

Mark A Buntine

List of Publications by Year in descending order

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81
papers

1,669
citations

257357

24
h-index

330025

37
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84
all docs

84
docs citations

84
times ranked

1557
citing authors

#	ARTICLE	IF	CITATIONS
1	Perceptions and Misconceptions about the Undergraduate Laboratory from Chemistry, Physics and Biology Academics. <i>International Journal of Innovation in Science and Mathematics Education</i> , 2020, 28, .	0.1	0
2	Collisional electrochemistry of laser-ablated gold nanoparticles by electrocatalytic oxidation of glucose. <i>Electrochemistry Communications</i> , 2017, 77, 24-27.	2.3	16
3	Laser-Based Formation of Copper Nanoparticles in Aqueous Solution: Optical Properties, Particle Size Distributions, and Formation Kinetics. <i>Australian Journal of Chemistry</i> , 2017, 70, 1212.	0.5	2
4	Development, Evaluation and Use of a Student Experience Survey in Undergraduate Science Laboratories: The Advancing Science by Enhancing Learning in the Laboratory Student Laboratory Learning Experience Survey. <i>International Journal of Science Education</i> , 2015, 37, 1795-1814.	1.0	27
5	Influence of Cationic Surfactants on the Formation and Surface Oxidation States of Gold Nanoparticles Produced via Laser Ablation. <i>Langmuir</i> , 2013, 29, 12452-12462.	1.6	32
6	The timing of an experiment in the laboratory program is crucial for the student laboratory experience: acylation of ferrocene as a case study. <i>Chemistry Education Research and Practice</i> , 2013, 14, 476-484.	1.4	4
7	Influence of Surfactant Concentration on Laser-Based Gold Nanoparticle Formation and Stability. <i>Australian Journal of Chemistry</i> , 2012, 65, 97.	0.5	3
8	Translational and rotational energy content of benzene molecules IR-desorbed from an in vacuo liquid surface. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 9185.	1.3	0
9	Anion-π Interactions of Hexaaryl[3]radialenes. <i>Journal of Physical Chemistry A</i> , 2012, 116, 8001-8007.	1.1	14
10	Facile Decarboxylation of Propiolic Acid on a Ruthenium Center and Related Chemistry. <i>Organometallics</i> , 2012, 31, 5262-5273.	1.1	13
11	A disconnect between staff and student perceptions of learning: an ACELL educational analysis of the first year undergraduate chemistry experiment "investigating sugar using a home made polarimeter". <i>Chemistry Education Research and Practice</i> , 2011, 12, 469-477.	1.4	10
12	Photoreduction Kinetics of Sodium Tetrachloroaurate under Synchrotron Soft X-ray Exposure. <i>Langmuir</i> , 2011, 27, 8099-8104.	1.6	63
13	The dynamics of evaporation from a liquid surface. <i>Chemical Physics Letters</i> , 2011, 513, 1-11.	1.2	13
14	Laser-Based Formation and Properties of Gold Nanoparticles in Aqueous Solution: Formation Kinetics and Surfactant-Modified Particle Size Distributions. <i>Journal of Physical Chemistry C</i> , 2010, 114, 15931-15940.	1.5	26
15	Photoionization efficiency spectroscopy and density functional theory investigations of RhHo ₂ O _n (n=0-2) clusters. <i>Journal of Chemical Physics</i> , 2009, 130, 164311.	1.2	5
16	Benzene Internal Energy Distributions Following Spontaneous Evaporation from a Water-Ethanol Solution. <i>Journal of Physical Chemistry C</i> , 2009, 113, 637-643.	1.5	11
17	Study of the Isomers of Isolelectronic C ₄ , (C ₃ B) ⁺ , and (C ₃ N) ⁺ : Rearrangements through Cyclic Isomers. <i>Journal of Physical Chemistry A</i> , 2009, 113, 12952-12960.	1.1	7
18	Onset of carbon-carbon bonding in the Nb ₅ C _y (y = 0-6) clusters: a threshold photo-ionisation and density functional theory study. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 1060-1068.	1.3	12

