Ghanshyam L Vaghjiani

List of Publications by Year
in descending order

74	2,687	186209 28	182361 51
papers	citations	h-index	g-index

76	76	76	1873
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Iridium catalyst detection by laser induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, 187, 106327.	1.5	2
2	Thermal and Catalytic Decomposition of 2-Hydroxyethylhydrazine and 2-Hydroxyethylhydrazinium Nitrate Ionic Liquid. Journal of Physical Chemistry A, 2022, 126, 373-394.	1.1	4
3	Structures, proton transfer and dissociation of hydroxylammonium nitrate (HAN) revealed by electrospray ionization tandem mass spectrometry and molecular dynamics simulations. Physical Chemistry Chemical Physics, 2022, 24, 14033-14043.	1.3	4
4	Study of the Reaction of Hydroxylamine with Iridium Atomic and Cluster Anions (n = 1â€“5). Journal of Physical Chemistry A, 2021, 125, 5922-5932.	1.1	6
5	Experimental and Theoretical Investigations of the Radicalâ€“Radical Reaction: N₂H₃ + NO₂. Journal of Physical Chemistry A, 2020, 124, 10434-10446.	1.1	2
6	Molecular Dynamics Simulations, Reaction Pathway and Mechanism Dissection, and Kinetics Modeling of the Nitric Acid Oxidation of Dicyanamide and Dicyanoborohydride Anions. Journal of Physical Chemistry B, 2020, 124, 11175-11188.	1.2	6
7	Ionic Liquid Clusters Generated from Electrospray Thrusters: Cold Ion Spectroscopic Signatures of Size-Dependent Acidâ€“Base Interactions. Journal of Physical Chemistry A, 2020, 124, 10507-10516.	1.1	9
8	Molecular Dynamics Simulations and Product Vibrational Spectral Analysis for the Reactions of NO₂ with 1-Ethyl-3-methylimidazolium Dicyanamide (EMIM⁺DCA^{â€“}), 1-Butyl-3-methylimidazolium Dicyanamide (BMIM⁺DCA^{â€“}), and 1-Allyl-3-methylimidazolium Dicyanamide (AMIM⁺DCA^{â€“}). Journal of Physical Chemistry B, 2020, 124, 4303-4325.	1.2	7
9	Two-stage decomposition of 2-hydroxyethylhydrazinium nitrate (HEHN). Combustion and Flame, 2020, 220, 1-6.	2.8	6
10	Thermal Decomposition and Hypergolic Reaction of a Dicyanoborohydride Ionic Liquid. Journal of Physical Chemistry A, 2020, 124, 864-874.	1.1	10
11	Ab Initio Kinetics of Methylamine Radical Thermal Decomposition and H-Abstraction from Monomethylhydrazine by H-Atom. Journal of Physical Chemistry A, 2020, 124, 3747-3753.	1.1	5
12	Thermal Decomposition of Hydroxylammonium Nitrate: ReaxFF Training Set Development for Molecular Dynamics Simulations. , 2019, , .		2
13	Computational Study of the Reaction of 1-Methyl-4-amino-1,2,4-triazolium Dicyanamide with NO₂: From Reaction Dynamics to Potential Surfaces, Kinetics and Spectroscopy. Journal of Physical Chemistry B, 2019, 123, 2956-2970.	1.2	8
14	Ignition Delay Reduction with Sodium Addition to Imidazolium-Based Dicyanamide Ionic Liquid. Journal of Physical Chemistry A, 2019, 123, 10-14.	1.1	11
15	Combustion Behavior of High Energy Density Boraneâ€“Aluminum Nanoparticles in Hypergolic Ionic Liquids. Energy & Fuels, 2018, 32, 7898-7908.	2.5	10
16	Temperature Jump Pyrolysis Studies of RP-2 Fuel. , 2017, , .		0
17	Catalytic Decomposition of Hydroxylammonium Nitrate Ionic Liquid: Enhancement of NO Formation. Journal of Physical Chemistry Letters, 2017, 8, 2126-2130.	2.1	33
18	Method for predicting hypergolic mixture flammability limits: Application for non-ionic liquid based systems. Combustion and Flame, 2017, 176, 547-553.	2.8	4

