Derek A Pratt

List of Publications by Year
in descending order

119 papers	10,698 citations	41627 51 h-index	39744 98 g-index
126 all docs	126 docs citations	126 times ranked	10312 citing authors

#	Article	IF	Citations
1	Mechanism of Visible Light-Mediated Alkene Aminoarylation with Arylsulfonylacetamides. ACS Catalysis, 2022, 12, 8511-8526.	5.5	21
2	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.	3.7	7
3	Autoxidation <i>vs.</i> antioxidants â€“ the fight for forever. Chemical Society Reviews, 2021, 50, 7343-7358.	18.7	49
4	A compendium of kinetic modulatory profiles identifies ferroptosis regulators. Nature Chemical Biology, 2021, 17, 665-674.	3.9	78
5	Temperature-Dependent Effects of Alkyl Substitution on Diarylamine Antioxidant Reactivity. Journal of Organic Chemistry, 2021, 86, 6538-6550.	1.7	9
6	A Divergent Strategy for Siteâ€Selective Radical Disulfuration of Carboxylic Acids with Trisulfideâ€1,1â€Dioxides. Angewandte Chemie - International Edition, 2021, 60, 15598-15605.	7.2	38
7	A Divergent Strategy for Siteâ€Selective Radical Disulfuration of Carboxylic Acids with Trisulfideâ€1,1â€Dioxides. Angewandte Chemie, 2021, 133, 15726-15733.	1.6	6
8	Mechanism of Electrochemical Generation and Decomposition of Phthalimide-<i>N</i>-oxyl. Journal of the American Chemical Society, 2021, 143, 10324-10332.	6.6	42
9	Dysfunction of the key ferroptosis-surveilling systems hypersensitizes mice to tubular necrosis during acute kidney injury. Nature Communications, 2021, 12, 4402.	5.8	116
10	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.	6.6	28
11	On the Products of Cholesterol Autoxidation in Phospholipid Bilayers and the Formation of Secosterols Derived Therefrom. Angewandte Chemie - International Edition, 2020, 59, 2089-2094.	7.2	8
12	Metabolic determinants of cancer cell sensitivity to canonical ferroptosis inducers. Nature Chemical Biology, 2020, 16, 1351-1360.	3.9	339
13	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.	6.6	30
14	Radical Substitution Provides a Unique Route to Disulfides. Journal of the American Chemical Society, 2020, 142, 10284-10290.	6.6	60
15	Quinone methide dimers lacking labile hydrogen atoms are surprisingly excellent radical-trapping antioxidants. Chemical Science, 2020, 11, 5676-5689.	3.7	11
16	Reactive Sterol Electrophiles: Mechanisms of Formation and Reactions with Proteins and Amino Acid Nucleophiles. Chemistry, 2020, 2, 390-417.	0.9	17
17	Synthesis of Vitisins A and D Enabled by a Persistent Radical Equilibrium. Journal of the American Chemical Society, 2020, 142, 6499-6504.	6.6	15
18	On the Products of Cholesterol Autoxidation in Phospholipid Bilayers and the Formation of Secosterols Derived Therefrom. Angewandte Chemie, 2020, 132, 2105-2110.	1.6	0