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19	Measuring the internal energy content of molecules transported across the liquid-gas interface. <i>Journal of Physics: Conference Series</i> , 2009, 185, 012027.	0.3	2
20	What Makes a Good Laboratory Learning Exercise? Student Feedback from the ACELL Project. , 2009, , 363-376.		3
21	Associative versus dissociative binding of CO to 4 <i>d</i> transition metal trimers: A density functional study. <i>Journal of Computational Chemistry</i> , 2008, 29, 1497-1506.	1.5	12
22	Regioselective control of the nickel-mediated coupling of acetylene and carbon dioxide – A DFT study. <i>Journal of Organometallic Chemistry</i> , 2008, 693, 2703-2710.	0.8	43
23	Surface movement in water of splendipherin, the aquatic male sex pheromone of the tree frog <i>Litoria splendida</i> . <i>FEBS Journal</i> , 2008, 275, 3362-3374.	2.2	12
24	Threshold Photoionization and Density Functional Theory Studies of the Niobium Carbide Clusters Nb ₃ C _n (<i>n</i> = 1–4) and Nb ₄ C _n (<i>n</i> = 1–6). <i>Journal of Physical Chemistry A</i> , 2008, 112, 5582-5592.	1.1	31
25	BFW: A Density Functional for Transition Metal Clusters. <i>Journal of Physical Chemistry A</i> , 2007, 111, 2625-2628.	1.1	8
26	Advancing Chemistry by Enhancing Learning in the Laboratory (ACELL): a model for providing professional and personal development and facilitating improved student laboratory learning outcomes. <i>Chemistry Education Research and Practice</i> , 2007, 8, 232-254.	1.4	31
27	Production of Acrylic Acid through Nickel-Mediated Coupling of Ethylene and Carbon Dioxide – A DFT Study. <i>Organometallics</i> , 2007, 26, 6784-6792.	1.1	95
28	UV-Vis and fluorimetric Al ³⁺ , Zn ²⁺ , Cd ²⁺ and Pb ²⁺ complexation studies of two 3-hydroxyflavones and a 3-hydroxythioflavone. <i>Inorganica Chimica Acta</i> , 2007, 360, 3380-3386.	1.2	15
29	Structure of the Molecular Receptor 1,4,7,10-Tetrakis[(S)-2-hydroxy-2-phenylethyl]-1,4,7,10-tetraazacyclododecane: A Combined X-Ray Crystallographic and Theoretical Study Producing an Assessment of the Crystal Packing Energy. <i>Australian Journal of Chemistry</i> , 2006, 59, 123.	0.5	1
30	Rotational Energy Distributions of Benzene Liberated from Aqueous Liquid Microjets: A Comparison between Evaporation and Infrared Desorption. <i>Australian Journal of Chemistry</i> , 2006, 59, 104.	0.5	6
31	Gas phase ion formation from a liquid beam of arginine in aqueous solution by IR multiphoton excitation. <i>Chemical Physics Letters</i> , 2006, 420, 18-23.	1.2	10
32	DFT Calculations on Group 5 Mixed Metal Tetramers: TaxNbyVz (x + y + z = 4).. <i>ChemInform</i> , 2005, 36, no.	0.1	0
33	Cyclodextrin and modified cyclodextrin complexes of E-4-tert-butylphenyl-4-oxazobenzene: UV-visible, 1H NMR and ab initio studies. <i>Organic and Biomolecular Chemistry</i> , 2005, 3, 1481-1488.	1.5	16
34	Ionization Potentials of Tantalum Carbide Clusters: An Experimental and Density Functional Theory Study. <i>Journal of Physical Chemistry A</i> , 2005, 109, 11180-11190.	1.1	27
35	DFT Calculations on Group 5 Mixed Metal Tetramers: TaxNbyVz (x + y + z = 4). <i>Australian Journal of Chemistry</i> , 2004, 57, 1197.	0.5	8
36	Ab initio calculations of stationary points on the benzene and p-difluorobenzene potential energy surfaces: barriers to bound orbiting states. <i>Journal of Chemical Physics</i> , 2004, 121, 4635-4641.	1.2	15

