

Jack C Wells

List of Publications by Year in descending order

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76
papers

1,428
citations

304701

22
h-index

345203

36
g-index

92
all docs

92
docs citations

92
times ranked

1243
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical solution of the time-dependent Schrödinger equation for intermediate-energy collisions of antiprotons with hydrogen. <i>Physical Review A</i> , 1996, 54, 593-604.	2.5	85
2	Ionization of Hydrogen and Hydrogenic Ions by Antiprotons. <i>Physical Review Letters</i> , 1996, 76, 2882-2885.	7.8	85
3	Size-Expanded DNA Bases: An Ab Initio Study of Their Structural and Electronic Properties. <i>Journal of Physical Chemistry B</i> , 2005, 109, 21135-21139.	2.6	64
4	Excitation and charge transfer in proton-hydrogen collisions. <i>Physical Review A</i> , 1998, 58, 2872-2880.	2.5	63
5	Lattice, Time-Dependent Schrödinger Equation Solution for Ion-Atom Collisions. <i>Physical Review Letters</i> , 1999, 82, 3976-3979.	7.8	61
6	Characterization of the tunneling conductance across DNA bases. <i>Physical Review E</i> , 2006, 74, 011919.	2.1	58
7	Theoretical Study on the Structure, Stability, and Electronic Properties of the Guanine-Zinc-Cytosine Base Pair in M-DNA. <i>Journal of Physical Chemistry B</i> , 2007, 111, 870-879.	2.6	55
8	Simple model of the interrelation between single- and multiwall carbon nanotube growth rates for the CVD process. <i>Physical Review B</i> , 2007, 75, .	3.2	53
9	Enabling real-time multi-messenger astrophysics discoveries with deep learning. <i>Nature Reviews Physics</i> , 2019, 1, 600-608.	26.6	53
10	First-Principles Transversal DNA Conductance Deconstructed. <i>Biophysical Journal</i> , 2006, 91, L04-L06.	0.5	51
11	Nonperturbative electromagnetic lepton-pair production in peripheral relativistic heavy-ion collisions. <i>Physical Review A</i> , 1992, 45, 6296-6312.	2.5	49
12	Light-fronts approach to electron-positron pair production in ultrarelativistic heavy-ion collisions. <i>Physical Review A</i> , 1998, 57, 1849-1861.	2.5	49
13	Size-Expanded γ DNA Bases: An Ab Initio Study. <i>Journal of Physical Chemistry B</i> , 2006, 110, 6379-6384.	2.6	49
14	Computational chemistry for molecular electronics. <i>Computational Materials Science</i> , 2003, 28, 321-341.	3.0	41
15	Adsorption of a carbon atom on the Ni ₃₈ magic cluster and three low-index nickel surfaces: A comparative first-principles study. <i>Physical Review B</i> , 2004, 69, .	3.2	40
16	Impact-parameter dependence of multiple lepton-pair production from electromagnetic fields. <i>Physical Review A</i> , 1995, 51, 1836-1844.	2.5	37
17	A Fast Scalable Implicit Solver for Nonlinear Time-Evolution Earthquake City Problem on Low-Ordered Unstructured Finite Elements with Artificial Intelligence and Transprecision Computing. , 2018, .		31
18	Exact Z ² scaling of pair production in the high-energy limit of heavy-ion collisions. <i>Physical Review C</i> , 1999, 59, 2753-2756.	2.9	28

