Patrick W Fowler

List of Publications by Year
in descending order

141 papers	5,080 citations	81743 39 h-index	102304 66 g-index
145 all docs	145 docs citations	145 times ranked	3275 citing authors

#	Article	IF	Citations
1	Equiauxetic Hinged Archimedean Tilings. Symmetry, 2022, 14, 232.	1.1	5
2	Applications of symmetry in pointâ€“lineâ€“plane frameworks for CAD. Journal of Computational Design and Engineering, 2021, 8, 615-637.	1.5	1
3	Periodoannulenes: A Generalized Annulene-within-an-Annulene Paradigm for Combined Ïƒ and Ï€ Ring Currents. Journal of Physical Chemistry A, 2021, 125, 6374-6383.	1.1	3
4	Partitioning HÃ¼ckelâ€“London Currents into Cycle Contributions. Chemistry, 2021, 3, 1138-1156.	0.9	4
5	A Simple Model of Ballistic Conduction in Multi-Lead Molecular Devices. Applied Sciences (Switzerland), 2021, 11, 11696.	1.3	0
6	Molecular graphs and molecular conduction: the d-omni-conductors. Physical Chemistry Chemical Physics, 2020, 22, 1349-1358.	1.3	3
7	A Correlated Source-Sink-Potential Model Consistent with the Meirâ€“Wingreen Formula. Journal of Physical Chemistry A, 2020, 124, 6928-6944.	1.1	2
8	Convexity Deficit of Benzenoids. Croatica Chemica Acta, 2020, 92, 457-466.	0.1	2
9	Ring-Current Maps for Benzenoids: Comparisons, Contradictions, and a Versatile Combinatorial Model. Journal of Physical Chemistry A, 2020, 124, 4517-4533.	1.1	5
10	Modelling aromatisation of (BN)_nH_{2n} azabora-annulenes. Physical Chemistry Chemical Physics, 2020, 22, 15919-15925.	1.3	4
11	Design of annulene-within-an-annulene systems by the altanisation approach. A study of altan-[n]annulenes. Physical Chemistry Chemical Physics, 2020, 22, 5476-5486.	1.3	4
12	Catacondensed Chemical Hexagonal Complexes: A Natural Generalisation of Benzenoids. Croatica Chemica Acta, 2020, 93, .	0.1	0
13	In search of Coulsonâ€™s lost theorem. Journal of Chemical Physics, 2019, 151, 151101.	1.2	0
14	Can percolation theory explain the gelation behavior of diblock copolymer worms?. Chemical Science, 2018, 9, 7138-7144.	3.7	66
15	Mobility of symmetric block-and-hole polyhedra. International Journal of Solids and Structures, 2018, 150, 40-51.	1.3	4
16	Bespoke Diblock Copolymer Nanoparticles Enable the Production of Relatively Stable Oil-in-Water Pickering Nanoemulsions. Langmuir, 2017, 33, 12616-12623.	1.6	46
17	Sizes of pentagonal clusters in fullerenes. Journal of Mathematical Chemistry, 2017, 55, 1669-1682.	0.7	3
18	Raman Deuterium Isotope Probing Reveals Microbial Metabolism at the Single-Cell Level. Analytical Chemistry, 2017, 89, 13305-13312.	3.2	51

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19	Near omni-conductors and insulators: Alternant hydrocarbons in the SSP model of ballistic conduction. Journal of Chemical Physics, 2017, 147, 164115.	1.2	3
20	From C₅₈to C₆₂and back: Stability, structural similarity, and ring current. Journal of Computational Chemistry, 2017, 38, 144-151.	1.5	8
21	An atlas of endohedral Sc₂S cluster fullerenes. Physical Chemistry Chemical Physics, 2017, 19, 419-425.	1.3	14
22	Structural interconnections and the role of heptagonal rings in endohedral trimetallic nitride template fullerenes. Journal of Computational Chemistry, 2016, 37, 1907-1913.	1.5	17
23	Determining the Effective Density and Stabilizer Layer Thickness of Sterically Stabilized Nanoparticles. Macromolecules, 2016, 49, 5160-5171.	2.2	70
