William Thomas Self

List of Publications by Year
in descending order

69 papers	9,929 citations	76326 40 h-index	102487 66 g-index
74 all docs	74 docs citations	74 times ranked	10499 citing authors

#	Article	IF	Citations
1	Superoxide dismutase mimetic properties exhibited by vacancy engineered ceria nanoparticles. Chemical Communications, 2007, , 1056.	4.1	1,009
2	Nanoceria exhibit redox state-dependent catalase mimetic activity. Chemical Communications, 2010, 46, 2736.	4.1	912
3	Protein adsorption and cellular uptake of cerium oxide nanoparticles as a function of zeta potential. Biomaterials, 2007, 28, 4600-4607.	11.4	876
4	The role of cerium redox state in the SOD mimetic activity of nanoceria. Biomaterials, 2008, 29, 2705-2709.	11.4	813
5	Redox-active radical scavenging nanomaterials. Chemical Society Reviews, 2010, 39, 4422.	38.1	458
6	Cerium oxide nanoparticles: applications and prospects in nanomedicine. Nanomedicine, 2013, 8, 1483-1508.	3.3	424
7	Catalytic properties and biomedical applications of cerium oxide nanoparticles. Environmental Science: Nano, 2015, 2, 33-53.	4.3	341
8	Fenton-Like Reaction Catalyzed by the Rare Earth Inner Transition Metal Cerium. Environmental Science & Technology, 2008, 42, 5014-5019.	10.0	306
9	PEGylated Nanoceria as Radical Scavenger with Tunable Redox Chemistry. Journal of the American Chemical Society, 2009, 131, 14144-14145.	13.7	302
10	Cerium Oxide Nanoparticles: A Brief Review of Their Synthesis Methods and Biomedical Applications. Antioxidants, 2018, 7, 97.	5.1	289
11	A phosphate-dependent shift in redox state of cerium oxide nanoparticles and its effects on catalytic properties. Biomaterials, 2011, 32, 6745-6753.	11.4	285
12	Bioâ€distribution and <i>in vivo</i> antioxidant effects of cerium oxide nanoparticles in mice. Environmental Toxicology, 2013, 28, 107-118.	4.0	249
13	The induction of angiogenesis by cerium oxide nanoparticles through the modulation of oxygen in intracellular environments. Biomaterials, 2012, 33, 7746-7755.	11.4	247
14	Cerium oxide nanoparticles scavenge nitric oxide radical (Ë™NO). Chemical Communications, 2012, 48, 4896.	4.1	222
15	Proline-Dependent Regulation of Clostridium difficile Stickland Metabolism. Journal of Bacteriology, 2013, 195, 844-854.	2.2	185
16	Cellular Interaction and Toxicity Depend on Physicochemical Properties and Surface Modification of Redox-Active Nanomaterials. ACS Nano, 2013, 7, 4855-4868.	14.6	179
17	Oxygenated Functional Group Density on Graphene Oxide: Its Effect on Cell Toxicity. Particle and Particle Systems Characterization, 2013, 30, 148-157.	2.3	173
18	Cerium oxide nanoparticles protect against AÎ^{2}-induced mitochondrial fragmentation and neuronal cell death. Cell Death and Differentiation, 2014, 21, 1622-1632.	11.2	166

#	Article	IF	Citations
19	Exposure to Titanium Dioxide Nanomaterials Provokes Inflammation of an <i>in Vitro</i> Human Immune Construct. ACS Nano, 2009, 3, 2523-2532.	14.6	152
20	Analysis of Proline Reduction in the Nosocomial Pathogen Clostridium difficile. Journal of Bacteriology, 2006, 188, 8487-8495.	2.2	145
21	Unveiling the mechanism of uptake and sub-cellular distribution of cerium oxide nanoparticles. Molecular BioSystems, 2010, 6, 1813.	2.9	144
22	Molybdate transport. Research in Microbiology, 2001, 152, 311-321.	2.1	129
23	Multicolored redox active upconverter cerium oxide nanoparticle for bio-imaging and therapeutics. Chemical Communications, 2010, 46, 6915.	4.1	118
24	Behavior of nanoceria in biologically-relevant environments. Environmental Science: Nano, 2014, 1, 516-532.	4.3	94
25	Expression and Regulation of a Silent Operon, hyf , Coding for Hydrogenase 4 Isoenzyme in Escherichia coli. Journal of Bacteriology, 2004, 186, 580-587.	2.2	89
26	Cerium oxide nanoparticles accelerate the decay of peroxynitrite (ONOOâˆ’). Drug Delivery and Translational Research, 2013, 3, 375-379.	5.8	85
27	Protonated Nanoparticle Surface Governing Ligand Tethering and Cellular Targeting. ACS Nano, 2009, 3, 1203-1211.	14.6	82
28	Redox-Sensitive Cerium Oxide Nanoparticles Protect Human Keratinocytes from Oxidative Stress Induced by Glutathione Depletion. Langmuir, 2016, 32, 12202-12211.	3.5	81
29	Immunomodulation and T Helper TH1/TH2 Response Polarization by CeO2 and TiO2 Nanoparticles. PLoS ONE, 2013, 8, e62816.	2.5	80
30	Using CRISPR-Cas9-mediated genome editing to generate C. difficile mutants defective in selenoproteins synthesis. Scientific Reports, 2017, 7, 14672.	3.3	79
31	Auranofin disrupts selenium metabolism in Clostridium difficile by forming a stable Auâ€“Se adduct. Journal of Biological Inorganic Chemistry, 2009, 14, 507-519.	2.6	75
32	Exposure to Silver Nanoparticles Inhibits Selenoprotein Synthesis and the Activity of Thioredoxin Reductase. Environmental Health Perspectives, 2012, 120, 56-61.	6.0	73
33	Transcriptional regulation of molybdoenzyme synthesis in Escherichia coli in response to molybdenum: ModE-molybdate, a repressor of the modABCD (molybdate transport) operon is a secondary transcriptional activator for the hyc and nar operons. Microbiology (United Kingdom), 1999, 145, 41-55.	1.8	61
34	Up conversion luminescence of Yb3+â€“Er3+ codoped CeO2 nanocrystals with imaging applications. Journal of Luminescence, 2012, 132, 743-749.	3.1	59
35	Inhibition of hydrogen uptake in Escherichia coli by expressing the hydrogenase from the cyanobacterium Synechocystis sp. PCC 6803. BMC Biotechnology, 2007, 7, 25.	3.3	56
36	Arsenic trioxide and auranofin inhibit selenoprotein synthesis: implications for chemotherapy for acute promyelocytic leukaemia. British Journal of Pharmacology, 2008, 154, 940-948.	5.4	55

