

Charles A Wight

List of Publications by Year in descending order

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108
papers

5,130
citations

147566

31
h-index

88477

70
g-index

116
all docs

116
docs citations

116
times ranked

3908
citing authors

#	ARTICLE	IF	CITATIONS
1	Applying High-performance Computing to Petascale Explosive Simulations. <i>Procedia Computer Science</i> , 2013, 18, 2259-2268.	1.2	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. <i>Combustion and Flame</i> , 2012, 159, 2491-2499.	2.8	15
5	Use of Condensed-Phase Reaction Models in Combustion Simulation of Energetic Materials. <i>Journal of Propulsion and Power</i> , 2008, 24, 175-183.	1.3	1
6	One-Dimensional Models. <i>Advances in Chemical Physics</i> , 2007, , 55-95.	0.3	10
7	Heavy Particle Transfer. <i>Advances in Chemical Physics</i> , 2007, , 309-336.	0.3	0
8	Hydrogen Transfer. <i>Advances in Chemical Physics</i> , 2007, , 151-207.	0.3	0
9	Tunneling Rotation. <i>Advances in Chemical Physics</i> , 2007, , 209-260.	0.3	0
10	From Thermal Activation to Tunneling. <i>Advances in Chemical Physics</i> , 2007, , 15-53.	0.3	0
11	Chemical Dynamics in the Presence of a Heat Bath. <i>Advances in Chemical Physics</i> , 2007, , 117-149.	0.3	0
12	Two-Dimensional Tunneling. <i>Advances in Chemical Physics</i> , 2007, , 97-116.	0.3	0
13	Vibration-Rotation Tunneling Spectroscopy of Molecules and Dimers. <i>Advances in Chemical Physics</i> , 2007, , 261-307.	0.3	1
14	Thermal Decomposition Kinetics of Hydrazinium Cerium 2,3-Pyrazinedicarboxylate Hydrate: A New Precursor for CeO ₂ . <i>Journal of Physical Chemistry B</i> , 2005, 109, 6126-6129.	1.2	27
15	Model-free treatment of the dehydration kinetics of nedocromil sodium trihydrate. <i>Journal of Pharmaceutical Sciences</i> , 2003, 92, 1367-1376.	1.6	48
16	Crystallization Kinetics of Amorphous Nifedipine Studied by Model-Fitting and Model-Free Approaches. <i>Journal of Pharmaceutical Sciences</i> , 2003, 92, 1779-1792.	1.6	83
17	HFCN open-shell isomers in solid argon. II. Excited-state tunneling isomerization HFC=N ⁺ FC ⁻ =NH. <i>Journal of Chemical Physics</i> , 2002, 116, 10318-10324.	1.2	3
18	HFCN open-shell isomers in solid argon. I. Spectroscopy of the ground and excited states of HFC=N radical. <i>Journal of Chemical Physics</i> , 2002, 116, 10307-10317.	1.2	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.	1.2	13
20	Photochemical Formation and Reaction of Radical Pairs from NH ₃ âˆ²F ₂ Complexes Isolated in Solid Argonâ€€. Journal of Physical Chemistry A, 2002, 106, 9756-9760.	1.1	6
21	Chemical Speciation and Dynamics in the Surface Combustion Zone of Energetic Materials. Journal of Propulsion and Power, 2002, 18, 824-834.	1.3	21
22	Thermal Activation of the High Explosive NTO:Â Sublimation, Decomposition, and Autocatalysis. Journal of Physical Chemistry B, 2002, 106, 4022-4026.	1.2	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.	1.6	30
24	Dehydration kinetics of neotame monohydrate. Journal of Pharmaceutical Sciences, 2002, 91, 1423-1431.	1.6	35
25	Autocatalytic thermal decomposition kinetics of TNT. Thermochimica Acta, 2002, 388, 175-181.	1.2	37
26	EPR and infrared spectra of the HFCNâ€ free radical stabilised in solid argon. Mendeleev Communications, 2001, 11, 64-66.	0.6	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 (FCâ€NH) in Solid Argon. Journal of the American Chemical Society, 2001, 123, 5156-5157.	6.6	7
