Donald J Kouri

List of Publications by Year
in descending order

98	2,536	185998	205818
papers	citations	28 h-index	48 g-index

99	99	99	573
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Noniterative Solutions of Integral Equations for Scattering. I. Single Channels. Journal of Chemical Physics, 1969, 51, 4809-4814.	1.2	248
2	Noniterative Solutions of Integral Equations for Scattering. II. Coupled Channels. Journal of Chemical Physics, 1969, 51, 4815-4819.	1.2	132
3	Coupled channel operator approach to eâ€H scattering. Journal of Mathematical Physics, 1973, 14, 1637-1642.	0.5	118
4	A timeâ€dependent wave packet approach to atomâ€“diatom reactive collision probabilities: Theory and application to the H+H2 (J=0) system. Journal of Chemical Physics, 1990, 93, 312-322.	1.2	114
5	General, energyâ€separable Faber polynomial representation of operator functions: Theory and application in quantum scattering. Journal of Chemical Physics, 1994, 101, 10493-10506.	1.2	97
6	Time dependent threeâ€dimensional body frame quantal wave packet treatment of the H+H2 exchange reaction on the Liuâ€“Siegbahnâ€“Truhlarâ€“Horowitz (LSTH) surface. Journal of Chemical Physics, 1989, 90, 5882-5884.	1.2	85
7	Variational principles for the timeâ€independent waveâ€packetâ€SchrÃ¶dinger and waveâ€packetâ€Lippmannâ€“Schwinger equations. Journal of Chemical Physics, 1994, 100, 3662-3671.	1.2	76
8	Sufficiency conditions for the validity of the jzâ€conserving coupled states approximation. Journal of Chemical Physics, 1976, 65, 1462-1473.	1.2	73
9	Accurate quantum mechanical reaction probabilities for the reaction O+H2â†'OH+H. Journal of Chemical Physics, 1987, 87, 1892-1894.	1.2	68
10	On the Lippmannâ€“Schwinger equation for atomâ€“diatom collisions: A rotating frame treatment. Journal of Chemical Physics, 1976, 65, 226-235.	1.2	67
11	The application of optical potentials for reactive scattering: A case study. Journal of Chemical Physics, 1990, 93, 2499-2505.	1.2	62
12	Quantum mechanical close coupling approach to molecular collisions: Averaged definite parity jz approximation with Clebschâ€“Gordan weights. Journal of Chemical Physics, 1977, 66, 2841-2849.	1.2	57
13	On the jzâ€conserving coupled states approximation: Magnetic transitions and angular distributions in rotating and fixed frames. Journal of Chemical Physics, 1977, 67, 86-98.	1.2	52
14	On accurate quantum mechanical approximations for molecular relaxation phenomena. Averaged jzâ€conserving coupled states approximation. Journal of Chemical Physics, 1977, 66, 542-547.	1.2	52
15	Variational derivation and extensions of distributed approximating functionals. Journal of Mathematical Chemistry, 1996, 20, 117-140.	0.7	52
16	Noniterative Solutions of Integral Equations for Scattering. III. Coupled Open and Closed Channels and Eigenvalue Problems. Journal of Chemical Physics, 1970, 52, 4144-4150.	1.2	50
17	Computational tests of angular momentum decoupling approximations for pressure broadening cross sections. Journal of Chemical Physics, 1977, 66, 1409-1412.	1.2	47
18	Locally solving fractional Laplacian viscoacoustic wave equation using Hermite distributed approximating functional method. Geophysics, 2017, 82, T59-T67.	1.4	43