#	ARTICLE	IF	CITATIONS
19	Interaction between benzenedithiolate and gold: Classical force field for chemical bonding. Journal of Chemical Physics, 2005, 122, 244721.	3.0	27
20	NWChem for materials science. Computational Materials Science, 2003, 28, 209-221.	3.0	25
21	Lattice Schrödinger-equation approach for excitation and ionization of He ⁺ by antiproton impact. Physical Review A, 1997, 56, 3710-3713.	2.5	23
22	Physical Reality of Light-Induced Atomic States. Physical Review Letters, 1998, 80, 3479-3482.	7.8	23
23	Covalent Attachment of Gold Nanoparticles to DNA Templates. Journal of Nanoscience and Nanotechnology, 2002, 2, 397-404.	0.9	22
24	Next Generation Workload Management System For Big Data on Heterogeneous Distributed Computing. Journal of Physics: Conference Series, 2015, 608, 012040.	0.4	21
25	A NUMERICAL IMPLEMENTATION OF THE DIRAC EQUATION ON A HYPERCUBE MULTICOMPUTER. International Journal of Modern Physics C, 1993, 04, 459-492.	1.7	18
26	High-frequency Floquet-theory content of wave-packet dynamics. Physical Review A, 1997, 56, 3961-3973.	2.5	18
27	In situ time-resolved measurements of carbon nanotube and nanohorn growth. Physica Status Solidi (B): Basic Research, 2007, 244, 3944-3949.	1.5	18
28	Far-field modulation of fluorescence decay rates in pairs of oriented semiconducting polymer nanostructures. Physical Review B, 2005, 71, .	3.2	17
29	Aromaticity-induced changes in electronic properties of size-expanded DNA bases: Case of xC. International Journal of Quantum Chemistry, 2006, 106, 2339-2346.	2.0	17
30	Basis Spline Collocation Method for Solving the Schrödinger Equation in Axillary Symmetric Systems. Journal of Computational Physics, 1996, 128, 197-208.	3.8	15
31	Pre-exascale accelerated application development: The ORNL Summit experience. IBM Journal of Research and Development, 2020, 64, 11:1-11:21.	3.1	15
32	SPECTRAL PROPERTIES OF DERIVATIVE OPERATORS IN THE BASIS-SPLINE COLLOCATION METHOD. International Journal of Modern Physics C, 1995, 06, 143-167.	1.7	14
33	Convergence of a lattice calculation for bound-free muon-pair production in peripheral relativistic heavy-ion collisions. Physical Review A, 1996, 53, 1498-1504.	2.5	14
34	Asymptotic channels and gauge transformations of the time-dependent Dirac equation for extremely relativistic heavy-ion collisions. Physical Review A, 1999, 59, 346-357.	2.5	13
35	A comparative first-principles study of the adsorption of a carbon atom on copper and nickel surfaces. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 4563-4567.	2.1	11
36	Nanotechnology for Electronics, Photonics, and Renewable Energy. Nanostructure Science and Technology, 2010, , .	0.1	11

#	ARTICLE	IF	CITATIONS
37	High-Throughput Computing on High-Performance Platforms: A Case Study. , 2017, , .		11
38	Lattice calculation for lepton capture from vacuum-pair production in relativistic heavy-ion collisions. Nuclear Instruments & Methods in Physics Research B, 1995, 99, 293-296.	1.4	9
39	Dependence of surface strain on island geometry in embedded quantum-dot systems. Surface Science, 2003, 539, L525-L530.	1.9	9
40	Measuring Scientific Impact Beyond Citation Counts. D-Lib Magazine, 2016, 22, .	0.5	9
41	Direct solution of the time-dependent Schrödinger equation for proton-hydrogen collisions in two-dimensional Cartesian space. Physical Review A, 1995, 52, 3868-3876.	2.5	8
42	Wells, Simbotin, and Gavrilina Reply:. Physical Review Letters, 1999, 82, 665-665.	7.8	8
43	Study of nuclear dissipation via muon-induced fission. A relativistic lattice calculation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 293, 270-274.	4.1	7
44	Reply to "Comment on "Characterization of the tunneling conductance across DNA bases" Physical Review E, 2007, 76, 013902.	2.1	7
45	Muon-induced fission: A probe for nuclear dissipation and fission dynamics. Physical Review C, 1993, 48, 1297-1306.	2.9	6
46	Quantum dots in magnetic fields: Thermal response of broken-symmetry phases. Physical Review B, 2001, 64, .	3.2	6
47	Toward Electronic Conductance Characterization of DNA Nucleotide Bases. Solid State Phenomena, 2007, 121-123, 1387-1390.	0.3	6
48	Comparison of flux-correcting and spline algorithms for solving (3+1)-dimensional relativistic hydrodynamics. Physical Review E, 1994, 49, 1726-1733.	2.1	5
49	Multiscale Simulations of Carbon Nanotube Nucleation and Growth: Electronic Structure Calculations. Journal of Nanoscience and Nanotechnology, 2004, 4, 414-422.	0.9	5
50	Two growth modes of graphitic carbon nanofibers with herring-bone structure. Physical Review B, 2005, 72, .	3.2	5
51	Early experiences on Summit: Data analytics and AI applications. IBM Journal of Research and Development, 2019, 63, 2:1-2:9.	3.1	5
52	Integration of Titan supercomputer at OLCF with ATLAS Production System. Journal of Physics: Conference Series, 2017, 898, 092002.	0.4	4
53	Surface diffusion and size evolution of nanostructures in laser-focused atomic deposition. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 2758.	1.6	3
54	GMG "A guaranteed global optimization algorithm: Application to remote sensing. Mathematical and Computer Modelling, 2007, 45, 459-472.	2.0	3

