## **Charles A Wight**

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Applying High-performance Computing to Petascale Explosive Simulations. Procedia Computer Science, 2013, 18, 2259-2268.	2.0	2
2	The influence of an applied heat flux on the violence of reaction of an explosive device. , 2013, , .		3
3	Multiscale modeling of high explosives for transportation accidents. , 2012, , .		4
4	An Eulerian–Lagrangian computational model for deflagration and detonation of high explosives. Combustion and Flame, 2012, 159, 2491-2499.	5.2	15
5	Use of Condensed-Phase Reaction Models in Combustion Simulation of Energetic Materials. Journal of Propulsion and Power, 2008, 24, 175-183.	2.2	1
6	One-Dimensional Models. Advances in Chemical Physics, 2007, , 55-95.	0.3	10
7	Heavy Particle Transfer. Advances in Chemical Physics, 2007, , 309-336.	0.3	0
8	Hydrogen Transfer. Advances in Chemical Physics, 2007, , 151-207.	0.3	0
9	Tunneling Rotation. Advances in Chemical Physics, 2007, , 209-260.	0.3	0
10	From Thermal Activation to Tunneling. Advances in Chemical Physics, 2007, , 15-53.	0.3	0
11	Chemical Dynamics in the Presence of a Heat Bath. Advances in Chemical Physics, 2007, , 117-149.	0.3	0
12	Two-Dimensional Tunneling. Advances in Chemical Physics, 2007, , 97-116.	0.3	0
13	Vibration-Rotation Tunneling Spectroscopy of Molecules and Dimers. Advances in Chemical Physics, 2007, , 261-307.	0.3	1
14	Thermal Decomposition Kinetics of Hydrazinium Cerium 2,3-Pyrazinedicarboxylate Hydrate:  A New Precursor for CeO2. Journal of Physical Chemistry B, 2005, 109, 6126-6129.	2.6	27
15	Model-free treatment of the dehydration kinetics of nedocromil sodium trihydrate. Journal of Pharmaceutical Sciences, 2003, 92, 1367-1376.	3.3	48
16	Crystallization Kinetics of Amorphous Nifedipine Studied by Model-Fitting and Model-Free Approaches. Journal of Pharmaceutical Sciences, 2003, 92, 1779-1792.	3.3	83
17	HFCN open-shell isomers in solid argon. II. Excited-state tunneling isomerization HFC=N•→FC•=NH. Journal of Chemical Physics, 2002, 116, 10318-10324.	3.0	3
18	HFCN open-shell isomers in solid argon. I. Spectroscopy of the ground and excited states of HFC=N radical. Journal of Chemical Physics, 2002, 116, 10307-10317.	3.0	6

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19	Thermal Decomposition of a Melt-Castable High Explosive:Â Isoconversional Analysis of TNAZ. Journal of Physical Chemistry B, 2002, 106, 2791-2795.	2.6	13
20	Photochemical Formation and Reaction of Radical Pairs from NH3â^'F2Complexes Isolated in Solid Argonâ€. Journal of Physical Chemistry A, 2002, 106, 9756-9760.	2.5	6
21	Chemical Speciation and Dynamics in the Surface Combustion Zone of Energetic Materials. Journal of Propulsion and Power, 2002, 18, 824-834.	2.2	21
22	Thermal Activation of the High Explosive NTO:Â Sublimation, Decomposition, and Autocatalysis. Journal of Physical Chemistry B, 2002, 106, 4022-4026.	2.6	28
23	Hard to swallow dry: Kinetics and mechanism of the anhydrous thermal decomposition of acetylsalicylic acid. Journal of Pharmaceutical Sciences, 2002, 91, 800-809.	3.3	30
24	Dehydration kinetics of neotame monohydrate. Journal of Pharmaceutical Sciences, 2002, 91, 1423-1431.	3.3	35
25	Autocatalytic thermal decomposition kinetics of TNT. Thermochimica Acta, 2002, 388, 175-181.	2.7	37
26	EPR and infrared spectra of the HFCN• free radical stabilised in solid argon. Mendeleev Communications, 2001, 11, 64-66.	1.6	8
27	Hard to swallow dry: formation of linear and cyclic oligomers in the anhydrous thermal decomposition of acetylsalicylic acid. Perkin Transactions II RSC, 2001, , 436-437.	1.1	2
28	Infrared and EPR Spectroscopic Observation of Novel Open-Shell Species:Â The Fluoroiminomethyl Radical (FC•NH) in Solid Argon. Journal of the American Chemical Society, 2001, 123, 5156-5157.	13.7	7
29	Thermal Dissociation Kinetics of Solid and Liquid Ammonium Nitrate. Chemistry of Materials, 2001, 13, 960-966.	6.7	96
30	Kinetics of the Thermal and Thermo-Oxidative Degradation of Polystyrene, Polyethylene and Poly(propylene). Macromolecular Chemistry and Physics, 2001, 202, 775-784.	2.2	617
