Derek A Pratt

List of Publications by Year in Descending Order

122 papers	6,998 citations	46 h-index	81 g-index
126 ext. papers	8,675 ext. citations	11.9 avg, IF	6.49 L-index

#	Paper	IF	Citations
122	Radical-Trapping Antioxidant Activity of Copper and Nickel Bis(Thiosemicarbazone) Complexes Underlies Their Potency as Inhibitors of Ferroptotic Cell Death. *Journal of the American Chemical Society*, **2021**, 143, 19043-19057	16.4	2
121	A compendium of kinetic modulatory profiles identifies ferroptosis regulators. *Nature Chemical Biology*, **2021**, 17, 665-674	11.7	20
120	Temperature-Dependent Effects of Alkyl Substitution on Diarylamine Antioxidant Reactivity. *Journal of Organic Chemistry*, **2021**, 86, 6538-6550	4.2	3
119	A Divergent Strategy for Site-Selective Radical Disulfuration of Carboxylic Acids with Trisulfide-1,1-Dioxides. *Angewandte Chemie - International Edition*, **2021**, 60, 15598-15605	16.4	11
118	A Divergent Strategy for Site-Selective Radical Disulfuration of Carboxylic Acids with Trisulfide-1,1-Dioxides. *Angewandte Chemie*, **2021**, 133, 15726-15733	3.6	5
117	Mechanism of Electrochemical Generation and Decomposition of Phthalimide--oxyl. *Journal of the American Chemical Society*, **2021**, 143, 10324-10332	16.4	8
116	Dysfunction of the key ferroptosis-surveilling systems hypersensitizes mice to tubular necrosis during acute kidney injury. *Nature Communications*, **2021**, 12, 4402	17.4	22
115	Temperature-dependence of radical-trapping activity of phenoxazine, phenothiazine and their aza-analogues clarifies the way forward for new antioxidant design. *Chemical Science*, **2021**, 12, 11065-11079	9.4	1
114	Autoxidation antioxidants - the fight for forever. *Chemical Society Reviews*, **2021**, 50, 7343-7358	58.5	13
113	Radical Substitution Provides a Unique Route to Disulfides. *Journal of the American Chemical Society*, **2020**, 142, 10284-10290	16.4	27
112	Quinone methide dimers lacking labile hydrogen atoms are surprisingly excellent radical-trapping antioxidants. *Chemical Science*, **2020**, 11, 5676-5689	9.4	5
111	Reactive Sterol Electrophiles: Mechanisms of Formation and Reactions with Proteins and Amino Acid Nucleophiles.. *Chemistry*, **2020**, 2, 390-417	2.1	8
110	Synthesis of Vitisins A and D Enabled by a Persistent Radical Equilibrium. *Journal of the American Chemical Society*, **2020**, 142, 6499-6504	16.4	10
109	On the Products of Cholesterol Autoxidation in Phospholipid Bilayers and the Formation of Secosterols Derived Therefrom. *Angewandte Chemie*, **2020**, 132, 2105-2110	3.6	
108	Base-Promoted C-C Bond Activation Enables Radical Allylation with Homoallylic Alcohols. *Journal of the American Chemical Society*, **2020**, 142, 2609-2616	16.4	23
107	Hydrogen Atom Abstraction from Polyolefins: Experimental and Computational Studies of Model Systems. *Macromolecules*, **2020**, 53, 2793-2800	5.5	0
106	On the Products of Cholesterol Autoxidation in Phospholipid Bilayers and the Formation of Secosterols Derived Therefrom. *Angewandte Chemie - International Edition*, **2020**, 59, 2089-2094	16.4	5

105	Metabolic determinants of cancer cell sensitivity to canonical ferroptosis inducers. *Nature Chemical Biology*, **2020**, 16, 1351-1360	11.7	82
104	Potent Ferroptosis Inhibitors Can Catalyze the Cross-Dismutation of Phospholipid-Derived Peroxyl Radicals and Hydroperoxyl Radicals. *Journal of the American Chemical Society*, **2020**, 142, 14331-14342	16.4	13
