1.5	9
122	Collective pair structure of $K=0$ and $K=1$ bands in deformed nuclei. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986, 179, 322-326.	4.1	18
123	Semiclassical treatment of the $M1$ -mode in IBM-2. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1985, 163, 1-6.	4.1	20