Richard F W Bader

List of Publications by Year
in descending order

69 papers	17,411 citations	44069 48 h-index	98798 67 g-index
71 all docs	71 docs citations	71 times ranked	9702 citing authors

#	Article	IF	Citations
1	A quantum theory of molecular structure and its applications. Chemical Reviews, 1991, 91, 893-928.	47.7	5,550
2	Calculation of the average properties of atoms in molecules. II. Journal of Computational Chemistry, 1982, 3, 317-328.	3.3	1,317
3	Properties of atoms in molecules: atomic volumes. Journal of the American Chemical Society, 1987, 109, 7968-7979.	13.7	1,120
4	The Lewis Model and Beyond. Journal of Physical Chemistry A, 1999, 103, 304-314.	2.5	944
5	Hydrogenâ€“Hydrogen Bonding: A Stabilizing Interaction in Molecules and Crystals. Chemistry - A European Journal, 2003, 9, 1940-1951.	3.3	688
6	Bond Paths Are Not Chemical Bonds. Journal of Physical Chemistry A, 2009, 113, 10391-10396.	2.5	544
7	Identifying and Analyzing Intermolecular Bonding Interactions in van der Waals Moleculesâ€. The Journal of Physical Chemistry, 1996, 100, 10892-10911.	2.9	411
8	VIBRATIONALLY INDUCED PERTURBATIONS IN MOLECULAR ELECTRON DISTRIBUTIONS. Canadian Journal of Chemistry, 1962, 40, 1164-1175.	1.1	343
9	Theoretical analysis of hydrocarbon properties. 1. Bonds, structures, charge concentrations, and charge relaxations. Journal of the American Chemical Society, 1987, 109, 985-1001.	13.7	298
10	Electron Delocalization and the Fermi Hole. Journal of the American Chemical Society, 1996, 118, 4959-4965.	13.7	271
11	Topological analysis of magnetically induced molecular current distributions. Journal of Chemical Physics, 1993, 99, 3669-3682.	3.0	264
12	Theoretical analysis of hydrocarbon properties. 2. Additivity of group properties and the origin of strain energy. Journal of the American Chemical Society, 1987, 109, 1001-1012.	13.7	248
13	Pauli Repulsions Exist Only in the Eye of the Beholder. Chemistry - A European Journal, 2006, 12, 2896-2901.	3.3	240
14	A physical basis for the VSEPR model of molecular geometry. Journal of the American Chemical Society, 1988, 110, 7329-7336.	13.7	228
15	Toward a theory of chemical reactivity based on the charge density. Journal of the American Chemical Society, 1985, 107, 6788-6795.	13.7	210
16	The Quantum Mechanical Basis of Conceptual Chemistry. Monatshefte FÃ¼r Chemie, 2005, 136, 819-854.	1.8	210
17	Atomic Charges Are Measurable Quantum Expectation Values:Â A Rebuttal of Criticisms of QTAIM Charges. Journal of Physical Chemistry A, 2004, 108, 8385-8394.	2.5	209
18	The Electron Pair. The Journal of Physical Chemistry, 1996, 100, 15398-15415.	2.9	206

#	Article	IF	Citations
19	Molecular fragments or chemical bonds. Accounts of Chemical Research, 1975, 8, 34-40.	15.6	202
20	Quantum Topology: Theory of Molecular Structure and its Change. Israel Journal of Chemistry, 1980, 19, 8-29.	2.3	184
21	Quantum topology of molecular charge distributions. II. Molecular structure and its change. Journal of Chemical Physics, 1979, 70, 4316-4329.	3.0	183
22	Definition of Molecular Structure: By Choice or by Appeal to Observation?. Journal of Physical Chemistry A, 2010, 114, 7431-7444.	2.5	176
23	Bonding to Titanium. Inorganic Chemistry, 2001, 40, 5603-5611.	4.0	156
24	Properties of atoms in molecules: Atomic polarizabilities. Journal of Chemical Physics, 1990, 93, 7213-7224.	3.0	155
25	Properties of atoms in molecules: Magnetic susceptibilities. Journal of Chemical Physics, 1993, 99, 3683-3693.	3.0	149
26	Origin of rotation and inversion barriers. Journal of the American Chemical Society, 1990, 112, 6530-6536.	13.7	148
27	Where To Draw the Line in Defining a Molecular Structure. Organometallics, 2004, 23, 6253-6263.	2.3	145
28	Properties of Atoms in Molecules:Â Group Additivity. Journal of Physical Chemistry A, 2000, 104, 5579-5589.	2.5	125
29	Properties of atoms in molecules: electrophilic aromatic substitution. The Journal of Physical Chemistry, 1989, 93, 2946-2956.	2.9	122
30	Properties of Atoms in Molecules:â€‰ Caged Atoms and the Ehrenfest Force. Journal of Chemical Theory and Computation, 2005, 1, 403-414.	5.3	119
31	An Experimentalist's Reply to â€œWhat Is an Atom in a Molecule?â€. Journal of Physical Chemistry A, 2006, 110, 6365-6371.	2.5	119
32	Towards the development of the quantum mechanics of a subspace. Journal of Chemical Physics, 1975, 63, 3945.	3.0	117
33	Core Distortions and Geometries of the Difluorides and Dihydrides of Ca, Sr, and Ba. Inorganic Chemistry, 1995, 34, 2407-2414.	4.0	114
34	The nature of the structure difference between light and heavy water and the origin of the solvent isotope effectâ€”I. Tetrahedron, 1960, 10, 182-199.	1.9	112
35	Properties of Atoms in Molecules:Â Atoms Forming Molecules. Journal of Physical Chemistry A, 2000, 104, 1779-1794.	2.5	112
36	The zero-flux surface and the topological and quantum definitions of an atom in a molecule. Theoretical Chemistry Accounts, 2001, 105, 276-283.	1.4	102

