David I Pattison

List of Publications by Year
in descending order

65 papers	4,994 citations	117453 34 h-index	102304 66 g-index
66 all docs	66 docs citations	66 times ranked	5037 citing authors

#	Article	IF	Citations
1	Absolute Rate Constants for the Reaction of Hypochlorous Acid with Protein Side Chains and Peptide Bonds. Chemical Research in Toxicology, 2001, 14, 1453-1464.	1.7	716
2	Mammalian Heme Peroxidases: From Molecular Mechanisms to Health Implications. Antioxidants and Redox Signaling, 2008, 10, 1199-1234.	2.5	490
3	Photo-oxidation of proteins. Photochemical and Photobiological Sciences, 2012, 11, 38-53.	1.6	438
4	Evidence for Rapid Inter- and Intramolecular Chlorine Transfer Reactions of Histamine and Carnosine Chloramines:Â Implications for the Prevention of Hypochlorous-Acid-Mediated Damageâ€. Biochemistry, 2006, 45, 8152-8162.	1.2	304
5	Singlet-oxygen-mediated amino acid and protein oxidation: Formation of tryptophan peroxides and decomposition products. Free Radical Biology and Medicine, 2009, 47, 92-102.	1.3	213
6	Kinetic Analysis of the Reactions of Hypobromous Acid with Protein Components:Â Implications for Cellular Damage and Use of 3-Bromotyrosine as a Marker of Oxidative Stressâ€. Biochemistry, 2004, 43, 4799-4809.	1.2	182
7	Reactions and reactivity of myeloperoxidase-derived oxidants: Differential biological effects of hypochlorous and hypothiocyanous acids. Free Radical Research, 2012, 46, 975-995.	1.5	137
8	Reevaluation of the rate constants for the reaction of hypochlorous acid (HOCl) with cysteine, methionine, and peptide derivatives using a new competition kinetic approach. Free Radical Biology and Medicine, 2014, 73, 60-66.	1.3	126
9	Hypochlorous Acid-Mediated Oxidation of Lipid Components and Antioxidants Present in Low-Density Lipoproteins:Â Absolute Rate Constants, Product Analysis, and Computational Modeling. Chemical Research in Toxicology, 2003, 16, 439-449.	1.7	117
10	Hypothiocyanous acid reactivity with low-molecular-mass and protein thiols: absolute rate constants and assessment of biological relevance. Biochemical Journal, 2009, 422, 111-117.	1.7	115
11	What Are the Plasma Targets of the Oxidant Hypochlorous Acid? A Kinetic Modeling Approach. Chemical Research in Toxicology, 2009, 22, 807-817.	1.7	109
12	Hypochlorous Acid-Mediated Protein Oxidation:â€‰ How Important Are Chloramine Transfer Reactions and Protein Tertiary Structure?. Biochemistry, 2007, 46, 9853-9864.	1.2	101
13	Reactivity of disulfide bonds is markedly affected by structure and environment: implications for protein modification and stability. Scientific Reports, 2016, 6, 38572.	1.6	101
14	Kinetic Analysis of the Role of Histidine Chloramines in Hypochlorous Acid Mediated Protein Oxidationâ€. Biochemistry, 2005, 44, 7378-7387.	1.2	96
15	Ability of Hypochlorous Acid and <i>N</i>-Chloramines to Chlorinate DNA and Its Constituents. Chemical Research in Toxicology, 2010, 23, 1293-1302.	1.7	77
16	Selenium-containing amino acids are targets for myeloperoxidase-derived hypothiocyanous acid: determination of absolute rate constants and implications for biological damage. Biochemical Journal, 2012, 441, 305-316.	1.7	73
17	Oxidation of DNA, proteins and lipids by DOPA, protein-bound DOPA, and related catechol(amine)s. Toxicology, 2002, 177, 23-37.	2.0	70
18	The Vinyl Ether Linkages of Plasmalogens Are Favored Targets for Myeloperoxidase-Derived Oxidants: A Kinetic Study. Biochemistry, 2008, 47, 8237-8245.	1.2	68