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19	Spectroscopic Investigation of the Primary Reaction Intermediates in the Oxidation of Levitated Droplets of Energetic Ionic Liquids. Journal of Physical Chemistry Letters, 2017, 8, 6053-6059.	2.1	17
20	Flow-Tube Investigations of Hypergolic Reactions of a Dicyanamide Ionic Liquid Via Tunable Vacuum Ultraviolet Aerosol Mass Spectrometry. Journal of Physical Chemistry A, 2016, 120, 8011-8023.	1.1	28
21	Anab initioBased Structure Property Relationship for Prediction of Ignition Delay of Hypergolic Ionic Liquids. Propellants, Explosives, Pyrotechnics, 2015, 40, 759-764.	1.0	14
22	Ab initio kinetics and thermal decomposition mechanism of mononitrobiuret and 1,5-dinitrobiuret. Journal of Chemical Physics, 2015, 142, 204301.	1.2	1
23	Binding of Alkenes and Ionic Liquids to Bâ€“H-Functionalized Boron Nanoparticles: Creation of Particles with Controlled Dispersibility and Minimal Surface Oxidation. ACS Applied Materials & Interfaces, 2015, 7, 9991-10003.	4.0	29
24	Molecular Orbital Based Design Guideline for Hypergolic Ionic Liquids. Propellants, Explosives, Pyrotechnics, 2015, 40, 144-149.	1.0	15
25	Dynamics Simulations and Statistical Modeling of Thermal Decomposition of 1-Ethyl-3-methylimidazolium Dicyanamide and 1-Ethyl-2,3-dimethylimidazolium Dicyanamide. Journal of Physical Chemistry A, 2014, 118, 11133-11144.	1.1	17
26	Thermal Decomposition Mechanisms of Alkylimidazolium Ionic Liquids with Cyano-Functionalized Anions. Journal of Physical Chemistry A, 2014, 118, 11119-11132.	1.1	49
27	Direct Dynamics Simulation of the Activation and Dissociation of 1,5-Dinitrobiuret (HDNB). Journal of Physical Chemistry A, 2014, 118, 2228-2236.	1.1	12
28	Helium Nanodroplet Isolation and Infrared Spectroscopy of the Isolated Ion-Pair 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide. Journal of Physical Chemistry A, 2013, 117, 9047-9056.	1.1	34
29	Ultraviolet Photoionization Efficiency of the Vaporized Ionic Liquid 1-Butyl-3-methylimidazolium Tricyanomethanide: Direct Detection of the Intact Ion Pair. Journal of Physical Chemistry Letters, 2012, 3, 2910-2914.	2.1	17
30	Thermal Decomposition Mechanism of 1-Ethyl-3-methylimidazolium Bromide Ionic Liquid. Journal of Physical Chemistry A, 2012, 116, 5867-5876.	1.1	57
31	Chemical kinetics interpretation of hypergolicity of dicyanamide ionic liquid-based systems. Combustion and Flame, 2012, 159, 1759-1768.	2.8	21
32	Reactions of Ions with Ionic Liquid Vapors by Selected-Ion Flow Tube Mass Spectrometry. Journal of Physical Chemistry Letters, 2011, 2, 874-879.	2.1	9
33	Soft Ionization of Thermally Evaporated Hypergolic Ionic Liquid Aerosols. Journal of Physical Chemistry A, 2011, 115, 4630-4635.	1.1	23
34	Thermal Decomposition of 1,5-Dinitrobiuret (DNB): Direct Dynamics Trajectory Simulations and Statistical Modeling. Journal of Physical Chemistry A, 2011, 115, 8064-8072.	1.1	11
35	Generation of Melamine Polymer Condensates upon Hypergolic Ignition of Dicyanamide Ionic Liquids. Angewandte Chemie - International Edition, 2011, 50, 8634-8637.	7.2	38
36	Tunable Wavelength Soft Photoionization of Ionic Liquid Vapors. Journal of Physical Chemistry A, 2010, 114, 879-883.	1.1	29