24	A HÃ¼ckel source-sink-potential theory of Pauli spin blockade in molecular electronic devices. Journal of Chemical Physics, 2016, 145, 204113.	1.2	7
25	Effect of Ring Size and Migratory Groups on [1,n] Suprafacial Shift Reactions. Confirmation of Aromatic and Antiaromatic Transition-State Character by Ring-Current Analysis. Journal of Organic Chemistry, 2016, 81, 8777-8788.	1.7	17
26	Coronoids, patches and generalised altans. Journal of Mathematical Chemistry, 2016, 54, 977-1009.	0.7	3
27	Perimeter ring currents in benzenoids from Pauling bond orders. Physical Chemistry Chemical Physics, 2016, 18, 11756-11764.	1.3	5
28	A new approach to the method of source-sink potentials for molecular conduction. Journal of Chemical Physics, 2015, 143, 194105.	1.2	13
29	Tracking heavy water (D ₂ O) incorporation for identifying and sorting active microbial cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E194-203.	3.3	359
30	Planar Homotropenylium Cation: A Transition State with Reversed Aromaticity. Journal of Organic Chemistry, 2015, 80, 1395-1401.	1.7	10
31	Determination of Effective Particle Density for Sterically Stabilized Carbon Black Particles: Effect of Diblock Copolymer Stabilizer Composition. Langmuir, 2015, 31, 8764-8773.	1.6	17
32	One rule for the electron-rich.... Nature Chemistry, 2015, 7, 857-858.	6.6	2
33	Distributed curvature and stability of fullerenes. Physical Chemistry Chemical Physics, 2015, 17, 23257-23264.	1.3	5
34	Symmetry Perspectives on Some Auxetic Body-Bar Frameworks. Symmetry, 2014, 6, 368-382.	1.1	9
35	Equiaromatic benzenoids: Arbitrarily large sets of isomers with equal ring currents. Chemical Physics Letters, 2014, 597, 30-35.	1.2	10
36	The homotropenylium cation: a system with a pinched Ï€ ring current. Physical Chemistry Chemical Physics, 2014, 16, 11566-11572.	1.3	4

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37	Writing with ring currents: selectively hydrogenated polycyclic aromatics as finite models of graphene and graphane. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20130617.	1.0	13
38	Counterâ€Rotating Spinâ€Polarised Ring Currents in Oddâ€Electron Carbocycles. Chemistry - A European Journal, 2013, 19, 1740-1746.	1.7	22
39	Interlacingâ€“extremal graphs. Ars Mathematica Contemporanea, 2013, 6, 261-278.	0.3	15
40	Face-spiral codes in cubic polyhedral graphs with face sizes no larger than 6. Journal of Mathematical Chemistry, 2012, 50, 2272-2280.	0.7	2
41	Counterexamples to a proposed algorithm for Fries structures of benzenoids. Journal of Mathematical Chemistry, 2012, 50, 2408-2426.	0.7	4
42	Visualising aromaticity of bowl-shaped molecules. Physical Chemistry Chemical Physics, 2011, 13, 20637.	1.3	13
43	Effect on Ring Current of the KekulÃ© Vibration in Aromatic and Antiaromatic Rings. Journal of Physical Chemistry A, 2011, 115, 13649-13656.	1.1	24
44	The â€œAnthracene Problemâ€: Closed-Form Conjugated-Circuit Models of Ring Currents in Linear Polyacenes. Journal of Physical Chemistry A, 2011, 115, 13191-13200.	1.1	42
45	Cubic polyhedral Ramanujan graphs with face size no larger than six. Journal of Mathematical Chemistry, 2011, 49, 843-858.	0.7	3
46	A graph-theoretical model for ballistic conduction in single-molecule conductors. Pure and Applied Chemistry, 2011, 83, 1515-1528.	0.9	22
47	Investigating the Threshold of Aromaticity and Antiaromaticity by Variation of Nuclear Charge. Journal of Physical Chemistry A, 2010, 114, 10742-10749.	1.1	13