29	Thermal Dissociation Kinetics of Solid and Liquid Ammonium Nitrate. Chemistry of Materials, 2001, 13, 960-966.	3.2	96
30	Kinetics of the Thermal and Thermo-Oxidative Degradation of Polystyrene, Polyethylene and Poly(propylene). Macromolecular Chemistry and Physics, 2001, 202, 775-784.	1.1	617
31	Synthesis, Thermal Stability and Impact Stability of Novel Tetranitro-Dipyridotetraazapentalene Derivatives. Propellants, Explosives, Pyrotechnics, 2000, 25, 75-80.	1.0	20
32	Competitive Vaporization and Decomposition of Liquid RDX. Journal of Physical Chemistry B, 2000, 104, 2570-2574.	1.2	62
33	Estimating Realistic Confidence Intervals for the Activation Energy Determined from Thermoanalytical Measurements. Analytical Chemistry, 2000, 72, 3171-3175.	3.2	89
34	Model-free and model-fitting approaches to kinetic analysis of isothermal and nonisothermal data. Thermochimica Acta, 1999, 340-341, 53-68.	1.2	1,111
35	Thermal decomposition kinetics of PBAN-binder and composite solid rocket propellants. Combustion and Flame, 1999, 119, 174-181.	2.8	48
36	Stabilizing effect of oxygen on thermal degradation of poly(methyl methacrylate). Macromolecular Rapid Communications, 1999, 20, 480-483.	2.0	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.	1.2	154
38	Kinetics of Thermal Decomposition of Cubic Ammonium Perchlorate. Chemistry of Materials, 1999, 11, 3386-3393.	3.2	246
39	Infrared Spectroscopic Observation of the Stabilized Intermediate Complex FO ₃ Formed by Reaction of Mobile Fluorine Atoms with Ozone Molecules Trapped in an Argon Matrix. Journal of Physical Chemistry A, 1999, 103, 7972-7977.	1.1	20
40	Endothermic Formation of a Chemical Bond by Entropic Stabilization: A Difluoronitroxide Radical in Solid Argon. Journal of the American Chemical Society, 1999, 121, 405-410.	6.6	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.	1.2	17
42	Infrared and EPR spectra of F ₂ NO radicals stabilised in solid argon. Mendeleev Communications, 1998, 8, 181-183.	0.6	1
43	Laser Photolysis of Matrix-Isolated Methyl Nitrate: A Experimental and Theoretical Characterization of the Infrared Spectrum of Imine Peroxide (HNOO). Journal of the American Chemical Society, 1998, 120, 12327-12333.	6.6	13
44	Infrared and EPR Spectra of the Difluoronitroxide Radical. Journal of the American Chemical Society, 1998, 120, 11520-11521.	6.6	15
45	Isothermal and non-isothermal kinetics of thermally stimulated reactions of solids. International Reviews in Physical Chemistry, 1998, 17, 407-433.	0.9	460
46	Laser Photodissociation and Thermal Pyrolysis of Energetic Polymers. Journal of Physical Chemistry B, 1997, 101, 2126-2131.	1.2	25
47	Thermal Decomposition of Ammonium Dinitramide at Moderate and High Temperatures. Journal of Physical Chemistry A, 1997, 101, 7217-7221.	1.1	46
48	Ammonium Dinitramide: A Kinetics and Mechanism of Thermal Decomposition. Journal of Physical Chemistry A, 1997, 101, 5653-5658.	1.1	107
49	Isothermal and Nonisothermal Reaction Kinetics in Solids: A In Search of Ways toward Consensus. Journal of Physical Chemistry A, 1997, 101, 8279-8284.	1.1	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.	1.2	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.	1.8	46
53	Diffusion limited geminate recombination of O+O ₂ in solid xenon. Journal of Chemical Physics, 1996, 104, 85-94.	1.2	28
54	Conformational Isomerization of 1,2-Difluoroethane in Solid Argon: A Cage-Modified Reaction Barriers. The Journal of Physical Chemistry, 1996, 100, 14958-14961.	2.9	11