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37	Heats of Vaporization of Room Temperature Ionic Liquids by Tunable Vacuum Ultraviolet Photoionization. Journal of Physical Chemistry B, 2010, 114, 1361-1367.	1.2	49
38	Resonant Laser Ignition Study of HAN-HEHN Propellant Mixture. Combustion Science and Technology, 2009, 181, 902-913.	1.2	11
39	Thermochemistry of Species Potentially Formed During NTO/MMH Hypergolic Ignition. Propellants, Explosives, Pyrotechnics, 2008, 33, 209-212.	1.0	30
40	Ionic Liquids as Hypergolic Fuels. Energy & Fuels, 2008, 22, 2871-2872.	2.5	308
41	Liquid Azide Salts and Their Reactions with Common Oxidizers IRFNA and N₂O₄. Inorganic Chemistry, 2008, 47, 6082-6089.	1.9	63
42	Fourier Transform Infrared Studies in Hypergolic Ignition of Ionic Liquids. Journal of Physical Chemistry A, 2008, 112, 7816-7824.	1.1	123
43	Highly accurate ignition delay apparatus for hypergolic fuel research. Review of Scientific Instruments, 2006, 77, 045109.	0.6	21
44	248-nm Laser Photolysis of CHBr3/O-Atom Mixtures:Â Kinetic Evidence for UV CO(A) Chemiluminescence in the Reaction of Methylidyne Radicals with Atomic Oxygen. Journal of Physical Chemistry A, 2005, 109, 2197-2206.	1.1	0
45	Kinetics of CH radicals with O2: Evidence for CO chemiluminescence in the gas phase reaction. Journal of Chemical Physics, 2003, 119, 5388-5396.	1.2	11
46	Investigations of chemiluminescence in the CH2 + O gas phase reaction. , 2001, , .		0
47	Gas Phase Reaction Kinetics of O Atoms with (CH3)2NNH2, CH3NHNH2, and N2H4, and Branching Ratios of the OH Product. Journal of Physical Chemistry A, 2001, 105, 4682-4690.	1.1	21
48	Kinetics of OH reactions with N2H4, CH3NHNH2 and (CH3)2NNH2 in the gas phase. International Journal of Chemical Kinetics, 2001, 33, 354-362.	1.0	14
49	OH(OD) + CO: Measurements and an Optimized RRKM Fit. Journal of Physical Chemistry A, 1998, 102, 8598-8606.	1.1	120
50	Reaction kinetics of O(3P) and OH with diamine rocket fuels. , 1998, , .		0
51	UV Absorption Cross Sections, Laser Photodissociation Product Quantum Yields, and Reactions of H Atoms with Methylhydrazines at 298 K. Journal of Physical Chemistry A, 1997, 101, 4167-4171.	1.1	23
52	Rate Coefficients for the Reactions of Hydroxyl Radicals with Methane and Deuterated Methanes. Journal of Physical Chemistry A, 1997, 101, 3125-3134.	1.1	135
53	Discharge flowâ€tube studies of O(3P)+N2H4 reaction: The rate coefficient values over the temperature range 252â€“423 K and the OH(Xâ€‰2Î) product yield at 298 K. Journal of Chemical Physics, 1996, 104, 5479-5489.	1.2	20
54	Laser photolysis studies of hydrazine vapor: 193 and 222-nm H-atom primary quantum yields at 296 K, and the kinetics of H + N2H4 reaction over the temperature range 222-657 K. International Journal of Chemical Kinetics, 1995, 27, 777-790.	1.0	36