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37	Some ruthenium complexes containing cyanocarbon ligands: syntheses, structures and extent of electronic communication in binuclear systems. <i>Journal of Organometallic Chemistry</i> , 2004, 689, 3308-3326.	0.8	12
38	The lowest-lying excited singlet and triplet electronic states of propanal: an ab initio molecular orbital investigation of the potential energy surfaces. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 688.	1.3	12
39	Photoionization of Nb ₃ CO and Nb ₃ (CO) ₂ : Is CO Molecularly or Dissociatively Adsorbed on Niobium?. <i>Journal of Physical Chemistry A</i> , 2004, 108, 964-970.	1.1	26
40	Supramolecular Sn ^{IV} -Cl associations in diorganotin dichlorides and their influence on molecular geometry as studied by ab initio molecular orbital calculations. <i>CrystEngComm</i> , 2003, 5, 331-336.	1.3	47
41	Infrared Laser Desorption of Hydroquinone from a Water/Ethanol Liquid Beam. <i>Journal of Physical Chemistry A</i> , 2003, 107, 6130-6135.	1.1	9
42	Metal ion-activated molecular receptors for aromatic anions with receptor cavities formed from 1- or 2-naphthyloxy moieties appended to cyclen. <i>Dalton Transactions</i> , 2003, , 3028.	1.6	5
43	Crystal structure of anhydrous potassium O-n-propyldithiocarbonate. Theoretical calculations of O-alkyl dithiocarbonates. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2003, 218, .	0.4	14
44	Ultraviolet Laser Irradiation of Low Concentration Liquid Microjets: Solute Evaporation and Solvent Initiated Reactivity. <i>Australian Journal of Chemistry</i> , 2003, 56, 481.	0.5	5
45	Synthesis and coordination chemistry of 1,4,7,10,13-pentakis(2-hydroxyethyl)-1,4,7,10,13-pentaazacyclopentadecane: a five armed pendant donor macrocycle. <i>Dalton Transactions RSC</i> , 2002, , 3571-3577.	2.3	8
46	Diastereomeric preference in 1,4,7-tris((S)-2-hydroxy-3-phenylpropyl)-1,4,7-triazacyclononane lithium(I) and its sodium(I) analogue. <i>Inorganica Chimica Acta</i> , 2002, 331, 340-344.	1.2	2
47	Reaction Pathways of Singlet Silylene and Singlet Germylene with Water, Methanol, Ethanol, Dimethyl Ether, and Trifluoromethanol: An ab Initio Molecular Orbital Study. <i>Journal of Physical Chemistry A</i> , 2001, 105, 1185-1196.	1.1	51
48	Diastereomeric discrimination in 1,4,7-tris((S)-2-hydroxypropyl)-1,4,7-triazacyclononane and its lithium(I), sodium(I) and zinc(II) complexes. <i>Dalton Transactions RSC</i> , 2001, , 2157-2163.	2.3	9
49	Time-of-flight mass spectrometric detection of mono- and di-substituted benzenes at parts per million concentrations by way of liquid microjet injection and laser ionisation. <i>International Journal of Mass Spectrometry</i> , 2001, 207, 1-12.	0.7	10
50	Jet-Cooled Multiphoton Ionization Spectroscopy of the iso-Butanal 3s Rydberg Transition. <i>Journal of Molecular Spectroscopy</i> , 2001, 206, 73-82.	0.4	6
51	Title is missing!. <i>Australian Journal of Chemistry</i> , 2001, 54, 185.	0.5	10
52	Examination of the effect of crystal packing forces on geometric parameters: a combined crystallographic and theoretical study of 2,2'-bipyridyl adducts of R ₂ SnCl ₂ . <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2000, 215, .	0.4	33
53	Neutral Tantalum Carbide Clusters: A Multiphoton Ionization and Density Functional Theory Study. <i>Journal of Physical Chemistry A</i> , 2000, 104, 3308-3316.	1.1	35
54	Structural Variation in Diorganotin Dimethylxanthates, R ₂ Sn(S ₂ COMe) ₂ : A Combined Crystallographic and Theoretical Investigation. <i>Organometallics</i> , 2000, 19, 5410-5415.	1.1	40