48	Non-IPR fullerenes with properly closed shells. Physical Chemistry Chemical Physics, 2010, 12, 14822.	1.3	3
49	Double Aromaticity and Ring Currents in Allâ€Carbon Rings. Chemistry - A European Journal, 2009, 15, 6964-6972.	1.7	64
50	Double aromaticity and ring currents in open-shell systems. Chemical Physics Letters, 2009, 483, 193-197.	1.2	9
51	Double Aromaticity in â€œBoron Toroidsâ€. Journal of Physical Chemistry C, 2009, 113, 15569-15575.	1.5	34
52	Comparison of ring currents evaluated consistently at density functional and Hartreeâ€“Fock levels. Molecular Physics, 2009, 107, 2591-2600.	0.8	29
53	On nut and core singular fullerenes. Discrete Mathematics, 2008, 308, 267-276.	0.4	15
54	Correlation of Delocalization Indices and Currentâ€Density Maps in Polycyclic Aromatic Hydrocarbons. Chemistry - A European Journal, 2008, 14, 3093-3099.	1.7	100

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55	Evidence from current-density mapping for Ïƒ-delocalisation in the aromatic hexaiodobenzene cation. Tetrahedron Letters, 2008, 49, 1421-1424.	0.7	18
56	Investigation of induced currents in cyclic forms of ortho-acylphenols and lithium analogues: does the lithium cation contribute to aromatic Ï€-electron delocalisation?. Physical Chemistry Chemical Physics, 2008, 10, 6979.	1.3	9
57	Aromaticity of planar Si6rings in siliconâ€“lithium clusters. Molecular Physics, 2008, 106, 1803-1811.	0.8	12
58	Aromaticity, Ï€-electron delocalization, and ring currents. Pure and Applied Chemistry, 2007, 79, 969-979.	0.9	31
59	Evaluating the cyclic Ï€-electron delocalization energy through a double cut of conjugated rings. New Journal of Chemistry, 2007, 31, 1918.	1.4	17
60	Induced Currents and Electron Counting in Aromatic Boron Wheels:Â B82-and B9-. Inorganic Chemistry, 2007, 46, 2892-2897.	1.9	41
61	Current-density maps as probes of aromaticity: Global and Clar Ï€ ring currents in totally resonant polycyclic aromatic hydrocarbons. Faraday Discussions, 2007, 135, 309-323.	1.6	73
62	Mellitic Trianhydride, C12O9:â€‰ The Aromatic Oxide of Carbon. Journal of Chemical Information and Modeling, 2007, 47, 905-908.	2.5	3
63	Symmetry conditions and finite mechanisms. Journal of Mechanics of Materials and Structures, 2007, 2, 293-301.	0.4	43
64	Vertex Spirals in Fullerenes and Their Implications for Nomenclature of Fullerene Derivatives. Chemistry - A European Journal, 2007, 13, 2208-2217.	1.7	22
65	The Phenalenyl Motif: A Magnetic Chameleon. Chemistry - A European Journal, 2007, 13, 2201-2207.	1.7	45
66	Designing Paramagnetic Circulenes. Angewandte Chemie - International Edition, 2007, 46, 1889-1892.	7.2	36
67	Ipsocentric ring currents in density functional theory. Chemical Physics Letters, 2007, 449, 347-353.	1.2	64
68	The ring current in cyclopropane. Theoretical Chemistry Accounts, 2007, 118, 123-127.	0.5	25
69	The Undecakisicosahedral Group and a 3-regular Carbon Network of Genus 26. Journal of Mathematical Chemistry, 2007, 42, 617-644.	0.7	4
70	Designing Ring-Current Patterns:Â [10,5]-Coronene, a Circulene with Inverted Rim and Hub Currents. Journal of Physical Chemistry A, 2006, 110, 7447-7452.	1.1	45
71	Aromaticity rules for cycles with arbitrary numbers of half-twists. Physical Chemistry Chemical Physics, 2006, 8, 1775.	1.3	34