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55	Formation of $\dot{\text{C}}\text{H}_2$ -Fluoroethyl Radical and Closed-Shell Products in Reactions of Photogenerated Fluorine Atoms with Ethene in Solid Argon. <i>The Journal of Physical Chemistry</i> , 1996, 100, 4496-4502.	2.9	18
56	Explosive Thermal Decomposition Mechanism of NTO. <i>Materials Research Society Symposia Proceedings</i> , 1995, 418, 379.	0.1	9
57	Detonation Chemistry Of Glycidyl Azide Polymer. <i>Materials Research Society Symposia Proceedings</i> , 1995, 418, 363.	0.1	0
58	Laser-generated shock waves in thin films of energetic materials. <i>Journal of Applied Physics</i> , 1995, 78, 7022-7025.	1.1	16
59	Dipole mechanism of line broadening in amorphous solids. <i>Journal of Chemical Physics</i> , 1995, 102, 67-74.	1.2	20
60	Shock-Initiated Chemistry of Energetic Materials. <i>The Journal of Physical Chemistry</i> , 1995, 99, 6584-6588.	2.9	16
61	Dipole broadened line shape of impurity chromophores isolated in a transparent matrix. <i>Journal of Chemical Physics</i> , 1995, 103, 9563-9567.	1.2	3
62	Infrared line shapes of clusters and microcrystals: Vibrational modes mixed by dipole interactions. <i>Journal of Chemical Physics</i> , 1994, 100, 972-977.	1.2	32
63	Photochemistry of ozone in solid mixtures with argon. <i>Journal of Chemical Physics</i> , 1994, 101, 292-298.	1.2	41
64	Photolysis of ozone and reactions of O(1D) atoms in solid nitrogen. <i>Chemical Physics</i> , 1994, 189, 307-314.	0.9	16
65	Explosive Thermal Decomposition Mechanism of RDX. <i>The Journal of Physical Chemistry</i> , 1994, 98, 5441-5444.	2.9	84
66	Inhomogeneous broadening of infrared and Raman spectral bands of amorphous and polycrystalline thin films. <i>Journal of Chemical Physics</i> , 1993, 99, 3374-3379.	1.2	42
67	Transient thin film laser pyrolysis of RDX. <i>The Journal of Physical Chemistry</i> , 1993, 97, 9149-9153.	2.9	52
68	Laser-initiated chain reactions and microexplosions in solid solutions of simple alkenes and chlorine. <i>The Journal of Physical Chemistry</i> , 1992, 96, 1288-1293.	2.9	7
69	Laser multiphoton dissociation—multiphoton ionization and photoelectron spectroscopy of $\text{Fe}(\text{C}_5\text{H}_5)_2$, $\text{Co}(\text{C}_5\text{H}_5)_2$, and $\text{Ni}(\text{C}_5\text{H}_5)_2$. <i>Journal of Chemical Physics</i> , 1992, 97, 3115-3125.	1.2	13
70	Thin Film Infrared Laser Pyrolysis Studies of Thermal Decomposition Mechanisms in Nitramine Propellants. <i>Materials Research Society Symposia Proceedings</i> , 1992, 296, 47.	0.1	2
71	Magnetic field effect on reactions of radical pairs possessing large spin-orbit coupling constants. <i>Journal of the American Chemical Society</i> , 1992, 114, 9235-9236.	6.6	4
72	Thermal decomposition of solid RDX begins with nitrogen-nitrogen bond scission. <i>Journal of the American Chemical Society</i> , 1992, 114, 8303-8304.	6.6	53