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55	On the structure of the monohydrated superoxide molecular anion, $O_2^{\cdot-}(H_2O)$. An ab initio molecular orbital study. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 3961-3966.	1.3	17
56	Aspects of Electrokinetic Charging in Liquid Microjets. <i>Journal of Physical Chemistry B</i> , 1999, 103, 3035-3042.	1.2	31
57	Metal Ion Dependent Molecular Inclusion Chemistry: \hat{A} Inclusion of p-Toluenesulfonate and p-Nitrophenolate within the Structure of Coordinated 1,4,7,10-Tetrakis((S)-2-hydroxy-3-phenoxypropyl)-1,4,7,10-tetraazacyclododecane. <i>Inorganic Chemistry</i> , 1999, 38, 4986-4992.	1.9	23
58	A Comparison between Crystallographic and Theoretical Structures for Three Hypervalent $RSnCl_3$ Compounds. Phosphorus, Sulfur and Silicon and the Related Elements, 1999, 150, 261-270.	0.8	6
59	Influence of Crystal Packing on Molecular Geometry: \hat{A} A Crystallographic and Theoretical Investigation of Selected Diorganotin Systems. <i>Journal of Physical Chemistry A</i> , 1998, 102, 2472-2482.	1.1	106
60	Diastereomeric \hat{I}^n -1,4,7,10-Tetrakis((R)-2-hydroxy-2-phenylethyl)-1,4,7,10-tetraazacyclododecane and Its Alkali-Metal Complex Ions. A Potentiometric Titration, Nuclear Magnetic Resonance, and Molecular Orbital Study. <i>Journal of the American Chemical Society</i> , 1998, 120, 2862-2869.	6.6	19
61	The degenerate Payne rearrangement of the 2,3-epoxypropoxide anion in the gas phase. A joint theoretical and experimental study. <i>Journal of the Chemical Society Perkin Transactions II</i> , 1997, , 1991-1997.	0.9	7
62	Structural Aspects of the Coordination of Triethylphosphinegold(I) to 2-Thiouracil: \hat{A} A Comparison between Theory and Experiment. <i>Journal of Physical Chemistry A</i> , 1997, 101, 5368-5373.	1.1	19
63	Diastereomeric 1,4,7,10-Tetrakis((S)-2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane and Its Alkali Metal Complex Ions. A Nuclear Magnetic Resonance, Potentiometric Titration, and Molecular Orbital Study. <i>Journal of the American Chemical Society</i> , 1997, 119, 6126-6134.	6.6	23
64	Competitive charge-remote and anion-induced fragmentations of the non-8-enoate anion. A charge-remote reaction which co-occurs with hydrogen scrambling. <i>Journal of the Chemical Society Perkin Transactions II</i> , 1997, , 695-702.	0.9	9
65	The gas phase Payne rearrangement. Part 2. Methyl substitution: a joint ab initio and experimental study. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1997, 165-166, 139-153.	1.9	3
66	Enantiomerization of Pendant-Arm Triaza Macrocyclic Lithium(I) and Sodium(I) Complex Ions. <i>Australian Journal of Chemistry</i> , 1997, 50, 853.	0.5	4
67	The mechanism of methanol loss from the $(M^?H)^?$ ions of cis- and trans-4-methoxycyclohexanol. The application of experiment and theory in concert. <i>Journal of the Chemical Society Perkin Transactions II</i> , 1996, , 2489.	0.9	0
68	Detection of vibrational \hat{A} overtone excitation in water via laser \hat{A} induced grating spectroscopy. <i>Journal of Chemical Physics</i> , 1995, 102, 2718-2726.	1.2	31
69	Excess Energy-Dependent Photodissociation Probabilities for $O_2^{\cdot-}$ in Water Clusters: $O_2^{\cdot-} \cdot (H_2O)_n$. <i>The Journal of Physical Chemistry</i> , 1995, 99, 8453-8457.	2.9	15
70	The $(n, 3s)$ Rydberg State in Deuterated Aldehydes: Jet-Cooled MPI Spectra of the sym and asym Rotamers of CHD_2CHO and CDH_2CHO . <i>Journal of Molecular Spectroscopy</i> , 1994, 165, 12-31.	0.4	14
71	The $(n, 3s)$ Rydberg State in Deuterated Aldehydes: Jet-Cooled MPI Spectra of the Propanal Isotopomeric Series. <i>Journal of Molecular Spectroscopy</i> , 1994, 165, 32-56.	0.4	18
72	Photoinitiation of the $O_2^{\cdot-} + H_2O \hat{A} OH^{\cdot-} + OH$ ion \hat{A} molecule reaction within the $O_2^{\cdot-} \cdot 2 \hat{A} H_2O$ binary complex. <i>Chemical Physics Letters</i> , 1993, 216, 471-478.	1.2	28

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73	Observation of the $\Lambda^{\infty}2\hat{u}\hat{t}\hat{x}\hat{a}^{\infty}2\hat{g}$ dissociative transition in isolated O_2^+ using mass-selected photofragmentation spectroscopy. Journal of Chemical Physics, 1993, 99, 5910-5916.	1.2	22
74	A two-color laser-induced grating technique for gas-phase excited-state spectroscopy. Journal of Chemical Physics, 1992, 97, 707-710.	1.2	69
75	Photodissociation dynamics of doubly excited Rydberg states of molecular hydrogen. Journal of Chemical Physics, 1992, 96, 5843-5856.	1.2	34
76	Production of metal atoms, clusters and complexes in pulsed discharge-excited jets : Studies via mass-resolved laser multiphoton ionization. Organic Mass Spectrometry, 1991, 26, 195-200.	1.3	0
77	Application of ion imaging to the atom-molecule exchange reaction: $H+HI\hat{t}^+H_2+I$. Journal of Chemical Physics, 1991, 94, 4672-4675.	1.2	51
78	Quantitative determination of H_2 , HD , and D_2 internal-state distributions by (2+1) resonance-enhanced multiphoton ionization. Journal of Chemical Physics, 1991, 95, 214-225.	1.2	77
79	Product internal-state distribution for the reaction $H+HI\hat{t}^+H_2+I$. Journal of Chemical Physics, 1991, 95, 1663-1670.	1.2	15
80	Effect of indistinguishable nuclei on product rotational distributions: $D+DI\hat{t}^+D_2+I$. Chemical Physics Letters, 1990, 169, 365-371.	1.2	15
81	Photodissociation of acetylene: Determination of D_00 ($HCC\hat{a}^{\infty}H$) by photofragment imaging. Journal of Chemical Physics, 1990, 93, 6578-6584.	1.2	71