#	Article	IF	Citations
37	Geometry of the Fluorides, Oxofluorides, Hydrides, and Methanides of Vanadium(V), Chromium(VI), and Molybdenum(VI):Â Understanding the Geometry of Non-VSEPR Molecules in Terms of Core Distortion. Inorganic Chemistry, 1996, 35, 3954-3963.	4.0	98
38	Atoms in molecules as non-overlapping, bounded, space-filling open quantum systems. Foundations of Chemistry, 2013, 15, 253-276.	1.1	94
39	Effect of electron correlation on the topological properties of molecular charge distributions. Journal of Chemical Physics, 1988, 88, 3792-3804.	3.0	93
40	Subspace quantum mechanics and the variational principle. Journal of Chemical Physics, 1978, 68, 3667-3679.	3.0	92
41	Quantum topology. IV. Relation between the topological and energetic stabilities of molecular structures. Journal of Chemical Physics, 1981, 74, 5162-5167.	3.0	89
42	Everyman's Derivation of the Theory of Atoms in Molecules. Journal of Physical Chemistry A, 2007, 111, 7966-7972.	2.5	76
43	Subspace quantum dynamics and the quantum action principle. Journal of Chemical Physics, 1978, 68, 3680-3691.	3.0	75
44	Atoms-in-molecules study of the genetically encoded amino acids. III. Bond and atomic properties and their correlations with experiment including mutation-induced changes in protein stability and genetic coding. Proteins: Structure, Function and Bioinformatics, 2003, 52, 360-399.	2.6	75
45	Structural homeomorphism between the electronic charge density and the nuclear potential of a molecular system. Physical Review A, 1980, 21, 1-11.	2.5	69
46	Proton Spinâ^'Spin Coupling and Electron Delocalization. Journal of Physical Chemistry A, 2002, 106, 7369-7375.	2.5	59
47	Forces in molecules. Faraday Discussions, 2007, 135, 79-95.	3.2	57
48	Atoms in molecules in external fields. Journal of Chemical Physics, 1989, 91, 6989-7001.	3.0	54
49	On the non-existence of parallel universes in chemistry. Foundations of Chemistry, 2011, 13, 11-37.	1.1	49
50	Trigonal Bipyramidal and Related Molecules of the Main Group Elements: Investigation of Apparent Exceptions to the VSEPR Model through the Analysis of the Laplacian of the Electron Density. Inorganic Chemistry, 1994, 33, 2115-2121.	4.0	46
51	Properties of atoms in crystals: Dielectric polarization. International Journal of Quantum Chemistry, 2001, 85, 592-607.	2.0	46
52	Recognizing a triple bond between main group atoms. Theoretical Chemistry Accounts, 2001, 105, 365-373.	1.4	43
53	Atoms-in-molecules study of the genetically encoded amino acids. II. Computational study of molecular geometries. Proteins: Structure, Function and Bioinformatics, 2002, 48, 519-538.	2.6	42
54	Atomic properties and the reactivity of carbenes. Canadian Journal of Chemistry, 1986, 64, 1496-1508.	1.1	41

#	Article	IF	Citations
55	Comment on the Comparative Use of the Electron Density and Its Laplacian. Chemistry - A European Journal, 2006, 12, 7769-7772.	3.3	39
56	Nearsightedness of Electronic Matter As Seen by a Physicist and a Chemist. Journal of Physical Chemistry A, 2008, 112, 13717-13728.	2.5	39
57	Properties of atoms in molecules: dipole moments and substituent effects in ethyl and carbonyl compounds. The Journal of Physical Chemistry, 1988, 92, 6219-6227.	2.9	38
58	Extending the VSEPR model through the properties of the Laplacian of the charge density. Canadian Journal of Chemistry, 1989, 67, 1842-1846.	1.1	36
59	Chemistry and the near-sighted nature of the one-electron density matrix. International Journal of Quantum Chemistry, 1995, 56, 409-419.	2.0	30
60	QTAIM Study on the Degenerate Cope Rearrangements of 1,5-Hexadiene and Semibullvalene. Journal of Physical Chemistry A, 2009, 113, 3254-3265.	2.5	28
61	Worlds Apart in Chemistry: A Personal Tribute to J. C. Slater. Journal of Physical Chemistry A, 2011, 115, 12667-12676.	2.5	28
62	Why define atoms in real space?. International Journal of Quantum Chemistry, 1994, 49, 299-308.	2.0	26
63	The Mechanism of Ethylene Oxide Formation from 2-Chloroethanol1,2. Journal of the American Chemical Society, 1959, 81, 2353-2359.	13.7	24
64	THE USE OF THE HELLMANNâ€“FEYNMAN THEOREM TO CALCULATE MOLECULAR ENERGIES. Canadian Journal of Chemistry, 1960, 38, 2117-2127.	1.1	21
65	Energy additivity in branched and cyclic hydrocarbons. Canadian Journal of Chemistry, 2009, 87, 1583-1592.	1.1	7
66	The Lagrangian Approach to Chemistry. , 0, , 35-59.		5
67	Atomic and Group Properties in the Alkanes. , 0, , 1-77.		3
68	Atoms in Medicinal Chemistry. Methods and Principles in Medicinal Chemistry, 2005, , 199-231.	0.3	2
69	Topology of Electron Density and Open Quantum Systems. NATO ASI Series Series B: Physics, 1995, , 237-272.	0.2	1