103	Beyond DPPH: Use of Fluorescence-Enabled Inhibited Autoxidation to Predict Oxidative Cell Death Rescue. *Cell Chemical Biology*, **2019**, 26, 1594-1607.e7	8.2	30
102	The antioxidant activity of polysulfides: it's radical!. *Chemical Science*, **2019**, 10, 4999-5010	9.4	16
101	Threshold protective effect of deuterated polyunsaturated fatty acids on peroxidation of lipid bilayers. *FEBS Journal*, **2019**, 286, 2099-2117	5.7	17
100	FSP1 is a glutathione-independent ferroptosis suppressor. *Nature*, **2019**, 575, 693-698	50.4	663
99	The chemical basis of ferroptosis. *Nature Chemical Biology*, **2019**, 15, 1137-1147	11.7	194
98	H-Atom Abstraction vs Addition: Accounting for the Diverse Product Distribution in the Autoxidation of Cholesterol and Its Esters. *Journal of the American Chemical Society*, **2019**, 141, 3037-3051	16.4	14
97	The Catalytic Reaction of Nitroxides with Peroxyl Radicals and Its Relevance to Their Cytoprotective Properties. *Journal of the American Chemical Society*, **2018**, 140, 3798-3808	16.4	44
96	Resolving the Role of Lipoxygenases in the Initiation and Execution of Ferroptosis. *ACS Central Science*, **2018**, 4, 387-396	16.8	214
95	The hydrogen atom transfer reactivity of sulfinic acids. *Chemical Science*, **2018**, 9, 7218-7229	9.4	18
94	Recent Insights on Hydrogen Atom Transfer in the Inhibition of Hydrocarbon Autoxidation. *Accounts of Chemical Research*, **2018**, 51, 1996-2005	24.3	35
93	Radicals in natural product synthesis. *Chemical Society Reviews*, **2018**, 47, 7851-7866	58.5	132
92	Inhibition of hydrocarbon autoxidation by nitroxide-catalyzed cross-dismutation of hydroperoxyl and alkylperoxyl radicals. *Chemical Science*, **2018**, 9, 6068-6079	9.4	27
91	Electrochemical Dimerization of Phenylpropenoids and the Surprising Antioxidant Activity of the Resultant Quinone Methide Dimers. *Angewandte Chemie*, **2018**, 130, 17371-17375	3.6	6
90	Electrochemical Dimerization of Phenylpropenoids and the Surprising Antioxidant Activity of the Resultant Quinone Methide Dimers. *Angewandte Chemie - International Edition*, **2018**, 57, 17125-17129	16.4	17
89	On the Mechanism of Cytoprotection by Ferrostatin-1 and Liproxstatin-1 and the Role of Lipid Peroxidation in Ferroptotic Cell Death. *ACS Central Science*, **2017**, 3, 232-243	16.8	291
88	Lipid Peroxidation: Kinetics, Mechanisms, and Products. *Journal of Organic Chemistry*, **2017**, 82, 2817-2825	4.2	65

87	Hydropersulfides: H-Atom Transfer Agents Par Excellence. *Journal of the American Chemical Society* , **2017**, 139, 6484-6493	16.4	51
86	Diazaphenoxazines and Diazaphenothiazines: Synthesis of the "Correct" Isomers Reveals They Are Highly Reactive Radical-Trapping Antioxidants. *Organic Letters*, **2017**, 19, 1854-1857	6.2	8
85	Ferroptosis Inhibition: Mechanisms and Opportunities. *Trends in Pharmacological Sciences*, **2017**, 38, 489-498	13.2	237
84	Aminyl Radical Generation via Tandem Norrish Type I Photocleavage, Fragmentation: Independent Generation and Reactivity of the 2Deoxyadenosin- N6-yl Radical. *Journal of Organic Chemistry*, **2017**, 82, 3571-3580	4.2	19
83	On the Reactions of Thiols, Sulfenic Acids, and Sulfinic Acids with Hydrogen Peroxide. *Angewandte Chemie*, **2017**, 129, 6351-6355	3.6	2
82	On the Reactions of Thiols, Sulfenic Acids, and Sulfinic Acids with Hydrogen Peroxide. *Angewandte Chemie - International Edition*, **2017**, 56, 6255-6259	16.4	60