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19	Reaction of protein chloramines with DNA and nucleosides: evidence for the formation of radicals, proteinâ€"DNA cross-links and DNA fragmentation. Biochemical Journal, 2002, 365, 605-615.	1.7	66
20	Nitric Oxide and Nitroxides Can Act as Efficient Scavengers of Protein-Derived Free Radicals. Chemical Research in Toxicology, 2008, 21, 2111-2119.	1.7	63
21	Acetaminophen (paracetamol) inhibits myeloperoxidase-catalyzed oxidant production and biological damage at therapeutically achievable concentrations. Biochemical Pharmacology, 2010, 79, 1156-1164.	2.0	59
22	High plasma thiocyanate levels in smokers are a key determinant of thiol oxidation induced by myeloperoxidase. Free Radical Biology and Medicine, 2011, 51, 1815-1822.	1.3	59
23	Myeloperoxidase-derived oxidants modify apolipoprotein A-I and generate dysfunctional high-density lipoproteins: comparison of hypothiocyanous acid (HOSCN) with hypochlorous acid (HOCl). Biochemical Journal, 2013, 449, 531-542.	1.7	55
24	Quantification of hydroxyl radical-derived oxidation products in peptides containing glycine, alanine, valine, and proline. Free Radical Biology and Medicine, 2012, 52, 328-339.	1.3	54
25	Oxidation of heparan sulphate by hypochlorite: role of N-chloro derivatives and dichloramine-dependent fragmentation. Biochemical Journal, 2005, 391, 125-134.	1.7	53
26	The nitroxide TEMPO is an efficient scavenger of protein radicals: Cellular and kinetic studies. Free Radical Biology and Medicine, 2012, 53, 1664-1674.	1.3	51
27	Formation and detection of oxidant-generated tryptophan dimers in peptides and proteins. Free Radical Biology and Medicine, 2017, 113, 132-142.	1.3	51
28	Kinetics of Hypobromous Acid-Mediated Oxidation of Lipid Components and Antioxidants. Chemical Research in Toxicology, 2007, 20, 1980-1988.	1.7	49
29	Inactivation of thiol-dependent enzymes by hypothiocyanous acid: role of sulfenyl thiocyanate and sulfenic acid intermediates. Free Radical Biology and Medicine, 2012, 52, 1075-1085.	1.3	48
30	Photochemistry of M(PP3)H2(M = Ru, Os; PP3= P(CH2CH2PPh2)3):Â Preparative, NMR, and Time-Resolved Studies. Journal of the American Chemical Society, 1997, 119, 8459-8473.	6.6	47
31	High plasma thiocyanate levels modulate protein damage induced by myeloperoxidase and perturb measurement of 3-chlorotyrosine. Free Radical Biology and Medicine, 2012, 53, 20-29.	1.3	45
32	Chromium(VI) Reduction by Catechol(amine)s Results in DNA Cleavage in Vitro:â€‰ Relevance to Chromium Genotoxicity. Chemical Research in Toxicology, 2001, 14, 500-510.	1.7	44
33	Tryptophan residues are targets in hypothiocyanous acid-mediated protein oxidation. Biochemical Journal, 2008, 416, 441-452.	1.7	41
34	EPR Studies of Chromium(V) Intermediates Generated via Reduction of Chromium(VI) by DOPA and Related Catecholamines:Â Potential Role for Oxidized Amino Acids in Chromium-Induced Cancers. Inorganic Chemistry, 2000, 39, 2729-2739.	1.9	37
35	Ultrafast reductive elimination of hydrogen from a metal carbonyl dihydride complex; a study by time-resolved IR and visible spectroscopy. Journal of the Chemical Society Dalton Transactions, 1997, , 2857-2860.	1.1	35
36	Superoxide radicals react with peptide-derived tryptophan radicals with very high rate constants to give hydroperoxides as major products. Free Radical Biology and Medicine, 2018, 118, 126-136.	1.3	34