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73	Pure Component Analysis of Chain Length Distributions from Solid-State Polymerization of Formaldehyde. <i>Applied Spectroscopy</i> , 1992, 46, 1799-1803.	1.2	11
74	Selectivity of isomeric product formation in solid state photochlorination reactions of methylcyclopentane and methylcyclohexane. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1992, 66, 193-203.	2.0	1
75	A statistical model of solid state chain reactions. <i>Chemical Physics</i> , 1992, 162, 393-400.	0.9	1
76	Laser multiphoton dissociation and multiphoton ionization of VOCl ₃ . <i>Chemical Physics</i> , 1992, 165, 143-146.	0.9	0
77	Laser-initiated chain reactions and microexplosions in solid solutions of methylcyclopropane and chlorine. <i>Chemical Physics</i> , 1991, 156, 141-148.	0.9	4
78	Photopolymerization of amorphous formaldehyde: a mechanistic study. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1991, 60, 251-260.	2.0	3
79	Photochlorination of simple alkanes in cryogenic solids. <i>The Journal of Physical Chemistry</i> , 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. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1990, 100, 445-455.	1.9	6
81	Laser multiphoton ionization and photoelectron spectroscopy of Co(CO) ₃ NO and Fe(CO) ₅ . <i>Journal of Chemical Physics</i> , 1990, 93, 6186-6199.	1.2	26
82	Photodissociation of cobalt tricarbonylnitrosyl and its trialkylphosphine derivatives in the visible region: evidence for impulsive fragmentation of the nitrosyl ligand. <i>The Journal of Physical Chemistry</i> , 1990, 94, 4935-4940.	2.9	11
83	Photofragment spectroscopy of cobalt tricarbonylnitrosyl and its trialkylphosphine derivatives. <i>Journal of Chemical Physics</i> , 1989, 90, 1694-1700.	1.2	15
84	Laser-initiated polymerization of solid formaldehyde. <i>The Journal of Physical Chemistry</i> , 1989, 93, 2143-2147.	2.9	11
85	Photochemistry of solid ozone. <i>The Journal of Physical Chemistry</i> , 1989, 93, 509-511.	2.9	27
86	Photofragment spectroscopy of nitrosobenzene. <i>Chemical Physics Letters</i> , 1989, 154, 458-462.	1.2	7
87	Multiphoton electron detachment studies of C ₇ H ₇ ⁺ using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation. <i>Chemical Physics</i> , 1989, 134, 375-384.	0.9	12
88	Excited-state proton-transfer polymerization of amorphous formaldehyde. <i>Journal of the American Chemical Society</i> , 1989, 111, 1900-1901.	6.6	26
89	Laser-induced reaction and polymerization of formaldehyde in low-temperature amorphous solids. <i>AIP Conference Proceedings</i> , 1989, . .	0.3	0
90	Free radical chain reactions of chlorine with cyclobutane in the solid state: Evidence for radical migration via H atom transfer. <i>Journal of Chemical Physics</i> , 1988, 88, 2847-2848.	1.2	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.	1.2	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 \hat{e} V energy transfer from Br*(4 \hat{a} %2P1/2) to nitrosyl bromide. Journal of Chemical Physics, 1987, 86, 2787-2792.	1.2	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.	6.6	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 l \hat{a} ,gh-cyclopentadienylnickel nitrosyl. Chemical Physics Letters, 1986, 132, 511-515.	1.2	8
98	A two \hat{a} laser pulse \hat{a} and \hat{a} probe study of T \hat{a} R, V energy transfer collisions of H+NO at 0.95 and 2.2 eV. Journal of Chemical Physics, 1985, 83, 660-667.	1.2	46
99	Vibrational energy disposal in reactive and inelastic collisions of H(D)+HCl(DCl) at 1 \hat{a} %3 eV. Journal of Chemical Physics, 1984, 81, 3951-3957.	1.2	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 translational \hat{a} to \hat{a} vibrational energy transfer in collisions of H and D atoms with CO. Journal of Chemical Physics, 1983, 78, 4875-4886.	1.2	55
102	Vibrational state distributions and absolute excitation efficiencies for T \hat{a} V transfer collisions of NO and CO with H atoms produced by excimer laser photolysis. Journal of Chemical Physics, 1983, 79, 4823-4829.	1.2	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.	6.6	36
104	Infrared laser photochemistry of vibrationally excited cyanobenzene cation prepared by internal conversion following electronic excitation. Chemical Physics Letters, 1981, 77, 30-35.	1.2	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.	0.4	12
106	Laser-Raman and emission spectra of the dibromide molecular anion in the M+Br2- species. Inorganic Chemistry, 1976, 15, 2147-2150.	1.9	25
107	On microwave discharge sources of new chemical species for matrix \hat{a} isolation spectroscopy and the identification of charged species. Journal of Chemical Physics, 1976, 65, 1244-1249.	1.2	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.	0.4	35