81	The Potency of Diarylamine Radical-Trapping Antioxidants as Inhibitors of Ferroptosis Underscores the Role of Autoxidation in the Mechanism of Cell Death. *ACS Chemical Biology*, **2017**, 12, 2538-2545	4.9	72
80	Phenoxazine: A Privileged Scaffold for Radical-Trapping Antioxidants. *Journal of Organic Chemistry*, **2017**, 82, 10523-10536	4.2	39
79	Polysulfide-1-oxides react with peroxyl radicals as quickly as hindered phenolic antioxidants and do so by a surprising concerted homolytic substitution. *Chemical Science*, **2016**, 7, 6347-6356	9.4	24
78	Inspired by garlic: insights on the chemistry of sulfenic acids and the radical-trapping antioxidant activity of organosulfur compounds. *Canadian Journal of Chemistry*, **2016**, 94, 1-8	0.9	15
77	A Continuous Visible Light Spectrophotometric Approach To Accurately Determine the Reactivity of Radical-Trapping Antioxidants. *Journal of Organic Chemistry*, **2016**, 81, 737-44	4.2	41
76	Determination of Key Hydrocarbon Autoxidation Products by Fluorescence. *Journal of Organic Chemistry*, **2016**, 81, 6649-56	4.2	11
75	Synthesis of resveratrol tetramers via a stereoconvergent radical equilibrium. *Science*, **2016**, 354, 1260-1265	33.3	54
74	Acid Is Key to the Radical-Trapping Antioxidant Activity of Nitroxides. *Journal of the American Chemical Society*, **2016**, 138, 5290-8	16.4	44
73	Cholesterol Autoxidation Revisited: Debunking the Dogma Associated with the Most Vilified of Lipids. *Journal of the American Chemical Society*, **2016**, 138, 6932-5	16.4	28
72	22nd IUPAC International Conference on Physical Organic Chemistry (ICPOC-22). *Pure and Applied Chemistry*, **2015**, 87, 339-339	2.1	
71	Maximizing the reactivity of phenolic and aminic radical-trapping antioxidants: just add nitrogen!. *Accounts of Chemical Research*, **2015**, 48, 966-75	24.3	46
70	The medicinal thiosulfinates from garlic and are not radical-trapping antioxidants in liposomes and cells, but lipophilic analogs are. *Chemical Science*, **2015**, 6, 6165-6178	9.4	9

69	Unprecedented inhibition of hydrocarbon autoxidation by diarylamine radical-trapping antioxidants. *Journal of the American Chemical Society*, **2015**, 137, 2440-3	16.4	20
68	A Scalable Biomimetic Synthesis of Resveratrol Dimers and Systematic Evaluation of their Antioxidant Activities. *Angewandte Chemie*, **2015**, 127, 3825-3828	3.6	11
67	Methods for determining the efficacy of radical-trapping antioxidants. *Free Radical Biology and Medicine*, **2015**, 82, 187-202	7.8	59
66	A scalable biomimetic synthesis of resveratrol dimers and systematic evaluation of their antioxidant activities. *Angewandte Chemie - International Edition*, **2015**, 54, 3754-7	16.4	50
65	The catalytic mechanism of diarylamine radical-trapping antioxidants. *Journal of the American Chemical Society*, **2014**, 136, 16643-50	16.4	31
64	Reactivity of Polyolefins toward Cumyloxy Radical: Yields and Regioselectivity of Hydrogen Atom Transfer. *Macromolecules*, **2014**, 47, 544-551	5.5	21
63	Redox chemistry of selenenic acids and the insight it brings on transition state geometry in the reactions of peroxyl radicals. *Journal of the American Chemical Society*, **2014**, 136, 1570-8	16.4	43
62	Advances in radical-trapping antioxidant chemistry in the 21st century: a kinetics and mechanisms perspective. *Chemical Reviews*, **2014**, 114, 9022-46	68.1	295