31	Synthesis, Thermal Stability and Impact Stability of Novel Tetranitro-Dipyridotetraazapentalene Derivatives. Propellants, Explosives, Pyrotechnics, 2000, 25, 75-80.	1.6	20
32	Competitive Vaporization and Decomposition of Liquid RDX. Journal of Physical Chemistry B, 2000, 104, 2570-2574.	2.6	62
33	Estimating Realistic Confidence Intervals for the Activation Energy Determined from Thermoanalytical Measurements. Analytical Chemistry, 2000, 72, 3171-3175.	6.5	89
34	Model-free and model-fitting approaches to kinetic analysis of isothermal and nonisothermal data. Thermochimica Acta, 1999, 340-341, 53-68.	2.7	1,111
35	Thermal decomposition kinetics of PBAN-binder and composite solid rocket propellants. Combustion and Flame, 1999, 119, 174-181.	5.2	48
36	Stabilizing effect of oxygen on thermal degradation of poly(methyl methacrylate). Macromolecular Rapid Communications, 1999, 20, 480-483.	3.9	42

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37	Kinetic Study of Stabilizing Effect of Oxygen on Thermal Degradation of Poly(methyl methacrylate). Journal of Physical Chemistry B, 1999, 103, 8087-8092.	2.6	154
38	Kinetics of Thermal Decomposition of Cubic Ammonium Perchlorate. Chemistry of Materials, 1999, 11, 3386-3393.	6.7	246
39	Infrared Spectroscopic Observation of the Stabilized Intermediate Complex FO3 Formed by Reaction of Mobile Fluorine Atoms with Ozone Molecules Trapped in an Argon Matrix. Journal of Physical Chemistry A, 1999, 103, 7972-7977.	2.5	20
40	Endothermic Formation of a Chemical Bond by Entropic Stabilization:Â Difluoronitroxide Radical in Solid Argon. Journal of the American Chemical Society, 1999, 121, 405-410.	13.7	18
41	Addition reactions of translationally hot fluorine atoms as a probe of long-range migration in crystalline argon: F+CO. Chemical Physics Letters, 1998, 293, 547-554.	2.6	17
42	Infrared and EPR spectra of F2NO radicals stabilised in solid argon. Mendeleev Communications, 1998, 8, 181-183.	1.6	1
43	Laser Photolysis of Matrix-Isolated Methyl Nitrate:  Experimental and Theoretical Characterization of the Infrared Spectrum of Imine Peroxide (HNOO). Journal of the American Chemical Society, 1998, 120, 12327-12333.	13.7	13
44	Infrared and EPR Spectra of the Difluoronitroxide Radical. Journal of the American Chemical Society, 1998, 120, 11520-11521.	13.7	15
45	Isothermal and non-isothermal kinetics of thermally stimulated reactions of solids. International Reviews in Physical Chemistry, 1998, 17, 407-433.	2.3	460
46	Laser Photodissociation and Thermal Pyrolysis of Energetic Polymers. Journal of Physical Chemistry B, 1997, 101, 2126-2131.	2.6	25
47	Thermal Decomposition of Ammonium Dinitramide at Moderate and High Temperatures. Journal of Physical Chemistry A, 1997, 101, 7217-7221.	2.5	46
48	Ammonium Dinitramide:Â Kinetics and Mechanism of Thermal Decomposition. Journal of Physical Chemistry A, 1997, 101, 5653-5658.	2.5	107
49	Isothermal and Nonisothermal Reaction Kinetics in Solids:Â In Search of Ways toward Consensus. Journal of Physical Chemistry A, 1997, 101, 8279-8284.	2.5	227
50	Migration of translationally excited fluorine atoms in solid argon and their reactions with small guest molecules. Chemical Physics Letters, 1997, 274, 23-28.	2.6	18
51	Thermal Decomposition Mechanism of NTO. The Journal of Physical Chemistry, 1996, 100, 8802-8806.	2.9	44
52	Theoretical and experimental studies of the structure and vibrational spectra of NTO. Journal of Molecular Structure, 1996, 384, 87-99.	3.6	46
53	Diffusionâ€limited geminate recombination of O+O2 in solid xenon. Journal of Chemical Physics, 1996, 104, 85-94.	3.0	28
54	Conformational Isomerization of 1,2-Difluoroethane in Solid Argon:Â Cage-Modified Reaction Barriers. The Journal of Physical Chemistry, 1996, 100, 14958-14961.	2.9	11

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55	Formation of β-Fluoroethyl Radical and Closed-Shell Products in Reactions of Photogenerated Fluorine Atoms with Ethene in Solid Argon. The Journal of Physical Chemistry, 1996, 100, 4496-4502.	2.9	18
56	Explosive Thermal Decomposition Mechanism of NTO. Materials Research Society Symposia Proceedings, 1995, 418, 379.	0.1	9