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19	Base-Promoted Câ€“C Bond Activation Enables Radical Allylation with Homoallylic Alcohols. Journal of the American Chemical Society, 2020, 142, 2609-2616.	6.6	45
20	Hydrogen Atom Abstraction from Polyolefins: Experimental and Computational Studies of Model Systems. Macromolecules, 2020, 53, 2793-2800.	2.2	6
21	FSP1 is a glutathione-independent ferroptosis suppressor. Nature, 2019, 575, 693-698.	13.7	1,624
22	Beyond DPPH: Use of Fluorescence-Enabled Inhibited Autoxidation to Predict Oxidative Cell Death Rescue. Cell Chemical Biology, 2019, 26, 1594-1607.e7.	2.5	56
23	The antioxidant activity of polysulfides: it's radical!. Chemical Science, 2019, 10, 4999-5010.	3.7	38
24	Threshold protective effect of deuterated polyunsaturated fatty acids on peroxidation of lipid bilayers. FEBS Journal, 2019, 286, 2099-2117.	2.2	38
25	The chemical basis of ferroptosis. Nature Chemical Biology, 2019, 15, 1137-1147.	3.9	477
26	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.	6.6	20
27	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.	6.6	61
28	Resolving the Role of Lipoxygenases in the Initiation and Execution of Ferroptosis. ACS Central Science, 2018, 4, 387-396.	5.3	434
29	Electrochemical Dimerization of Phenylpropenoids and the Surprising Antioxidant Activity of the Resultant Quinone Methide Dimers. Angewandte Chemie, 2018, 130, 17371-17375.	1.6	6
30	Electrochemical Dimerization of Phenylpropenoids and the Surprising Antioxidant Activity of the Resultant Quinone Methide Dimers. Angewandte Chemie - International Edition, 2018, 57, 17125-17129.	7.2	26
31	The hydrogen atom transfer reactivity of sulfinic acids. Chemical Science, 2018, 9, 7218-7229.	3.7	36
32	Recent Insights on Hydrogen Atom Transfer in the Inhibition of Hydrocarbon Autoxidation. Accounts of Chemical Research, 2018, 51, 1996-2005.	7.6	54
33	Radicals in natural product synthesis. Chemical Society Reviews, 2018, 47, 7851-7866.	18.7	200
34	Inhibition of hydrocarbon autoxidation by nitroxide-catalyzed cross-dismutation of hydroperoxyl and alkylperoxyl radicals. Chemical Science, 2018, 9, 6068-6079.	3.7	38
35	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.	5.3	583
36	Lipid Peroxidation: Kinetics, Mechanisms, and Products. Journal of Organic Chemistry, 2017, 82, 2817-2825.	1.7	100

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37	Hydropersulfides: H-Atom Transfer Agents Par Excellence. Journal of the American Chemical Society, 2017, 139, 6484-6493.	6.6	85
38	Diazaphenoxazines and Diazaphenothiazines: Synthesis of the â€œCorrectâ€•Isomers Reveals They Are Highly Reactive Radical-TrappingÂAntioxidants. Organic Letters, 2017, 19, 1854-1857.	2.4	12
39	Ferroptosis Inhibition: Mechanisms and Opportunities. Trends in Pharmacological Sciences, 2017, 38, 489-498.	4.0	389
40	Aminyl Radical Generation via Tandem Norrish Type I Photocleavage, Î²-Fragmentation: Independent Generation and Reactivity of the 2â€²-Deoxyadenosin- <i>N</i>6-yl Radical. Journal of Organic Chemistry, 2017, 82, 3571-3580.	1.7	21
41	On the Reactions of Thiols, Sulfenic Acids, and Sulfinic Acids with Hydrogen Peroxide. Angewandte Chemie, 2017, 129, 6351-6355.	1.6	6
42	On the Reactions of Thiols, Sulfenic Acids, and Sulfinic Acids with Hydrogen Peroxide. Angewandte Chemie - International Edition, 2017, 56, 6255-6259.	7.2	79
43	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.	1.6	121
44	Phenoxazine: A Privileged Scaffold for Radical-Trapping Antioxidants. Journal of Organic Chemistry, 2017, 82, 10523-10536.	1.7	56
45	Determination of Key Hydrocarbon Autoxidation Products by Fluorescence. Journal of Organic Chemistry, 2016, 81, 6649-6656.	1.7	13
46	Synthesis of resveratrol tetramers via a stereoconvergent radical equilibrium. Science, 2016, 354, 1260-1265.	6.0	66
47	Acid Is Key to the Radical-Trapping Antioxidant Activity of Nitroxides. Journal of the American Chemical Society, 2016, 138, 5290-5298.	6.6	61
48	Cholesterol Autoxidation Revisited: Debunking the Dogma Associated with the Most Vilified of Lipids. Journal of the American Chemical Society, 2016, 138, 6932-6935.	6.6	48
49	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.	3.7	36
50	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.	0.6	19
51	A Continuous Visible Light Spectrophotometric Approach To Accurately Determine the Reactivity of Radical-Trapping Antioxidants. Journal of Organic Chemistry, 2016, 81, 737-744.	1.7	51
52	Advances and applications in physical organic chemistry. Papers from the 22nd IUPAC International Conference on Physical Organic Chemistry, Ottawa, Canada, 10â€"15 August 2014. Canadian Journal of Chemistry, 2015, 93, v-v.	0.6	0
53	Unprecedented Inhibition of Hydrocarbon Autoxidation by Diarylamine Radical-Trapping Antioxidants. Journal of the American Chemical Society, 2015, 137, 2440-2443.	6.6	25
54	Methods for determining the efficacy of radical-trapping antioxidants. Free Radical Biology and Medicine, 2015, 82, 187-202.	1.3	70