61	Antioxidant generation and regeneration in lipid bilayers: the amazing case of lipophilic thiosulfinates and hydrophilic thiols. *Chemical Communications*, **2013**, 49, 8181-3	5.8	9
60	Reaction mechanisms: radical and radical ion reactions. *Annual Reports on the Progress of Chemistry Section B*, **2013**, 109, 295		2
59	Besting vitamin E: sidechain substitution is key to the reactivity of naphthyridinol antioxidants in lipid bilayers. *Journal of the American Chemical Society*, **2013**, 135, 1394-405	16.4	43
58	3-Pyridinols and 5-pyrimidinols: Tailor-made for use in synergistic radical-trapping co-antioxidant systems. *Beilstein Journal of Organic Chemistry*, **2013**, 9, 2781-92	2.5	28
57	Antioxidants in Chemistry and Biology **2012**,		6
56	Preparation of highly reactive pyridine- and pyrimidine-containing diarylamine antioxidants. *Journal of Organic Chemistry*, **2012**, 77, 6908-16	4.2	46
55	The reactivity of air-stable pyridine- and pyrimidine-containing diarylamine antioxidants. *Journal of Organic Chemistry*, **2012**, 77, 6895-907	4.2	34
54	A versatile fluorescence approach to kinetic studies of hydrocarbon autoxidations and their inhibition by radical-trapping antioxidants. *Chemical Communications*, **2012**, 48, 10141-3	5.8	25
53	Peroxyesters as precursors to peroxyl radical clocks. *Journal of Organic Chemistry*, **2012**, 77, 276-84	4.2	10
52	Incorporation of ring nitrogens into diphenylamine antioxidants: striking a balance between reactivity and stability. *Journal of the American Chemical Society*, **2012**, 134, 8306-9	16.4	58

51	Dissecting the mechanisms of a class of chemical glycosylation using primary ^{13}C kinetic isotope effects. *Nature Chemistry*, **2012**, 4, 663-7	17.6	158
50	The reaction of sulfenic acids with peroxyl radicals: insights into the radical-trapping antioxidant activity of plant-derived thiosulfinates. *Chemistry - A European Journal*, **2012**, 18, 6370-9	4.8	55
49	The mechanism of radical-trapping antioxidant activity of plant-derived thiosulfinates. *Organic and Biomolecular Chemistry*, **2011**, 9, 3320-30	3.9	43
48	A selective cysteinyl leukotriene receptor 2 antagonist blocks myocardial ischemia/reperfusion injury and vascular permeability in mice. *Journal of Pharmacology and Experimental Therapeutics*, **2011**, 339, 768-78	4.7	43
47	Free radical oxidation of polyunsaturated lipids: New mechanistic insights and the development of peroxyl radical clocks. *Accounts of Chemical Research*, **2011**, 44, 458-67	24.3	181
46	Autoxidative and cyclooxygenase-2 catalyzed transformation of the dietary chemopreventive agent curcumin. *Journal of Biological Chemistry*, **2011**, 286, 1114-24	5.4	104
45	Tyrosine analogues for probing proton-coupled electron transfer processes in peptides and proteins. *Journal of the American Chemical Society*, **2010**, 132, 863-72	16.4	24
44	Influence of "remote" intramolecular hydrogen bonds on the stabilities of phenoxyl radicals and benzyl cations. *Journal of Organic Chemistry*, **2010**, 75, 4434-40	4.2	39
43	TEMPO reacts with oxygen-centered radicals under acidic conditions. *Chemical Communications*, **2010**, 46, 5139-41	5.8	52
42	Secondary orbital interactions in the propagation steps of lipid peroxidation. *Chemical Communications*, **2010**, 46, 3711-3	5.8	14
41	Isomerization and Elimination Reactions of Brominated Poly(isobutylene-co-isoprene). *Macromolecules*, **2010**, 43, 8456-8461	5.5	35
40	The redox chemistry of sulfenic acids. *Journal of the American Chemical Society*, **2010**, 132, 16759-61	16.4	49
