Craig Hemann

List of Publications by Year
in descending order

65 papers	3,808 citations	101384 36 h-index	123241 61 g-index
65 all docs	65 docs citations	65 times ranked	4951 citing authors

#	Article	IF	Citations
1	MicroRNA-210 Controls Mitochondrial Metabolism during Hypoxia by Repressing the Iron-Sulfur Cluster Assembly Proteins ISCU1/2. Cell Metabolism, 2009, 10, 273-284.	7.2	588
2	S-glutathionylation uncouples eNOS and regulates its cellular and vascular function. Nature, 2010, 468, 1115-1118.	13.7	507
3	Higher blood flow and circulating NO products offset high-altitude hypoxia among Tibetans. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 17593-17598.	3.3	299
4	Genetic and hypoxic alterations of the micro <scp>RNA</scp> â€210â€•<scp>ISCU</scp> 1/2 axis promote ironâ€“sulfur deficiency and pulmonary hypertension. EMBO Molecular Medicine, 2015, 7, 695-713.	3.3	120
5	Rapid Kinetic Studies Link Tetrahydrobiopterin Radical Formation to Heme-dioxy Reduction and Arginine Hydroxylation in Inducible Nitric-oxide Synthase. Journal of Biological Chemistry, 2001, 276, 315-319.	1.6	119
6	Characterization of the Mechanism and Magnitude of Cytoglobin-mediated Nitrite Reduction and Nitric Oxide Generation under Anaerobic Conditions. Journal of Biological Chemistry, 2012, 287, 36623-36633.	1.6	114
7	Peroxynitrite Induces Destruction of the Tetrahydrobiopterin and Heme in Endothelial Nitric Oxide Synthase: Transition from Reversible to Irreversible Enzyme Inhibition. Biochemistry, 2010, 49, 3129-3137.	1.2	101
8	A Tetrahydrobiopterin Radical Forms and then Becomes Reduced during NÏ‰-Hydroxyarginine Oxidation by Nitric-oxide Synthase. Journal of Biological Chemistry, 2003, 278, 46668-46673.	1.6	96
9	Hypoxia and Reoxygenation Induce Endothelial Nitric Oxide Synthase Uncoupling in Endothelial Cells through Tetrahydrobiopterin Depletion and S-Glutathionylation. Biochemistry, 2014, 53, 3679-3688.	1.2	95
10	The Active Site of Arsenite Oxidase from Alcaligenes faecalis. Journal of the American Chemical Society, 2002, 124, 11276-11277.	6.6	74
11	Cytoglobin regulates blood pressure and vascular tone through nitric oxide metabolism in the vascular wall. Nature Communications, 2017, 8, 14807.	5.8	73
12	Iron-sulfur cluster biosynthesis: characterization of Schizosaccharomyces pombe Isa1. Journal of Biological Inorganic Chemistry, 2002, 7, 526-532.	1.1	70
13	Kinetic and Spectroscopic Studies of the Molybdenum-Copper CO Dehydrogenase from Oligotropha carboxidovorans. Journal of Biological Chemistry, 2010, 285, 12571-12578.	1.6	68
14	Catalytic Reduction of a Tetrahydrobiopterin Radical within Nitric-oxide Synthase. Journal of Biological Chemistry, 2008, 283, 11734-11742.	1.6	67
15	Redox Modulation of Endothelial Nitric Oxide Synthase by Glutaredoxin-1 through Reversible Oxidative Post-Translational Modification. Biochemistry, 2013, 52, 6712-6723.	1.2	59
16	Rubredoxin from the Green Sulfur Bacterium Chlorobium tepidum Functions as an Electron Acceptor for Pyruvate Ferredoxin Oxidoreductase. Journal of Biological Chemistry, 1999, 274, 29772-29778.	1.6	58
17	Characterization of the Function of Cytoglobin as an Oxygen-Dependent Regulator of Nitric Oxide Concentration. Biochemistry, 2012, 51, 5072-5082.	1.2	56
18	Silver-Zinc Redox-Coupled Electroceutical Wound Dressing Disrupts Bacterial Biofilm. PLoS ONE, 2015, 10, e0119531.	1.1	56