57	Detonation Chemistry Of Glycidyl Azide Polymer. Materials Research Society Symposia Proceedings, 1995, 418, 363.	0.1	0
58	Laserâ€generated shock waves in thin films of energetic materials. Journal of Applied Physics, 1995, 78, 7022-7025.	2.5	16
59	Dipole mechanism of line broadening in amorphous solids. Journal of Chemical Physics, 1995, 102, 67-74.	3.0	20
60	Shock-Initiated Chemistry of Energetic Materials. The Journal of Physical Chemistry, 1995, 99, 6584-6588.	2.9	16
61	Dipole broadened line shape of impurity chromophores isolated in a transparent matrix. Journal of Chemical Physics, 1995, 103, 9563-9567.	3.0	3
62	Infrared line shapes of clusters and microcrystals: Vibrational modes mixed by dipole interactions. Journal of Chemical Physics, 1994, 100, 972-977.	3.0	32
63	Photochemistry of ozone in solid mixtures with argon. Journal of Chemical Physics, 1994, 101, 292-298.	3.0	41
64	Photolysis of ozone and reactions of O(1D) atoms in solid nitrogen. Chemical Physics, 1994, 189, 307-314.	1.9	16
65	Explosive Thermal Decomposition Mechanism of RDX. The Journal of Physical Chemistry, 1994, 98, 5441-5444.	2.9	84
66	Inhomogeneous broadening of infrared and Raman spectral bands of amorphous and polycrystalline thin films. Journal of Chemical Physics, 1993, 99, 3374-3379.	3.0	42
67	Transient thin film laser pyrolysis of RDX. The Journal of Physical Chemistry, 1993, 97, 9149-9153.	2.9	52
68	Laser-initiated chain reactions and microexplosions in solid solutions of simple alkenes and chlorine. The Journal of Physical Chemistry, 1992, 96, 1288-1293.	2.9	7
69	Laser multiphoton dissociation–multiphoton ionization and photoelectron spectroscopy of Fe(C5H5)2, Co(C5H5)2, and Ni(C5H5)2. Journal of Chemical Physics, 1992, 97, 3115-3125.	3.0	13
70	Thin Film Infrared Laser Pyrolysis Studies of Thermal Decomposition Mechanisms in Nitramine Propellants. Materials Research Society Symposia Proceedings, 1992, 296, 47.	0.1	2
71	Magnetic field effect on reactions of radical pairs possessing large spin-orbit coupling constants. Journal of the American Chemical Society, 1992, 114, 9235-9236.	13.7	4
72	Thermal decomposition of solid RDX begins with nitrogen-nitrogen bond scission. Journal of the American Chemical Society, 1992, 114, 8303-8304.	13.7	53

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73	Pure Component Analysis of Chain Length Distributions from Solid-State Polymerization of Formaldehyde. Applied Spectroscopy, 1992, 46, 1799-1803.	2.2	11
74	Selectivity of isomeric product formation in solid state photochlorination reactions of methylcyclopentane and methylcyclohexane. Journal of Photochemistry and Photobiology A: Chemistry, 1992, 66, 193-203.	3.9	1
75	A statistical model of solid state chain reactions. Chemical Physics, 1992, 162, 393-400.	1.9	1
76	Laser multiphoton dissociation and multiphoton ionization of VOCl3. Chemical Physics, 1992, 165, 143-146.	1.9	0
77	Laser-initiated chain reactions and microexplosions in solid solutions of methylcyclopropane and chlorine. Chemical Physics, 1991, 156, 141-148.	1.9	4
78	Photopolymerization of amorphous formaldehyde: a mechanistic study. Journal of Photochemistry and Photobiology A: Chemistry, 1991, 60, 251-260.	3.9	3
79	Photochlorination of simple alkanes in cryogenic solids. The Journal of Physical Chemistry, 1990, 94, 2487-2492.	2.9	12
80	Infrared spectra of butenyl anions: multiphoton electron detachment as a photochemical probe of isomeric structures of gas phase anions. International Journal of Mass Spectrometry and Ion Processes, 1990, 100, 445-455.	1.8	6
81	Laser multiphoton ionization and photoelectron spectroscopy of Co(CO)3NO and Fe(CO)5. Journal of Chemical Physics, 1990, 93, 6186-6199.	3.0	26
82	Photodissociation of cobalt tricarbonylnitrosyl and its trialkylphosphine derivatives in the visible region: evidence for impulsive fragmentation of the nitrosyl ligand. The Journal of Physical Chemistry, 1990, 94, 4935-4940.	2.9	11
83	Photofragment spectroscopy of cobalt tricarbonylnitrosyl and its trialkylphosphine derivatives. Journal of Chemical Physics, 1989, 90, 1694-1700.	3.0	15