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19	Noniterative Solutions of Integral Equations for Scattering. IV. Preliminary Calculations for Coupled Open Channels and Coupled Eigenvalue Problems. Journal of Chemical Physics, 1970, 53, 496-501.	1.2	40
20	Memory kernels from molecular dynamics. Journal of Chemical Physics, 1981, 75, 2462-2463.	1.2	40
21	Timeâ€dependent treatment of scattering: Integral equation approaches using the timeâ€dependent amplitude density. Journal of Chemical Physics, 1990, 92, 4167-4177.	1.2	40
22	Theory of Reactive Scattering. IV. Exact Quantum Mechanical Study of Angular Independent and Angular Dependent Models for Three Dimensional Rearrangement Collisions. Journal of Chemical Physics, 1972, 56, 1758-1768.	1.2	37
23	Distributed approximating functional fit of the H3 ab initio potential-energy data of Liu and Siegbahn. Journal of Chemical Physics, 1997, 107, 804-811.	1.2	36
24	Spectroscopic analysis of transition state energy levels: Bendingâ€“rotational spectrum and lifetime analysis of H3 quasibound states. Journal of Chemical Physics, 1989, 91, 5302-5309.	1.2	35
25	Accurate opacity functions for atomâ€“diatom scattering: Averaged definite parity jzâ€conserving approximation. Journal of Chemical Physics, 1976, 65, 3372-3373.	1.2	34
26	Inverse scattering theory: Renormalization of the Lippmann-Schwinger equation for acoustic scattering in one dimension. Physical Review E, 2003, 67, 046614.	0.8	31
27	Further analysis of solutions to the timeâ€independent wave packet equations for quantum dynamics: General initial wave packets. Journal of Chemical Physics, 1994, 101, 1242-1250.	1.2	30
28	Propagation method for the solution of the arrangementâ€channel coupling equations for reactive scattering in three dimensions. Journal of Chemical Physics, 1987, 86, 2772-2786.	1.2	29
29	Theory of Reactive Scattering. I. Homogeneous Integral Solution Formalism for the Rearrangement Ï„â€Operator Integral Equation. Journal of Chemical Physics, 1969, 51, 5204-5215.	1.2	28
30	Theory of Reactive Scattering. II. Application of the Ï„ Operator Formalism to a Linear Model for Three Body Rearrangements. Journal of Chemical Physics, 1972, 56, 4840-4847.	1.2	27
31	Comparison of quasiclassical trajectory calculations to accurate quantum mechanics for stateâ€toâ€state partial cross sections at low total angular momentum for the reaction D+H2â†'HD+H. Journal of Chemical Physics, 1989, 91, 1038-1042.	1.2	27
32	Quantum mechanical close coupling approach to molecular collisions. Averaged definite parity jzâ€conserving coupled states approximation. Journal of Chemical Physics, 1977, 66, 675-688.	1.2	26
33	Wave packet study of gas phase atomâ€“rigid rotor scattering. Journal of Chemical Physics, 1988, 89, 2958-2964.	1.2	26
34	Semiclassical and Quantum Mechanical Calculations of Isotopic Kinetic Branching Ratios for the Reactionof O(³P) with HD. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1989, 44, 427-434.	0.7	26
35	On the coupled states and infinite order sudden approximations to the body frame wavefunction. Journal of Chemical Physics, 1977, 67, 4534-4544.	1.2	24
36	Theory of Reactive Scattering. III. Exact Quantumâ€Mechanical Calculations for a Threeâ€Dimensional Model for Threeâ€Body Rearrangements. Journal of Chemical Physics, 1972, 57, 3441-3455.	1.2	21

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37	On predicting quantal cross sections by interpolation: Surprisal analysis of jzCCS and statistical jz results. Journal of Chemical Physics, 1976, 65, 4218-4227.	1.2	21
38	Supersymmetric Quantum Mechanics, Excited State Energies and Wave Functions, and the Rayleighâ˜Ritz Variational Principle: A Proof of Principle Study. Journal of Physical Chemistry A, 2009, 113, 15257-15264.	1.1	20
39	Comparisons of Morse and harmonic oscillator models for vibration-rotation excitation of H2 by Li+. Journal of Chemical Physics, 1974, 60, 2296-2304.	1.2	19
40	On combined statistical and jzâ€conserving coupled states approximations. Journal of Chemical Physics, 1976, 65, 706-711.	1.2	17
41	Particular and homogeneous solutions of time-independent wavepacket SchrÃ¶dinger equations: calculations using a subset of eigenstates of undamped or damped Hamiltonians. Theoretical Chemistry Accounts, 2000, 104, 471-483.	0.5	17
42	On the relative importance of spinâ€“spin and spinâ€“rotation relaxation in gas phase NMR. Journal of Chemical Physics, 1978, 69, 4999-5005.	1.2	16
43	Noniterative Solutions of Integral Equations for Scattering. V. Auxiliary T(kj) Matrix Formalism. Journal of Chemical Physics, 1971, 54, 878-890.	1.2	15
44	Quantum scattering theory of relaxation phenomena. Coupled states calculations of rotational relaxation and spectral line shapes in Heâ€“H2 gas mixtures. Journal of Chemical Physics, 1977, 66, 2452-2456.	1.2	15
45	Computational tests of the coupled states angular momentum decoupling approximation for NMR spinâ€“lattice relaxation cross sections. Journal of Chemical Physics, 1977, 67, 225-228.	1.2	15
46	Interacting distributed approximating functions for realâ€time quantum dynamics. Journal of Chemical Physics, 1993, 99, 1124-1134.	1.2	14
47	Extraction of dynamics from the resonance structure of HeH2+ spectra. Journal of Chemical Physics, 1995, 102, 7988-8000.	1.2	14
48	New Generalization of Supersymmetric Quantum Mechanics to Arbitrary Dimensionality or Number of Distinguishable Particles. Journal of Physical Chemistry A, 2010, 114, 8202-8216.	1.1	13
49	Nâ€Particle Noninteracting Green's Function. Journal of Mathematical Physics, 1972, 13, 809-813.	0.5	12
50	On representative orbital angular momentun quantum numbers in the definite parity jz CCS approximation. Journal of Chemical Physics, 1976, 65, 3958-3967.	1.2	12
51	Inverse scattering theory: Inverse scattering series method for one dimensional non-compact support potential. Journal of Mathematical Physics, 2014, 55, 123512.	0.5	12
52	Low-frequency reflection-data augmentation by an inpainting method: 1D acoustic media. Geophysics, 2015, 80, R139-R153.	1.4	12
53	Hermite Distributed Approximating Functionals as Almost-Ideal Low-Pass Filters. Sampling Theory in Signal and Information Processing, 2008, 7, 15-38.	0.2	11
54	Theory of Atomâ€“Diatom Collisions. III. An Integral Equation Formalism for Level Widths and Shifts. Journal of Chemical Physics, 1970, 52, 2556-2566.	1.2	10