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19	Functional asymmetry of photosystem II D1 and D2 peripheral chlorophyll mutants ofChlamydomonas reinhardtii. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4091-4096.	3.3	54
20	Structure of Tetrahydrobiopterin Tunes its Electron Transfer to the Hemeâ˜Dioxy Intermediate in Nitric Oxide Synthaseâ€. Biochemistry, 2003, 42, 1969-1977.	1.2	53
21	Removal of H2O2 and generation of superoxide radical: Role of cytochrome c and NADH. Free Radical Biology and Medicine, 2011, 51, 160-170.	1.3	53
22	Differences in oxygenâ€dependent nitric oxide metabolism by cytoglobin and myoglobin account for their differing functional roles. FEBS Journal, 2013, 280, 3621-3631.	2.2	50
23	The Three Nitric-oxide Synthases Differ in Their Kinetics of Tetrahydrobiopterin Radical Formation, Heme-Dioxy Reduction, and Arginine Hydroxylation. Journal of Biological Chemistry, 2005, 280, 8929-8935.	1.6	49
24	Depletion of NADP(H) due to CD38 activation triggers endothelial dysfunction in the postischemic heart. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11648-11653.	3.3	49
25	Regulation of FMN Subdomain Interactions and Function in Neuronal Nitric Oxide Synthase. Biochemistry, 2009, 48, 3864-3876.	1.2	48
26	Spectroscopic and Kinetic Studies ofArabidopsisthalianaSulfite Oxidase: Nature of the Redox-Active Orbital and Electronic Structure Contributions to Catalysis. Journal of the American Chemical Society, 2005, 127, 16567-16577.	6.6	47
27	Differences in a Conformational Equilibrium Distinguish Catalysis by the Endothelial and Neuronal Nitric-oxide Synthase Flavoproteins. Journal of Biological Chemistry, 2008, 283, 19603-19615.	1.6	47
28	Characterization of CD38 in the major cell types of the heart: endothelial cells highly express CD38 with activation by hypoxia-reoxygenation triggering NAD(P)H depletion. American Journal of Physiology - Cell Physiology, 2018, 314, C297-C309.	2.1	47
29	Stabilization and Characterization of a Heme-Oxy Reaction Intermediate in Inducible Nitric-oxide Synthase. Journal of Biological Chemistry, 2008, 283, 33498-33507.	1.6	46
30	Luteolinidin Protects the Postischemic Heart through CD38 Inhibition with Preservation of NAD(P)(H). Journal of Pharmacology and Experimental Therapeutics, 2017, 361, 99-108.	1.3	43
31	The Role of Arginine 310 in Catalysis and Substrate Specificity in Xanthine Dehydrogenase from Rhodobacter capsulatus. Journal of Biological Chemistry, 2007, 282, 12785-12790.	1.6	42
32	A Conserved Tryptophan in Nitric Oxide Synthase Regulates Hemeâ˜Dioxy Reduction by Tetrahydrobiopterinâ€. Biochemistry, 2001, 40, 12819-12825.	1.2	40
33	Proteinâ€“coenzyme interactions in adenosylcobalamin-dependent glutamate mutase. Biochemical Journal, 2001, 355, 131-137.	1.7	40
34	Crystal Structure and Stability Studies of C77S HiPIP:â€‰ A Serine Ligated [4Fe-4S] Cluster. Biochemistry, 2002, 41, 1195-1201.	1.2	38
35	Synthesis of Trityl Radical-Conjugated Disulfide Biradicals for Measurement of Thiol Concentration. Journal of Organic Chemistry, 2011, 76, 3853-3860.	1.7	38
36	Reduced nonprotein thiols inhibit activation and function of MMP-9: Implications for chemoprevention. Free Radical Biology and Medicine, 2006, 41, 1315-1324.	1.3	37