39	Preparation and investigation of vitamin B6-derived aminopyridinol antioxidants. *Chemistry - A European Journal*, **2010**, 16, 14106-14	4.8	39
38	Garlic: source of the ultimate antioxidants--sulfenic acids. *Angewandte Chemie - International Edition*, **2009**, 48, 157-60	16.4	88
37	Unexpected acid catalysis in reactions of peroxyl radicals with phenols. *Angewandte Chemie - International Edition*, **2009**, 48, 8348-51	16.4	59
36	Synthesis of pyrrolnitrin and related halogenated phenylpyrroles. *Organic Letters*, **2009**, 11, 1051-4	6.2	36
35	Pyridine and pyrimidine analogs of acetaminophen as inhibitors of lipid peroxidation and cyclooxygenase and lipoxygenase catalysis. *Organic and Biomolecular Chemistry*, **2009**, 7, 5103-12	3.9	36
34	A simple Cu-catalyzed coupling approach to substituted 3-pyridinol and 5-pyrimidinol antioxidants. *Journal of Organic Chemistry*, **2008**, 73, 9326-33	4.2	37

33	Hock cleavage of cholesterol 5alpha-hydroperoxide: an ozone-free pathway to the cholesterol ozonolysis products identified in arterial plaque and brain tissue. *Journal of the American Chemical Society*, **2008**, 130, 12224-5	16.4	76
32	The unusual reaction of semiquinone radicals with molecular oxygen. *Journal of Organic Chemistry*, **2008**, 73, 1830-41	4.2	100
31	Tetrahydro-1,8-naphthyridinol analogues of alpha-tocopherol as antioxidants in lipid membranes and low-density lipoproteins. *Journal of the American Chemical Society*, **2007**, 129, 10211-9	16.4	89
30	Control of oxygenation in lipoxygenase and cyclooxygenase catalysis. *Chemistry and Biology*, **2007**, 14, 473-88		237
29	Peroxyl radical clocks. *Journal of Organic Chemistry*, **2006**, 71, 3527-32	4.2	64
28	Properties and reactivity of chlorovinylcobalamin and vinylcobalamin and their implications for vitamin B12-catalyzed reductive dechlorination of chlorinated alkenes. *Journal of the American Chemical Society*, **2005**, 127, 1126-36	16.4	75
27	Model studies of the histidine-tyrosine cross-link in cytochrome C oxidase reveal the flexible substituent effect of the imidazole moiety. *Organic Letters*, **2005**, 7, 2735-8	6.2	41
26	Theoretical investigations into the intermediacy of chlorinated vinylcobalamins in the reductive dehalogenation of chlorinated ethylenes. *Journal of the American Chemical Society*, **2005**, 127, 384-96	16.4	33
25	Lipid-soluble 3-pyridinol antioxidants spare alpha-tocopherol and do not efficiently mediate peroxidation of cholesterol esters in human low-density lipoprotein. *Journal of Medicinal Chemistry*, **2005**, 48, 6787-9	8.3	23
24	Critical re-evaluation of the O-H bond dissociation enthalpy in phenol. *Journal of Physical Chemistry A*, **2005**, 109, 2647-55	2.8	184
23	Synthesis and reactivity of some 6-substituted-2,4-dimethyl-3-pyridinols, a novel class of chain-breaking antioxidants. *Journal of Organic Chemistry*, **2004**, 69, 9215-23	4.2	79
22	Bond strengths of toluenes, anilines, and phenols: to hammett or not. *Accounts of Chemical Research*, **2004**, 37, 334-40	24.3	125
21	O-H bond dissociation enthalpies in oximes: order restored. *Journal of the American Chemical Society*, **2004**, 126, 10667-75	16.4	50
20	Thermal decomposition of O-benzyl ketoximes; role of reverse radical disproportionation. *Organic and Biomolecular Chemistry*, **2004**, 2, 415-20	3.9	16