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55	Integral Equation Approach to Bound State Atomic Systems. Preliminary Studies of Helium and Hydrogen. Journal of Chemical Physics, 1972, 57, 2487-2497.	1.2	10
56	Theory of reactive scattering. Molecular Physics, 1974, 27, 707-719.	0.8	10
57	Properties of Minimum Uncertainty Wavelets and Their Relations to the Harmonic Oscillator and the Coherent States. Journal of Physical Chemistry A, 2003, 107, 7318-7327.	1.1	10
58	Close Coupled Calculations of Electronâ€Hydrogen Atom Scattering Using a Noniterative Integral Equation Technique. Journal of Chemical Physics, 1972, 57, 4770-4781.	1.2	9
59	Theory of reactive scattering. VII. On the uncoupled channel operator equations for rearrangement. Journal of Chemical Physics, 1973, 58, 1914-1918.	1.2	9
60	A new method for accurately approximating individual Tâ€matrix elements in atomâ€“diatom collisions. Journal of Chemical Physics, 1976, 65, 5021-5023.	1.2	9
61	Reactant-product decoupling approach to half-scattering problems: Photodissociation of H2O in three dimensions. Journal of Chemical Physics, 1997, 107, 751-756.	1.2	8
62	Multidimensional Supersymmetric Quantum Mechanics: A Scalar Hamiltonian Approach to Excited States by the Imaginary Time Propagation Method. Journal of Physical Chemistry A, 2013, 117, 3449-3457.	1.1	8
63	Theory of Atomâ€“Diatom Collisions. II. Journal of Chemical Physics, 1968, 49, 4481-4499.	1.2	7
64	Quantum mechanical theory of three-body rearrangements: exact total cross-section calculations for a three-dimensional model. Molecular Physics, 1971, 22, 289-299.	0.8	7
65	Theory of Atomâ€“Diatom Collisions. IV. On Integral Equation Formalisms for Resonance Level Widths and Positions. Journal of Chemical Physics, 1971, 55, 1248-1256.	1.2	7
66	Quantum infinite order sudden approximation for ion-molecule reactions: Treatment of the He + H2+ system. International Journal of Quantum Chemistry, 1986, 30, 483-493.	1.0	7
67	On the role of parallel architecture supercomputers in time-dependent approaches to quantum scattering. Theoretica Chimica Acta, 1991, 79, 297-311.	0.9	7
68	Direct Approach to Density Functional Theory:Â Heavisideâ^'Fermi Level Operator Using a Pseudopotential Treatment. The Journal of Physical Chemistry, 1996, 100, 7903-7910.	2.9	7
69	A Spreadsheet Template for Quantum Mechanical Wavepacket Propagation. Journal of Chemical Education, 1997, 74, 335.	1.1	7
70	On the Mathematical Properties of Distributed Approximating Functionals. Journal of Mathematical Chemistry, 2001, 30, 83-107.	0.7	7
71	Reply to â€œComment on 'New Generalization of Supersymmetric Quantum Mechanics to Arbitrary Dimensionality or Number of Distinguishable Particles'â€. Journal of Physical Chemistry A, 2011, 115, 950-950.	1.1	7
72	New system-specific coherent states for bound state calculations. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 505302.	0.7	7