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37	Spectroscopic and Functional Properties of Novel 2[4Fe-4S] Cluster-containing Ferredoxins from the Green Sulfur Bacterium Chlorobium tepidum. Journal of Biological Chemistry, 2001, 276, 44027-44036.	1.6	32
38	Esterified Dendritic TAM Radicals with Very High Stability and Enhanced Oxygen Sensitivity. Journal of Organic Chemistry, 2013, 78, 1371-1376.	1.7	30
39	HPLC analysis of tetrahydrobiopterin and its pteridine derivatives using sequential electrochemical and fluorimetric detection: Application to tetrahydrobiopterin autoxidation and chemical oxidation. Archives of Biochemistry and Biophysics, 2012, 520, 7-16.	1.4	28
40	Sulfite oxidase activity of cytochrome c: Role of hydrogen peroxide. Biochemistry and Biophysics Reports, 2016, 5, 96-104.	0.7	27
41	Chronic cigarette smoke exposure triggers a vicious cycle of leukocyte and endothelial-mediated oxidant stress that results in vascular dysfunction. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 319, H51-H65.	1.5	27
42	Proteinâ€'coenzyme interactions in adenosylcobalamin-dependent glutamate mutase. Biochemical Journal, 2001, 355, 131.	1.7	25
43	Substitution of a Chlorophyll into the Inactive Branch Pheophytin-Binding Site Impairs Charge Separation in Photosystem II. Journal of Physical Chemistry B, 2004, 108, 16904-16911.	1.2	25
44	The novel SOD mimetic GC4419 increases cancer cell killing with sensitization to ionizing radiation while protecting normal cells. Free Radical Biology and Medicine, 2020, 160, 630-642.	1.3	21
45	Resonance Raman Studies of Xanthine Oxidase:Â the Reduced Enzymeâ^'Product Complex with Violapterin. Journal of Physical Chemistry B, 2005, 109, 3023-3031.	1.2	20
46	Cytoglobin has potent superoxide dismutase function. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	19
47	Vibrational Spectra of Lumazine in Water at pH 2â^'13:â€‰ Ab Initio Calculation and FTIR/Raman Spectra. Journal of Physical Chemistry B, 2003, 107, 2139-2155.	1.2	16
48	Oxygen binding and nitric oxide dioxygenase activity of cytoglobin are altered to different extents by cysteine modification. FEBS Open Bio, 2017, 7, 845-853.	1.0	15
49	Nitrones reverse hyperglycemia-induced endothelial dysfunction in bovine aortic endothelial cells. Biochemical Pharmacology, 2016, 104, 108-117.	2.0	14
50	Spectroscopic and Kinetic Studies of Y114F and W116F Mutants of Me2SO Reductase from Rhodobacter capsulatus. Journal of Biological Chemistry, 2007, 282, 35519-35529.	1.6	13
51	Mesohaem substitution reveals how haem electronic properties can influence the kinetic and catalytic parameters of neuronal NO synthase. Biochemical Journal, 2011, 433, 163-174.	1.7	9
52	Defining the reducing system of the NO dioxygenase cytoglobin in vascular smooth muscle cells and its critical role in regulating cellular NO decay. Journal of Biological Chemistry, 2021, 296, 100196.	1.6	9
53	FTIR characterization of heterocycles lumazine and violapterin in solution: Effects of solvent on anionic forms. , 1998, 4, 235-256.		8
54	Ser170 of Bacillus thuringiensis Cry1Ab Î´-endotoxin becomes anchored in a hydrophobic moiety upon insertion of this protein into Manduca sexta brush border membranes. BMC Biochemistry, 2009, 10, 25.	4.4	8

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55	Effect of temperature, pH and heme ligands on the reduction of Cygb(Fe3+) by ascorbate. Archives of Biochemistry and Biophysics, 2014, 554, 1-5.	1.4	7
56	Trityl radicals in perfluorocarbon emulsions as stable, sensitive, and biocompatible oximetry probes. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 5685-5688.	1.0	6
57	Formation of a Tyrosyl Radical in Xanthine Oxidaseâ€. Biochemistry, 1998, 37, 7787-7791.	1.2	3
58	Instrumental barriers in biological Fourier transform infrared spectroscopy. Mikrochimica Acta, 1988, 94, 335-338.	2.5	1
59	X-ray absorption spectroscopy of myoglobin and iron prophyrin derivatives. Physica B: Condensed Matter, 1989, 158, 87-89.	1.3	1
60	Involvement of the Endothelial Nitric Oxide Pathway and Leukocyte Infiltration in Secondhand Smoke Exposureâ€Induced Vascular Endothelial Dysfunction and Hypertension. FASEB Journal, 2012, 26, 866.7.	0.2	1
61	Cigarette smoke extract causes endothelial nitric oxide synthase dysfunction through stimulation of ubiquitin proteasome system. FASEB Journal, 2013, 27, 654.12.	0.2	1
62	Abstract 15954: Both Tetrahydrobiopterin Depletion and eNOS S-Glutathionytion Contribute to eNOS Uncoupling in Coronary Disease Patients. Circulation, 2014, 130, .	1.6	1
63	Cigarette smoke extract causes endothelial nitric oxide synthase dysfunction through Sâ€glutathionylation. FASEB Journal, 2013, 27, 890.11.	0.2	0
64	Thymoquinone protects against myocardial ischemiaâ€reperfusion injury via modulation of oxidant generation and nuclear factorâ€kappaBâ€mediated responses (1080.1). FASEB Journal, 2014, 28, 1080.1.	0.2	0
65	Role of Human Aldehyde Oxidase in the Generation of Reactive Oxygen Species during the Metabolism of Nicotine. FASEB Journal, 2022, 36, .	0.2	0