72	Ring Currents in Tangentially pâ€”p Bonded Ïƒ-Aromatic Systems. Journal of Organic Chemistry, 2006, 71, 6459-6467.	1.7	13

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73	Persistence of Paratropic Ring Currents in Nonplanar, Tub-Shaped Geometries of 1,3,5,7-Cyclooctatetraene. Organic Letters, 2006, 8, 1255-1258.	2.4	25
74	A classification scheme forÂchiral tetrahedra. Comptes Rendus Chimie, 2006, 9, 1203-1208.	0.2	2
75	Geometric localisation in MÃ¶bius ï€ systems. Chemical Physics Letters, 2006, 427, 221-224.	1.2	5
76	Growing fullerenes from seed: Growth transformations of fullerene polyhedra. Chemical Physics Letters, 2006, 428, 386-393.	1.2	8
77	Efficient mapping ofÂring currents inÂfullerenes andÂother curved carbon networks. Comptes Rendus Chimie, 2006, 9, 1085-1093.	0.2	17
78	If-Aromaticity in <mml:math altimg="si12.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.c. Che	1.2	86
79	Restricted Rotation in (Phenylpyrrolidino)fullerene Derivatives. European Journal of Organic Chemistry, 2005, 2005, 3766-3774.	1.2	32
80	A Unified Orbital Model of Delocalised and Localised Currents in Monocycles, from Annulenes to Azabora-heterocycles. Chemistry - A European Journal, 2005, 11, 1257-1266.	1.7	59
81	The Electronic Structure of Inorganic Benzenes:Â Valence Bond and Ring-Current Descriptions. Inorganic Chemistry, 2005, 44, 5266-5272.	1.9	71
82	Is There a ?Most Chiral Tetrahedron??. Chemistry - A European Journal, 2004, 10, 6575-6580.	1.7	29
83	A parity rule for ring currents in ï€-clamped monocycles. Physical Chemistry Chemical Physics, 2004, 6, 4921-4923.	1.3	4
84	On the orbital analysis of magnetic properties. Physical Chemistry Chemical Physics, 2004, 6, 261-272.	1.3	114
85	Ring currents in large [4nâ€‰+â€‰2]-annulenes. Physical Chemistry Chemical Physics, 2004, 6, 277-284.	1.3	29
86	Aromaticity and antiaromaticity of LixAl4clusters: Ring current patterns versus electron counting. Physical Chemistry Chemical Physics, 2004, 6, 285-288.	1.3	76
87	Cyclopent[b,c]acenaphthylene: An elusive isomer of pyracylene with the ring currents of an annelated pentalene. Physical Chemistry Chemical Physics, 2004, 6, 2033.	1.3	8
88	Localisation and reversal of paratropic ring currents in molecules with formal anti-aromatic electron counts. Physical Chemistry Chemical Physics, 2004, 6, 289-294.	1.3	35
89	Aromaticity of Organic Heterocyclothiazenes and Analogues. Journal of the American Chemical Society, 2004, 126, 11202-11212.	6.6	17
90	Perimeter Effects on Ring Currents in Polycyclic Aromatic Hydrocarbons: Circumcoronene and Two Hexabenzocoronenes. Chemistry - A European Journal, 2003, 9, 2974-2981.	1.7	51

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91	Topological Rotational Strengths as Chirality Descriptors for Fullerenes. Chemistry - A European Journal, 2003, 9, 644-651.	1.7	13
92	Trimerization of Ethyne:â€‰ Growth and Evolution of Ring Currents in the Formation of the Benzene Ring. Journal of Physical Chemistry A, 2003, 107, 1867-1871.	1.1	21
93	A diatropic ring current in a fluorofullerene trannulene. Chemical Communications, 2003, , 3042.	2.2	22
94	The four-electron diamagnetic ring current of porphycene. Organic and Biomolecular Chemistry, 2003, 1, 1785.	1.5	33
95	A transferable representation of the induced multipoles in ionic crystals. Molecular Physics, 2002, 100, 3847-3865.	0.8	14