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55	A Scalable Biomimetic Synthesis of Resveratrol Dimers and Systematic Evaluation of their Antioxidant Activities. Angewandte Chemie - International Edition, 2015, 54, 3754-3757.	7.2	61
56	22nd IUPAC International Conference on Physical Organic Chemistry (ICPOC-22). Pure and Applied Chemistry, 2015, 87, 339-339.	0.9	0
57	Maximizing the Reactivity of Phenolic and Aminic Radical-Trapping Antioxidants: Just Add Nitrogen!. Accounts of Chemical Research, 2015, 48, 966-975.	7.6	61
58	The medicinal thiosulfinates from garlic and Petiveria are not radical-trapping antioxidants in liposomes and cells, but lipophilic analogs are. Chemical Science, 2015, 6, 6165-6178.	3.7	13
59	The Catalytic Mechanism of Diarylamine Radical-Trapping Antioxidants. Journal of the American Chemical Society, 2014, 136, 16643-16650.	6.6	42
60	Reactivity of Polyolefins toward Cumyloxy Radical: Yields and Regioselectivity of Hydrogen Atom Transfer. Macromolecules, 2014, 47, 544-551.	2.2	25
61	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, 1570-1578.	6.6	48
62	Advances in Radical-Trapping Antioxidant Chemistry in the 21st Century: A Kinetics and Mechanisms Perspective. Chemical Reviews, 2014, 114, 9022-9046.	23.0	390
63	Antioxidant generation and regeneration in lipid bilayers: the amazing case of lipophilic thiosulfinates and hydrophilic thiols. Chemical Communications, 2013, 49, 8181.	2.2	10
64	Reaction mechanisms: radical and radical ion reactions. Annual Reports on the Progress of Chemistry Section B, 2013, 109, 295.	0.8	3
65	Besting Vitamin E: Sidechain Substitution is Key to the Reactivity of Naphthyridinol Antioxidants in Lipid Bilayers. Journal of the American Chemical Society, 2013, 135, 1394-1405.	6.6	52
66	3-Pyridinols and 5-pyrimidinols: Tailor-made for use in synergistic radical-trapping co-antioxidant systems. Beilstein Journal of Organic Chemistry, 2013, 9, 2781-2792.	1.3	32
67	Preparation of Highly Reactive Pyridine- and Pyrimidine-Containing Diarylamine Antioxidants. Journal of Organic Chemistry, 2012, 77, 6908-6916.	1.7	53
68	The Reactivity of Air-Stable Pyridine- and Pyrimidine-Containing Diarylamine Antioxidants. Journal of Organic Chemistry, 2012, 77, 6895-6907.	1.7	40
69	A versatile fluorescence approach to kinetic studies of hydrocarbon autoxidations and their inhibition by radical-trapping antioxidants. Chemical Communications, 2012, 48, 10141.	2.2	29
70	Peroxyesters As Precursors to Peroxyl Radical Clocks. Journal of Organic Chemistry, 2012, 77, 276-284.	1.7	10
71	Incorporation of Ring Nitrogens into Diphenylamine Antioxidants: Striking a Balance between Reactivity and Stability. Journal of the American Chemical Society, 2012, 134, 8306-8309.	6.6	67
72	Dissecting the mechanisms of a class of chemical glycosylation using primary 13C kinetic isotope effects. Nature Chemistry, 2012, 4, 663-667.	6.6	180