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73	A minimal subspace residual method for large-scale eigenvalue problems. Journal of Chemical Physics, 1999, 110, 8303-8308.	1.2	6
74	Comment on the Quantum Mechanical Collinear Model of Three Body Rearrangement Scattering. Journal of Chemical Physics, 1972, 56, 2491-2492.	1.2	5
75	Theory of reactive scattering. IV. Simple model for endoergic and exoergic collinear reactive collisions. Journal of Chemical Physics, 1973, 58, 1955-1963.	1.2	5
76	Estimating bounds on the highest and lowest eigenvalues of any matrix. Theoretical Chemistry Accounts, 2000, 103, 507-517.	0.5	5
77	The Heisenbergâ^'Weyl Algebra on the Circle and a Related Quantum Mechanical Model for Hindered Rotation. Journal of Physical Chemistry A, 2009, 113, 7698-7705.	1.1	5
78	Adiabatic switching approach to multidimensional supersymmetric quantum mechanics for several excited states. Molecular Physics, 2012, 110, 2977-2986.	0.8	5
79	New full-wave phase-shift approach to solve the Helmholtz acoustic wave equation for modeling. Geophysics, 2012, 77, T11-T27.	1.4	5
80	Forward Scattering and Volterra Renormalization for Acoustic Wavefield Propagation in Vertically Varying Media. Communications in Computational Physics, 2016, 20, 353-373.	0.7	5
81	Inverse Scattering Theory:Â Strategies Based on the Volterra Inverse Series for Acoustic Scatteringâ€. Journal of Physical Chemistry B, 2004, 108, 10522-10528.	1.2	4
82	Multidimensional Supersymmetric Quantum Mechanics: Spurious States for the Tensor Sector Two Hamiltonian. Journal of Physical Chemistry A, 2013, 117, 3442-3448.	1.1	4
83	Fourier and Beyond: Invariance Properties of a Family of Integral Transforms. Journal of Fourier Analysis and Applications, 2017, 23, 660-678.	0.5	4
84	Coupled supersymmetry and ladder structures beyond the harmonic oscillator. Molecular Physics, 2018, 116, 2599-2612.	0.8	4
85	Reply to â€œComment on `Noniterative Solutions of Integral Equations for Scattering' â€• Journal of Chemical Physics, 1970, 53, 1299-1300.	1.2	3
86	Theory of reactive scattering. Molecular Physics, 1971, 22, 421-431.	0.8	3
87	On the noniterative solution of integral equations for scattering of electromagnetic waves. Journal of Mathematical Physics, 1973, 14, 1116-1120.	0.5	3
88	Minimum uncertainty wavelets in non-relativistic super-symmetric quantum mechanics. Journal of Mathematical Chemistry, 2011, 49, 12-34.	0.7	3
89	Dual propagation inversion of truncated signals. Theoretical Chemistry Accounts, 2001, 105, 173-181.	0.5	2
90	Dual window selective median switching filter. , 2017, , .		2

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91	Point Transformations and Relationships among Linear Anomalous Diffusion, Normal Diffusion and the Central Limit Theorem. Applied Mathematics, 2018, 09, 178-197.	0.1	2
92	Low energy atomic collisions. Molecular Physics, 1971, 21, 609-633.	0.8	1
93	AN IMPLICIT METHOD FOR DATA PREDICTION AND IMPULSE NOISE REMOVAL FROM CORRUPTED SIGNALS. International Journal of Modern Physics C, 2002, 13, 565-583.	0.8	1
94	Volterra inverse scattering series method for oneâ€dimensional quantum barrier scattering. International Journal of Quantum Chemistry, 2017, 117, e25403.	1.0	1
95	Scattering amplitudes calculated with continuous space-filling curves. Molecular Physics, 1973, 26, 549-560.	0.8	0
96	Perspective on "Molecular collisions. VIII". Theoretical Chemistry Accounts, 2000, 103, 281-285.	0.5	0
97	Generalized newton variational principle-â„¢ amplitude density treatment of the 3-dimensional quantal reaction F + H2 â† HF(vf) + H: Comparison of reaction probabilities and state-to-state collisional delay times for zero and nonzero total angular momentum. International Journal of Quantum Chemistry, 2009, 36, 45-58.	1.0	0
98	Scaled Fourier Transforms and Heisenbergâ€™s Uncertainty Principle. Journal of the Chinese Chemical Society, 2016, 63, 145-149.	0.8	0