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37	Câ˘'H Bond Cleavage in Thiophenes by [P(CH2CH2PPh2)3Ru]. UV Flash Kinetic Spectroscopy Discloses the Rutheniumâ˘'Thiophene Adduct Which Precedes Câ˘'H Insertion. Organometallics, 1997, 16, 4611-4619.	1.1	33
38	Preventing Protein Oxidation with Sugars: Scavenging of Hypohalous Acids by 5-Selenopyranose and 4-Selenofuranose Derivatives. Chemical Research in Toxicology, 2012, 25, 2589-2599.	1.7	33
39	Characterization of disulfide (cystine) oxidation by HOCl in a model peptide: Evidence for oxygen addition, disulfide bond cleavage and adduct formation with thiols. Free Radical Biology and Medicine, 2020, 154, 62-74.	1.3	32
40	Hypochlorous acid oxidizes methionine and tryptophan residues in myoglobin. Free Radical Biology and Medicine, 2008, 45, 789-798.	1.3	31
41	Photo-oxidation-induced inactivation of the selenium-containing protective enzymes thioredoxin reductase and glutathione peroxidase. Free Radical Biology and Medicine, 2012, 53, 1308-1316.	1.3	30
42	Correction of Matrix Effects for Reliable Non-target Screening LCâ€"ESIâ€"MS Analysis of Wastewater. Analytical Chemistry, 2021, 93, 8432-8441.	3.2	30
43	One-Electron Reduction of <i>N</i>-Chlorinated and <i>N</i>-Brominated Species Is a Source of Radicals and Bromine Atom Formation. Chemical Research in Toxicology, 2011, 24, 371-382.	1.7	29
44	Catalytic oxidant scavenging by selenium-containing compounds: Reduction of selenoxides and N-chloramines by thiols and redox enzymes. Redox Biology, 2017, 12, 872-882.	3.9	29
45	Kinetics of reaction of peroxynitrite with selenium- and sulfur-containing compounds: Absolute rate constants and assessment of biological significance. Free Radical Biology and Medicine, 2015, 89, 1049-1056.	1.3	28
46	X-ray Absorption Spectroscopic and Electrochemical Studies of Tris(catecholato(2â˘'))chromate(V/IV/III) Complexes. Angewandte Chemie - International Edition, 2004, 43, 462-465.	7.2	27
47	Myeloperoxidase-derived oxidants rapidly oxidize and disrupt zincâ€"cysteine/histidine clusters in proteins. Free Radical Biology and Medicine, 2012, 53, 2072-2080.	1.3	26
48	Separation, detection, and quantification of hydroperoxides formed at side-chain and backbone sites on amino acids, peptides, and proteins. Free Radical Biology and Medicine, 2008, 45, 1279-1289.	1.3	25
49	An Investigation of the Chromium Oxidation State of a Monoanionic Chromium Tris(catecholate) Complex by X-ray Absorption and EPR Spectroscopies. Inorganic Chemistry, 2001, 40, 214-217.	1.9	24
50	Reactivity of selenium-containing compounds with myeloperoxidase-derived chlorinating oxidants: Second-order rate constants and implications for biological damage. Free Radical Biology and Medicine, 2015, 84, 279-288.	1.3	22
51	Computational Design of Effective, Bioinspired HOCl Antioxidants: The Role of Intramolecular Cl⁺ and H⁺ Shifts. Journal of the American Chemical Society, 2012, 134, 19240-19245.	6.6	21
52	Absolute rate constants for the formation of nitrogen-centred radicals from chloramines/amides and their reactions with antioxidants. Perkin Transactions II RSC, 2002, , 1461.	1.1	19
53	Interaction kinetics of selenium-containing compounds with oxidants. Free Radical Biology and Medicine, 2020, 155, 58-68.	1.3	19
54	The myeloperoxidase-derived oxidant hypothiocyanous acid inhibits protein tyrosine phosphatases via oxidation of key cysteine residues. Free Radical Biology and Medicine, 2016, 90, 195-205.	1.3	16

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55	Site-specific hypochlorous acid-induced oxidation of recombinant human myoglobin affects specific amino acid residues and the rate of cytochrome b5-mediated heme reduction. Free Radical Biology and Medicine, 2010, 48, 35-46.	1.3	12
56	Methylglyoxal-induced modification of arginine residues decreases the activity of NADPH-generating enzymes. Free Radical Biology and Medicine, 2013, 61, 229-242.	1.3	12
57	Carnosine and Carcinine Derivatives Rapidly React with Hypochlorous Acid to Form Chloramines and Dichloramines. Chemical Research in Toxicology, 2019, 32, 513-525.	1.7	12
58	Glucosinolate profiles and phylogeny in Barbarea compared to other tribe Cardamineae (Brassicaceae) and Reseda (Resedaceae), based on a library of ion trap HPLC-MS/MS data of reference desulfoglucosinolates. Phytochemistry, 2021, 185, 112658.	1.4	12
59	Photochemistry of Ru(etp)(CO)H2 (etp = PhP(CH2CH2PPh2)2):â€‰ Fast Oxidative Addition and Coordination Following Exclusive Dihydrogen Loss. Organometallics, 2004, 23, 4034-4039.	1.1	11
60	Pulsed laser photolysis of Os(pp3)H2[pp3= P(CH2CH2PPh2)3]: kinetic selectivity for reaction with methane. Journal of the Chemical Society Chemical Communications, 1994, , 513.	2.0	7
61	Tryptophan oxidation in proteins exposed to thiocyanate-derived oxidants. Archives of Biochemistry and Biophysics, 2014, 564, 1-11.	1.4	7
62	Competitive kinetics as a tool to determine rate constants for reduction of ferrylmyoglobin by food components. Food Chemistry, 2016, 199, 36-41.	4.2	5
63	Ancient Biosyntheses in an Oil Crop: Glucosinolate Profiles in <i>Limnanthes alba</i> and Its Relatives (Limnanthaceae, Brassicales). Journal of Agricultural and Food Chemistry, 2022, 70, 1134-1147.	2.4	5
64	Prevention of degradation of the natural high potency sweetener (2R,4R)-monatin in mock beverage solutions. Food Chemistry, 2015, 173, 645-651.	4.2	4
65	Mechanisms of Degradation of the Natural High-Potency Sweetener (2R,4R)-Monatin in Mock Beverage Solutions. Journal of Agricultural and Food Chemistry, 2014, 62, 3476-3487.	2.4	3