96	Control of the Diatropic Ï€ Ring Current in Strained Benzenes:Â Effects of Annelation with Cyclopropa, Cyclobuta, and Cyclobutadieno Clamping Groups. Journal of Organic Chemistry, 2002, 67, 4753-4758.	1.7	68
97	Ring Current Patterns in Annelated Bicyclic Polyenes. Journal of Physical Chemistry A, 2002, 106, 5703-5708.	1.1	22
98	Reaction of C60F18 with diethyl bromomalonate: diversion of the Bingel reaction and formation of the first 18Ï€ annulenic fullereneElectronic supplementary information (ESI) available: EI mass spectra for fullerenes 1â€“3. See http://www.rsc.org/suppdata/p2/b1/b105921c/. Perkin Transactions II RSC, 2002, , 41-46.	1.1	1
99	Some cycloadditions of dienes with C60F18: structures and relative stabilities derived from theoretical calculation. Perkin Transactions II RSC, 2002, , 1718-1721.	1.1	4
100	Selection rules for ring currents in radial Ï€ systems: trannulene substructures in hydrogenated fullerene cages. Perkin Transactions II RSC, 2002, , 723-727.	1.1	15
101	Substituent effects on induced current densities in penta- and heptafulvenes. Perkin Transactions II RSC, 2002, , 502-507.	1.1	23
102	Isolation and characterisation of symmetrical C60Me6, C60Me5Cl and C60Me5O2OH, together with unsymmetrical C60Me5O3H, C60Me5OOH, C60Me4PhO2OH, and C60Me12; fragmentation of methylfullerenols to C58. Perkin Transactions II RSC, 2002, , 53-58.	1.1	2
103	Paratropic Delocalized Ring Currents in Flattened Cyclooctatetraene Systems with Bond Alternation. Angewandte Chemie - International Edition, 2002, 41, 1558-1560.	7.2	61
104	Regioselectivity in radical reactions of C60 derivatives. Perkin Transactions II RSC, 2001, , 821-823.	1.1	12
105	Four- and two-electron rules for diatropic and paratropic ring currents in monocyclic Ãê‚¬ systems. Chemical Communications, 2001, , 2220-2221.	2.2	252
106	Stabilisation of pentagon adjacencies in the lower fullerenes by functionalisation. Perkin Transactions II RSC, 2001, , 487-490.	1.1	35
107	Leapfrog fullerenes, HÃ¼ckel bond order and KekulÃ© structures. Perkin Transactions II RSC, 2001, , 18-22.	1.1	16
108	Mapping the modification of ring currents induced by cyclopenta-fusion on a naphthalene core. Perkin Transactions II RSC, 2001, , 1058-1065.	1.1	36

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109	Visualisation of counter-rotating ring currents in kekulene. Chemical Communications, 2001, , 659-660.	2.2	62
110	Isolation and characterisation of bis(oxahomo)fullerene derivatives of C60F18. Perkin Transactions II RSC, 2001, , 550-556.	1.1	17
111	Survival and extinction of delocalised ring currents in clamped benzenes. Chemical Communications, 2001, , 2386-2387.	2.2	48
112	Complete Bond Force Fields for Trivalent and Deltahedral Cages:â€‰ Group Theory and Applications to Cubane, Closo-dodecaborane, and Buckminsterfullerene. Journal of Physical Chemistry A, 2001, 105, 8284-8295.	1.1	18
113	Allowed Boundary Sequences for Fused Polycyclic Patches and Related Algorithmic Problems. Journal of Chemical Information and Computer Sciences, 2001, 41, 300-308.	2.8	14
114	Topological coordinates for carbon nanostructures. AIP Conference Proceedings, 2001, , .	0.3	1
115	Counter-Rotating Ring Currents in Coronene and Corannulene. Angewandte Chemie - International Edition, 2001, 40, 362-366.	7.2	233
116	Facts and Conjectures about Fullerene Graphs: Leapfrog, Cylinder and Ramanujan Fullerenes. , 2001, , 134-146.		6