84	Laser-initiated polymerization of solid formaldehyde. The Journal of Physical Chemistry, 1989, 93, 2143-2147.	2.9	11
85	Photochemistry of solid ozone. The Journal of Physical Chemistry, 1989, 93, 509-511.	2.9	27
86	Photofragment spectroscopy of nitrosobenzene. Chemical Physics Letters, 1989, 154, 458-462.	2.6	7
87	Multiphoton electron detachment studies of C7H7â^' using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation. Chemical Physics, 1989, 134, 375-384.	1.9	12
88	Excited-state proton-transfer polymerization of amorphous formaldehyde. Journal of the American Chemical Society, 1989, 111, 1900-1901.	13.7	26
89	Laser-induced reaction and polymerization of formaldehyde in low-temperature amorphous solids. AIP Conference Proceedings, 1989, , .	0.4	0
90	Free radical chain reactions of chlorine with cyclobutane in the solid state: Evidence for radical migration via H atom transfer. Journal of Chemical Physics, 1988, 88, 2847-2848.	3.0	11

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91	Nitric oxide photofragment rotational distribution from UV dissociation of cyclopentadienylnickel nitrosyl. Journal of Chemical Physics, 1988, 88, 7418-7423.	3.0	14
92	Laser-initiated free-radical chlorination of propane in amorphous thin films: temperature dependence from 15 to 77 K. The Journal of Physical Chemistry, 1988, 92, 2821-2824.	2.9	3
93	Photochemical Chain Reactions in Amorphous Solids. Laser Chemistry, 1988, 9, 155-170.	0.5	3
94	Infrared fluorescence study of E–V energy transfer from Br*(4 2P1/2) to nitrosyl bromide. Journal of Chemical Physics, 1987, 86, 2787-2792.	3.0	8
95	Laser-initiated chain reactions of chlorine with propane and cyclopropane in amorphous films at 77 K. Journal of the American Chemical Society, 1987, 109, 6223-6229.	13.7	10
96	Infrared fluorescence studies of near-resonant electronic-to-vibrational energy-transfer collisions: atomic bromine(42P1/2) + nitric oxide. The Journal of Physical Chemistry, 1986, 90, 2683-2687.	2.9	6
97	Photofragment spectroscopy of ̄gh-cyclopentadienylnickel nitrosyl. Chemical Physics Letters, 1986, 132, 511-515.	2.6	8
98	A twoâ€laser pulseâ€andâ€probe study of Tâ€R, V energy transfer collisions of H+NO at 0.95 and 2.2 eV. Journal of Chemical Physics, 1985, 83, 660-667.	3.0	46
99	Vibrational energy disposal in reactive and inelastic collisions of H(D)+HCl(DCl) at 1–3 eV. Journal of Chemical Physics, 1984, 81, 3951-3957.	3.0	26
100	Infrared laser photodetachment of electrons from vibrationally excited allyl anions. The Journal of Physical Chemistry, 1984, 88, 4426-4430.	2.9	7
101	Excimer laser photolysis studies of translationalâ€ŧoâ€vibrational energy transfer in collisions of H and D atoms with CO. Journal of Chemical Physics, 1983, 78, 4875-4886.	3.0	55
102	Vibrational state distributions and absolute excitation efficiencies for Tâ€V transfer collisions of NO and CO with H atoms produced by excimer laser photolysis. Journal of Chemical Physics, 1983, 79, 4823-4829.	3.0	73
103	Infrared spectra of gas-phase ions and their use in elucidating reaction mechanisms. Identification of C7H7- structural isomers by multiphoton electron detachment using a low-power infrared laser. Journal of the American Chemical Society, 1981, 103, 6499-6501.	13.7	36
104	Infrared laser photochemistry of vibrationally excited cyanobenzene cation prepared by internal conversion following electronic excitation. Chemical Physics Letters, 1981, 77, 30-35.	2.6	17
105	Vacuum-ultraviolet photoionization of bromoform and its chlorine substituted counterparts during condensation with argon at 15 K. Journal of Molecular Spectroscopy, 1978, 73, 120-143.	1.2	12
106	Laser-Raman and emission spectra of the dibromide molecular anion in the M+Br2- species. Inorganic Chemistry, 1976, 15, 2147-2150.	4.0	25
107	On microwave discharge sources of new chemical species for matrixâ€isolation spectroscopy and the identification of charged species. Journal of Chemical Physics, 1976, 65, 1244-1249.	3.0	106
108	Laser-induced fluorescence and resonance Raman spectra of interhalogen diatomics isolated in inert matrices at 12 K. Journal of Molecular Spectroscopy, 1975, 56, 239-250.	1.2	35