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73	The Reaction of Sulfenic Acids with Peroxyl Radicals: Insights into the Radicalâ€Trapping Antioxidant Activity of Plantâ€Derived Thiosulfinates. Chemistry - A European Journal, 2012, 18, 6370-6379.	1.7	59
74	The mechanism of radical-trapping antioxidant activity of plant-derived thiosulfinates. Organic and Biomolecular Chemistry, 2011, 9, 3320.	1.5	48
75	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, 768-778.	1.3	50
76	Free Radical Oxidation of Polyunsaturated Lipids: New Mechanistic Insights and the Development of Peroxyl Radical Clocks. Accounts of Chemical Research, 2011, 44, 458-467.	7.6	234
77	Autoxidative and Cyclooxygenase-2 Catalyzed Transformation of the Dietary Chemopreventive Agent Curcumin. Journal of Biological Chemistry, 2011, 286, 1114-1124.	1.6	123
78	Preparation and Investigation of Vitaminâ€…B₆â€Derived Aminopyridinol Antioxidants. Chemistry - A European Journal, 2010, 16, 14106-14114.	1.7	42
79	Tyrosine Analogues for Probing Proton-Coupled Electron Transfer Processes in Peptides and Proteins. Journal of the American Chemical Society, 2010, 132, 863-872.	6.6	27
80	Influence of â€œRemoteâ€• Intramolecular Hydrogen Bonds on the Stabilities of Phenoxyl Radicals and Benzyl Cations. Journal of Organic Chemistry, 2010, 75, 4434-4440.	1.7	43
81	TEMPO reacts with oxygen-centered radicals under acidic conditions. Chemical Communications, 2010, 46, 5139.	2.2	65
82	Secondary orbital interactions in the propagation steps of lipid peroxidation. Chemical Communications, 2010, 46, 3711.	2.2	14
83	Isomerization and Elimination Reactions of Brominated Poly(isobutylene-<i>co</i>-isoprene). Macromolecules, 2010, 43, 8456-8461.	2.2	40
84	The Redox Chemistry of Sulfenic Acids. Journal of the American Chemical Society, 2010, 132, 16759-16761.	6.6	56
85	Garlic: Source of the Ultimate Antioxidantsâ€"Sulfenic Acids. Angewandte Chemie - International Edition, 2009, 48, 157-160.	7.2	109
86	Unexpected Acid Catalysis in Reactions of Peroxyl Radicals with Phenols. Angewandte Chemie - International Edition, 2009, 48, 8348-8351.	7.2	67
87	Synthesis of Pyrrolnitrin and Related Halogenated Phenylpyrroles. Organic Letters, 2009, 11, 1051-1054.	2.4	42
88	Pyridine and pyrimidine analogs of acetaminophen as inhibitors of lipid peroxidation and cyclooxygenase and lipoxygenase catalysis. Organic and Biomolecular Chemistry, 2009, 7, 5103.	1.5	43
89	The Unusual Reaction of Semiquinone Radicals with Molecular Oxygen. Journal of Organic Chemistry, 2008, 73, 1830-1841.	1.7	117
90	A Simple Cu-Catalyzed Coupling Approach to Substituted 3-Pyridinol and 5-Pyrimidinol Antioxidants. Journal of Organic Chemistry, 2008, 73, 9326-9333.	1.7	43

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91	Hock Cleavage of Cholesterol 5Î±-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, 12224-12225.	6.6	84
92	Tetrahydro-1,8-naphthyridinol Analogues of Î±-Tocopherol as Antioxidants in Lipid Membranes and Low-Density Lipoproteins. Journal of the American Chemical Society, 2007, 129, 10211-10219.	6.6	98
93	Control of Oxygenation in Lipoxygenase and Cyclooxygenase Catalysis. Chemistry and Biology, 2007, 14, 473-488.	6.2	265
94	Peroxyl Radical Clocks. Journal of Organic Chemistry, 2006, 71, 3527-3532.	1.7	69
95	Critical Re-evaluation of the Oâˆ'H Bond Dissociation Enthalpy in Phenol. Journal of Physical Chemistry A, 2005, 109, 2647-2655.	1.1	202
96	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, 1126-1136.	6.6	85
97	Model Studies of the Histidine-Tyrosine Cross-Link in CytochromecOxidase Reveal the Flexible Substituent Effect of the Imidazole Moiety. Organic Letters, 2005, 7, 2735-2738.	2.4	46
98	Theoretical Investigations into the Intermediacy of Chlorinated Vinylcobalamins in the Reductive Dehalogenation of Chlorinated Ethylenes. Journal of the American Chemical Society, 2005, 127, 384-396.	6.6	36
99	Lipid-Soluble 3-Pyridinol Antioxidants Spare Î±-Tocopherol and Do Not Efficiently Mediate Peroxidation of Cholesterol Esters in Human Low-Density Lipoprotein. Journal of Medicinal Chemistry, 2005, 48, 6787-6789.	2.9	26
100	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, 9215-9223.	1.7	83
101	Bond Strengths of Toluenes, Anilines, and Phenols:â€‰ To Hammett or Not. Accounts of Chemical Research, 2004, 37, 334-340.	7.6	132
102	Oâˆ'H Bond Dissociation Enthalpies in Oximes:Â Order Restored. Journal of the American Chemical Society, 2004, 126, 10667-10675.	6.6	61
103	Thermal decomposition of O-benzyl ketoximes; role of reverse radical disproportionation. Organic and Biomolecular Chemistry, 2004, 2, 415.	1.5	16
104	Kinetics and Mechanism of the General-Acid-Catalyzed Ring-Closure of the Malondialdehydeâˆ'DNA Adduct,N2-(3-Oxo-1-propenyl)deoxyguanosine (N2OPdG-), to 3-(2â€˜-Deoxy-Î²-d-erythro-pentofuranosyl)pyrimido[1,2-Î±]purin- 10(3H)-one (M1dG). Journal of the American Chemical Society, 2004, 126, 10571-10581.	6.6	41
105	Thermolyses ofO-Phenyl Oxime Ethers. A New Source of Iminyl Radicals and a New Source of Aryloxyl Radicals. Journal of Organic Chemistry, 2004, 69, 3112-3120.	1.7	64
106	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.	1.7	94
107	6-Amino-3-Pyridinols: Towards Diffusion-Controlled Chain-Breaking Antioxidants. Angewandte Chemie - International Edition, 2003, 42, 4370-4373.	7.2	125
108	6-Amino-3-Pyridinols: Towards Diffusion-Controlled Chain-Breaking Antioxidants. Angewandte Chemie - International Edition, 2003, 42, 4847-4847.	7.2	2