#	ARTICLE	IF	CITATIONS
55	Integration Of PanDA Workload Management System With Supercomputers for ATLAS and Data Intensive Science. Journal of Physics: Conference Series, 2016, 762, 012021.	0.4	3
56	Preface to Special Topic: Building the Bridge to the Exascaleâ€™ Applications and Opportunities for Plasma Physics. Physics of Plasmas, 2021, 28, 090401.	1.9	3
57	Identification of User Facility Related Publications. D-Lib Magazine, 2012, 18, .	0.5	3
58	Low-Order Finite Element Solver with Small Matrix-Matrix Multiplication Accelerated by AI-Specific Hardware for Crustal Deformation Computation. , 2020, , .		3
59	Workflow Submit Nodes as a Service on Leadership Class Systems. , 2020, , .		3
60	PARALLEL IMPLEMENTATION OF 3 + 1-DIMENSIONAL RELATIVISTIC HYDRODYNAMICS. International Journal of Modern Physics C, 1993, 04, 1023-1040.	1.7	2
61	Site-Specific Attachment of Gold Nanoparticles to DNA Templates. Materials Research Society Symposia Proceedings, 2001, 635, C4.2.1.	0.1	2
62	Emergence of computational chaos in asynchronous neurocomputing. , 0, , .		1
63	Integration of Panda Workload Management System with supercomputers. Physics of Particles and Nuclei Letters, 2016, 13, 647-653.	0.4	1
64	Audience Based View of Publication Impact. , 2017, , .		1
65	Nonperturbative electromagnetic muon-pair production with capture in peripheral relativistic heavy-ion collisions. AIP Conference Proceedings, 1992, , .	0.4	0
66	The quantum structure of matter grand challenge project. , 1993, , .		0
67	The basis-spline collocation method. AIP Conference Proceedings, 1995, , .	0.4	0
68	Correlated Magnetoexcitons in Semiconductor Quantum Dots at Finite Temperature. Materials Research Society Symposia Proceedings, 1999, 579, 117.	0.1	0
69	Excess-photon ionization spectra and atomic structure in intense laser fields. AIP Conference Proceedings, 2000, , .	0.4	0
70	A Light-Fronts Approach to a Two-Center Time-Dependent Dirac Equation. Foundations of Physics, 2001, 31, 993-1015.	1.3	0
71	CAUSAL CLASSICAL THEORY OF RADIATION DAMPING. Modern Physics Letters A, 2002, 17, 1635-1642.	1.2	0
72	Modeling Impact of Execution Strategies on Resource Utilization. , 2018, , .		0

#	ARTICLE	IF	CITATIONS
73	Enabling Data Intensive Science on Supercomputers for High Energy Physics R&D Projects in HL-LHC Era. EPJ Web of Conferences, 2020, 226, 01007.	0.3	0
74	Multi-year Content Analysis of User Facility Related Publications. D-Lib Magazine, 2013, 19, .	0.5	0
75	Recent Progress in Nonperturbative Electromagnetic Lepton-Pair Production with Capture in Relativistic Heavy-Ion Collisions. NATO ASI Series Series B: Physics, 1994, , 777-785.	0.2	0
76	Perturbative and Nonperturbative Em Lepton Pair Production in Relativistic Heavy-Ion Collisions. NATO ASI Series Series B: Physics, 1994, , 569-578.	0.2	0