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	Role of Human Aldehyde Oxidase in the Generation of Reactive Oxygen Species during the Metabolism of Nicotine. FASEB Journal, 2022, 36, .	0.2	0
2	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
3	Cytoglobin has potent superoxide dismutase function. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	19
4	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
5	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
6	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
7	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
8	Cytoglobin regulates blood pressure and vascular tone through nitric oxide metabolism in the vascular wall. Nature Communications, 2017, 8, 14807.	5.8	73
9	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
10	Trityl radicals in perfluorocarbon emulsions as stable, sensitive, and biocompatible oximetry probes. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 5685-5688.	1.0	6
11	Nitrones reverse hyperglycemia-induced endothelial dysfunction in bovine aortic endothelial cells. Biochemical Pharmacology, 2016, 104, 108-117.	2.0	14
12	Sulfite oxidase activity of cytochrome c: Role of hydrogen peroxide. Biochemistry and Biophysics Reports, 2016, 5, 96-104.	0.7	27
13	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
14	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
15	Silver-Zinc Redox-Coupled Electroceutical Wound Dressing Disrupts Bacterial Biofilm. PLoS ONE, 2015, 10, e0119531.	1.1	56
16	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
17	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
18	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

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19	Abstract 15954: Both Tetrahydrobiopterin Depletion and eNOS S-Glutathionytion Contribute to eNOS Uncoupling in Coronary Disease Patients. Circulation, 2014, 130, .	1.6	1
20	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
21	Redox Modulation of Endothelial Nitric Oxide Synthase by Glutaredoxin-1 through Reversible Oxidative Post-Translational Modification. Biochemistry, 2013, 52, 6712-6723.	1.2	59
22	Esterified Dendritic TAM Radicals with Very High Stability and Enhanced Oxygen Sensitivity. Journal of Organic Chemistry, 2013, 78, 1371-1376.	1.7	30
23	Cigarette smoke extract causes endothelial nitric oxide synthase dysfunction through Sâ€glutathionylation. FASEB Journal, 2013, 27, 890.11.	0.2	0
24	Cigarette smoke extract causes endothelial nitric oxide synthase dysfunction through stimulation of ubiquitin proteasome system. FASEB Journal, 2013, 27, 654.12.	0.2	1
25	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
26	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
27	Characterization of the Function of Cytoglobin as an Oxygen-Dependent Regulator of Nitric Oxide Concentration. Biochemistry, 2012, 51, 5072-5082.	1.2	56
28	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
29	Synthesis of Trityl Radical-Conjugated Disulfide Biradicals for Measurement of Thiol Concentration. Journal of Organic Chemistry, 2011, 76, 3853-3860.	1.7	38
30	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
31	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
32	S-glutathionylation uncouples eNOS and regulates its cellular and vascular function. Nature, 2010, 468, 1115-1118.	13.7	507
33	Kinetic and Spectroscopic Studies of the Molybdenum-Copper CO Dehydrogenase from Oligotropha carboxidovorans. Journal of Biological Chemistry, 2010, 285, 12571-12578.	1.6	68
34	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
35	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
36	Regulation of FMN Subdomain Interactions and Function in Neuronal Nitric Oxide Synthase. Biochemistry, 2009, 48, 3864-3876.	1.2	48

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37	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
38	Catalytic Reduction of a Tetrahydrobiopterin Radical within Nitric-oxide Synthase. Journal of Biological Chemistry, 2008, 283, 11734-11742.	1.6	67
39	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
40	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
41	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
42	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
43	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
44	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
45	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
46	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
47	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
48	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
49	Structure of Tetrahydrobiopterin Tunes its Electron Transfer to the Hemeâ^'Dioxy Intermediate in Nitric Oxide Synthaseâ€. Biochemistry, 2003, 42, 1969-1977.	1.2	53
50	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
51	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
52	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
53	Crystal Structure and Stability Studies of C77S HiPIP:â€‰ A Serine Ligated [4Fe-4S] Cluster. Biochemistry, 2002, 41, 1195-1201.	1.2	38
54	The Active Site of Arsenite Oxidase from Alcaligenes faecalis. Journal of the American Chemical Society, 2002, 124, 11276-11277.	6.6	74

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55	Iron-sulfur cluster biosynthesis: characterization of Schizosaccharomyces pombe Isa1. Journal of Biological Inorganic Chemistry, 2002, 7, 526-532.	1.1	70
56	A Conserved Tryptophan in Nitric Oxide Synthase Regulates Hemeâ˜'Dioxy Reduction by Tetrahydrobiopterinâ€. Biochemistry, 2001, 40, 12819-12825.	1.2	40
57	Proteinâ€'coenzyme interactions in adenosylcobalamin-dependent glutamate mutase. Biochemical Journal, 2001, 355, 131.	1.7	25
58	Proteinâ€“coenzyme interactions in adenosylcobalamin-dependent glutamate mutase. Biochemical Journal, 2001, 355, 131-137.	1.7	40
59	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
60	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
61	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
62	FTIR characterization of heterocycles lumazine and violapterin in solution: Effects of solvent on anionic forms. , 1998, 4, 235-256.		8
63	Formation of a Tyrosyl Radical in Xanthine Oxidaseâ€. Biochemistry, 1998, 37, 7787-7791.	1.2	3
64	X-ray absorption spectroscopy of myoglobin and iron prophyrin derivatives. Physica B: Condensed Matter, 1989, 158, 87-89.	1.3	1
65	Instrumental barriers in biological Fourier transform infrared spectroscopy. Mikrochimica Acta, 1988, 94, 335-338.	2.5	1