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55	Ultraviolet absorption cross sections for N2H4vapor between 191â€“291 nm and H(2S) quantum yield in 248 nm photodissociation at 296 K. Journal of Chemical Physics, 1993, 98, 2123-2131.	1.2	34
56	CH3SH ultraviolet absorption cross sections in the region 192.5â€“309.5 nm and photodecomposition at 222 and 193 nm and 296 K. Journal of Chemical Physics, 1993, 99, 5936-5943.	1.2	46
57	Photodissociation of HNO3 at 193, 222, and 248 nm: Products and quantum yields. Journal of Chemical Physics, 1992, 96, 5887-5895.	1.2	66
58	Photodissociation of H2O2 at 193 and 222 nm: Products and quantum yields. Journal of Chemical Physics, 1992, 96, 5878-5886.	1.2	48
59	Photodissociation of bromocarbons at 193, 222, and 248 nm: Quantum yields of Br atom at 298 K. Journal of Chemical Physics, 1992, 96, 8194-8201.	1.2	42
60	Atmospheric fate of CF₃Br, CF₂Br₂, CF₂ClBr, and CF₂BrCF₂BR. Journal of Geophysical Research, 1991, 96, 5025-5043.	3.3	53
61	Atmospheric fate of hydrofluoroethanes and hydrofluorochloroethanes: 1. Rate coefficients for reactions with OH. Journal of Geophysical Research, 1991, 96, 5001-5011.	3.3	52
62	New measurement of the rate coefficient for the reaction of OH with methane. Nature, 1991, 350, 406-409.	13.7	217
63	The photochemistry of ozone at 193 and 222 nm. Journal of Chemical Physics, 1991, 95, 3244-3251.	1.2	78
64	The rate coefficient for the reaction of O(3P) with CH3OOH at 297 K. International Journal of Chemical Kinetics, 1990, 22, 351-358.	1.0	9
65	Photodissociation of H2O2 and CH3OOH at 248 nm and 298 K: Quantum yields for OH, O(3P) and H(2S). Journal of Chemical Physics, 1990, 92, 996-1003.	1.2	118
66	Reaction probabilities, cross sections, and threshold energies in the reaction of isotopically pure H atoms and nâ€butane. Journal of Chemical Physics, 1989, 91, 5121-5123.	1.2	10
67	Absorption cross sections of CH₃OOH, H₂O₂, and D₂O₂ vapors between 210 and 365 nm at 297 K. Journal of Geophysical Research, 1989, 94, 3487-3492.	3.3	99
68	Kinetics and mechanism of hydroxyl radical reaction with methyl hydroperoxide. The Journal of Physical Chemistry, 1989, 93, 1948-1959.	2.9	183
69	Reactions of hydroxyl and hydroxyl-d with hydrogen peroxide and hydrogen peroxide-d2. The Journal of Physical Chemistry, 1989, 93, 7833-7837.	2.9	45
70	Reaction cross sections and threshold energy in the reaction of isotopically pure H atoms and ethane. Journal of Chemical Physics, 1988, 89, 3388-3389.	1.2	8
71	Quenching of OD (Aâ€‰2Î£+,vâ€²=0 and 1) by various gases. Journal of Chemical Physics, 1987, 87, 7050-7058.	1.2	15
72	Reaction probabilities and cross-sections in the reaction of isotopically pure hydrogen atoms and propane. Journal of the Chemical Society, Faraday Transactions 2, 1987, 83, 607.	1.1	12

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73	Reaction probabilities for the reactions of hydrogen atoms at selected initial energies in hydrogen iodideâ€“iodine mixtures. Journal of the Chemical Society, Faraday Transactions 2, 1986, 82, 737-743.	1.1	1
74	Reaction probabilities and threshold energy in the reaction of isotopically pure hydrogen atoms and ethane. Journal of the Chemical Society, Faraday Transactions 2, 1986, 82, 1945.	1.1	3