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109	Role of Hyperconjugation in Determining Carbonâ˜'Oxygen Bond Dissociation Enthalpies in Alkylperoxyl Radicals. Organic Letters, 2003, 5, 387-390.	2.4	34
110	Theoretical Calculations of Carbonâ˜'Oxygen Bond Dissociation Enthalpies of Peroxyl Radicals Formed in the Autoxidation of Lipids. Journal of the American Chemical Society, 2003, 125, 5801-5810.	6.6	148
111	Revised Structure for the Diphenylaminyl Radical:â€‰ The Importance of Theory in the Assignment of Electronic Transitions in Ph2Xâ€¢ (X = CH, N) and PhYâ€¢ (Y = CH2, NH, O). Journal of Physical Chemistry A, 2002, 106, 11719-11725.	1.1	32
112	Substituent Effects on the Bond Dissociation Enthalpies of Aromatic Amines. Journal of the American Chemical Society, 2002, 124, 11085-11092.	6.6	116
113	5-Pyrimidinols:Â Novel Chain-Breaking Antioxidants More Effective than Phenols. Journal of the American Chemical Society, 2001, 123, 4625-4626.	6.6	146
114	Oxygenâ˜'Carbon Bond Dissociation Enthalpies of Benzyl Phenyl Ethers and Anisoles. An Example of Temperature Dependent Substituent Effects1. Journal of the American Chemical Society, 2001, 123, 5518-5526.	6.6	88
115	Kinetic Products of Linoleate Peroxidation:Â Rapid Î²-Fragmentation of Nonconjugated Peroxyls. Journal of the American Chemical Society, 2001, 123, 11827-11828.	6.6	84
116	Theoretical Calculation of Ionization Potentials for Disubstituted Benzenes:Â Additivity vs Non-Additivity of Substituent Effects. Journal of Organic Chemistry, 2000, 65, 2195-2203.	1.7	71
117	Oâ˜'O Bond Dissociation Enthalpy in Di(trifluoromethyl) Peroxide (CF3OOCF3) as Determined by Very Low Pressure Pyrolysis. Density Functional Theory Computations on Oâ˜'O and Oâ˜'H Bonds in (Fluorinated) Derivatives. Journal of Physical Chemistry A, 2000, 104, 10713-10720.	1.1	57
118	The Peroxy Acid Dioxirane Equilibrium:â€‰ Base-Promoted Exchange of Peroxy Acid Oxygens. Journal of the American Chemical Society, 2000, 122, 11272-11273.	6.6	13
119	Theoretical Study of Carbonâ˜'Halogen Bond Dissociation Enthalpies of Substituted Benzyl Halides. How Important Are Polar Effects?1. Journal of the American Chemical Society, 1999, 121, 4877-4882.	6.6	97