117	Counter-Rotating Ring Currents in Coronene and Corannulene We are grateful for a travel grant from the Council for Chemical Sciences of the Netherlands Organization for Scientific Research (CW-NWO) and the British Council.. Angewandte Chemie - International Edition, 2001, 40, 362-366.	7.2	10
118	C60F18O, the first characterised intramolecular fullerene ether. Chemical Communications, 2000, , 1325-1326.	2.2	48
119	Isolation and characterisation of two oxahomofullerene derivatives of C60F18. Perkin Transactions II RSC, 2000, , 2212-2216.	1.1	19
120	Competition between Even and Odd Fullerenes:â€‰ C118, C119, and C120. Journal of Physical Chemistry A, 2000, 104, 9625-9629.	1.1	29
121	A generalized ring spiral algorithm for coding fullerenes and other cubic polyhedra. DIMACS Series in Discrete Mathematics and Theoretical Computer Science, 2000, , 175-187.	0.0	7
122	Dipole and quadrupole polarization in ionic systems: Ab initio studies. Journal of Chemical Physics, 1999, 111, 2038-2049.	1.2	68
123	Dihedral fullerenes of threefold symmetry with and without face spirals. Journal of the Chemical Society, Faraday Transactions, 1997, 93, 3289-3294.	1.7	16
124	Non-bonding orbitals in graphite, carbon tubules, toroids and fullerenes. Journal of the Chemical Society, Faraday Transactions, 1997, 93, 1037-1043.	1.7	23
125	Ring Currents and Aromaticity of Monocyclic Ï€-Electron Systems C6H6, B3N3H6, B3O3H3, C3N3H3, C5H5-, C7H7+, C3N3F3, C6H3F3, and C6F6. Journal of Physical Chemistry A, 1997, 101, 1409-1413.	1.1	195
126	Electronic Structures and Geometries of C60Anions via Density Functional Calculations. The Journal of Physical Chemistry, 1996, 100, 14892-14898.	2.9	125

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127	Ring currents in aromatic hydrocarbons. International Journal of Quantum Chemistry, 1996, 60, 609-616.	1.0	153
128	Fullerene stability and structure. Contemporary Physics, 1996, 37, 235-247.	0.8	24
129	Ring currents in aromatic hydrocarbons. , 1996, 60, 609.		1
130	Receptor interactions of the position 4 side chains of angiotensin II analogues: Importance of aromatic ring quadrupole. Journal of Molecular Recognition, 1994, 7, 251-256.	1.1	7
131	Symmetry properties of the leapfrog transformation for fullerenes and benzenoids. Chemical Physics Letters, 1994, 224, 123-130.	1.2	20
132	Leapfrog transformations and polyhedra of Clar type. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 2865.	1.7	70
133	A fullerene without a spiral. Chemical Physics Letters, 1993, 204, 1-7.	1.2	61
134	Faraday communications. An end to the search for the ground state of C84?. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 3117.	1.7	115
135	Molecular graphs, point groups, and fullerenes. Journal of Chemical Physics, 1992, 96, 7603-7614.	1.2	293
136	Magic numbers and stable structures for fullerenes, fullerides and fullerenium ions. Nature, 1992, 355, 428-430.	13.7	80
137	Fixing a molecular snapshot. Nature, 1992, 355, 586-587.	13.7	5
138	Vocabulary for fuzzy symmetry. Nature, 1992, 360, 626-626.	13.7	10
139	Electronic stability of fullerenes: eigenvalue theorems for leapfrog carbon clusters. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 2427.	1.7	71
140	Aromaticity revisited. Nature, 1991, 350, 20-21.	13.7	49
141	Carbon cylinders: a class of closed-shell clusters. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 2073.	1.7	102