19	Kinetics and mechanism of the general-acid-catalyzed ring-closure of the malondialdehyde-DNA adduct, N2-(3-oxo-1-propenyl)deoxyguanosine (N2OPdG-), to 3-(2PDeoxy-beta-D-erythro-pentofuranosyl)pyrimido[1,2-alpha]purin- 10(3H)-one (M1dG). *Journal of the American Chemical Society*, **2004**, 126, 10571-81	16.4	37
18	Thermolyses of O-phenyl oxime ethers. A new source of iminyl radicals and a new source of aryloxyl radicals. *Journal of Organic Chemistry*, **2004**, 69, 3112-20	4.2	56
17	6-Amino-3-Pyridinols: Towards Diffusion-Controlled Chain-Breaking Antioxidants. *Angewandte Chemie*, **2003**, 115, 4506-4509	3.6	18
16	6-Amino-3-Pyridinols: Towards Diffusion-Controlled Chain-Breaking Antioxidants. *Angewandte Chemie*, **2003**, 115, 4996-4996	3.6	

15	The effect of ring nitrogen atoms on the homolytic reactivity of phenolic compounds: understanding the radical-scavenging ability of 5-pyrimidinols. *Chemistry - A European Journal*, **2003** , 9, 4997-5010	4.8	87
14	6-Amino-3-pyridinols: towards diffusion-controlled chain-breaking antioxidants. *Angewandte Chemie - International Edition*, **2003**, 42, 4370-3	16.4	113
13	6-Amino-3-Pyridinols: Towards Diffusion-Controlled Chain-Breaking Antioxidants. *Angewandte Chemie - International Edition*, **2003**, 42, 4847-4847	16.4	2
12	Role of hyperconjugation in determining carbon-oxygen bond dissociation enthalpies in alkylperoxyl radicals. *Organic Letters*, **2003**, 5, 387-90	6.2	33
11	Theoretical calculations of carbon-oxygen bond dissociation enthalpies of peroxyl radicals formed in the autoxidation of lipids. *Journal of the American Chemical Society*, **2003**, 125, 5801-10	16.4	133
10	Revised Structure for the Diphenylaminyl Radical: The Importance of Theory in the Assignment of Electronic Transitions in Ph2X (X = CH, N) and PhY (Y = CH2, NH, O). *Journal of Physical Chemistry A* , **2002**, 106, 11719-11725	2.8	31
9	Substituent effects on the bond dissociation enthalpies of aromatic amines. *Journal of the American Chemical Society*, **2002**, 124, 11085-92	16.4	109
8	5-Pyrimidinols: novel chain-breaking antioxidants more effective than phenols. *Journal of the American Chemical Society*, **2001**, 123, 4625-6	16.4	129
7	Oxygen-carbon bond dissociation enthalpies of benzyl phenyl ethers and anisoles. An example of temperature dependent substituent effects. *Journal of the American Chemical Society*, **2001**, 123, 5518-26	16.4	78
6	Kinetic products of linoleate peroxidation: rapid beta-fragmentation of nonconjugated peroxyls. *Journal of the American Chemical Society*, **2001**, 123, 11827-8	16.4	82
5	Theoretical calculation of ionization potentials for disubstituted benzenes: additivity vs non-additivity of substituent effects. *Journal of Organic Chemistry*, **2000**, 65, 2195-203	4.2	57
4	OO Bond Dissociation Enthalpy in Di(trifluoromethyl) Peroxide (CF3OOCF3) as Determined by Very Low Pressure Pyrolysis. Density Functional Theory Computations on OO and OH Bonds in (Fluorinated) Derivatives. *Journal of Physical Chemistry A*, **2000**, 104, 10713-10720	2.8	50
3	The Peroxy Acid Dioxirane Equilibrium: Base-Promoted Exchange of Peroxy Acid Oxygens. *Journal of the American Chemical Society*, **2000**, 122, 11272-11273	16.4	12
2	Theoretical Study of CarbonHalogen Bond Dissociation Enthalpies of Substituted Benzyl Halides. How Important Are Polar Effects?1. *Journal of the American Chemical Society*, **1999**, 121, 4877-4882	16.4	90
1	A Compendium of Kinetic Cell Death Modulatory Profiles Identifies Ferroptosis Regulators		3