#	Article	IF	Citations
37	Selenium-dependent metabolism of purines: A selenium-dependent purine hydroxylase and xanthine dehydrogenase were purified from Clostridium purinolyticum and characterized. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 7208-7213.	7.1	50
38	Impact of Trivalent Arsenicals on Selenoprotein Synthesis. Environmental Health Perspectives, 2007, 115, 346-353.	6.0	50
39	A facile synthesis of PLGA encapsulated cerium oxide nanoparticles: release kinetics and biological activity. Nanoscale, 2012, 4, 2597.	5.6	48
40	Targeting selenium metabolism and selenoproteins: Novel avenues for drug discovery. Metallomics, 2010, 2, 112-116.	2.4	42
41	A Selenium-Dependent Xanthine Dehydrogenase Triggers Biofilm Proliferation in<i>Enterococcus faecalis</i>through Oxidant Production. Journal of Bacteriology, 2011, 193, 1643-1652.	2.2	42
42	Therapeutic potential of nanoceria in regenerative medicine. MRS Bulletin, 2014, 39, 976-983.	3.5	42
43	Characterizing the phosphatase mimetic activity of cerium oxide nanoparticles and distinguishing its active site from that for catalase mimetic activity using anionic inhibitors. Environmental Science: Nano, 2017, 4, 1742-1749.	4.3	41
44	Orphan SelD proteins and selenium-dependent molybdenum hydroxylases. Biology Direct, 2008, 3, 4.	4.6	40
45	Inhibition of Selenium Metabolism in the Oral Pathogen <i>Treponema denticola</i>. Journal of Bacteriology, 2009, 191, 4035-4040.	2.2	39
46	An Analysis of the Binding of Repressor Protein ModE to modABCD (Molybdate Transport) Operator/Promoter DNA of Escherichia coli. Journal of Biological Chemistry, 1999, 274, 24308-24315.	3.4	38
47	Synthesis and characterization of selenotrisulfide-derivatives of lipoic acid and lipoamide. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 12481-12486.	7.1	37
48	Comparison of the anaerobic microbiota of deep-water <i>Geodia</i> spp. and sandy sediments in the Straits of Florida. ISME Journal, 2010, 4, 686-699.	9.8	35
49	Tuning Hydrated Nanoceria Surfaces: Experimental/Theoretical Investigations of Ion Exchange and Implications in Organic and Inorganic Interactions. Langmuir, 2010, 26, 7188-7198.	3.5	35
50	High affinity selenium uptake in a keratinocyte model. FEBS Letters, 2008, 582, 299-304.	2.8	33
51	N-terminal truncations in the FhlA protein result in formate- and MoeA-independent expression of the hyc (formate hydrogenlyase) operon of Escherichia coli. Microbiology (United Kingdom), 2001, 147, 3093-3104.	1.8	31
52	Regulation of Purine Hydroxylase and Xanthine Dehydrogenase from Clostridium purinolyticum in Response to Purines, Selenium, and Molybdenum. Journal of Bacteriology, 2002, 184, 2039-2044.	2.2	28
53	Cofactor Determination and Spectroscopic Characterization of the Selenium-Dependent Purine Hydroxylase fromClostridium purinolyticum. Biochemistry, 2003, 42, 11382-11390.	2.5	28
54	Molybdate-dependent transcription ofhycandnaroperons ofEscherichia colirequires MoeA protein and ModE-molybdate. FEMS Microbiology Letters, 1998, 169, 111-116.	1.8	26

#	Article	IF	Citations
55	Isolation and characterization of mutated FhlA proteins which activate transcription of thehycoperon (formate hydrogenlyase) ofEscherichia coliin the absence of molybdate. FEMS Microbiology Letters, 2000, 184, 47-52.	1.8	26
56	Transcriptional regulation of the moe (molybdate metabolism) operon of Escherichia coli. Archives of Microbiology, 2001, 175, 178-188.	2.2	21
57	Exposure to monomethylarsonous acid (MMAIII) leads to altered selenoprotein synthesis in a primary human lung cell model. Toxicology and Applied Pharmacology, 2009, 239, 130-136.	2.8	20
58	The Rv2633c protein of Mycobacterium tuberculosis is a non-heme di-iron catalase with a possible role in defenses against oxidative stress. Journal of Biological Chemistry, 2018, 293, 1590-1595.	3.4	19
59	Antioxidant Inorganic Nanoparticles and Their Potential Applications in Biomedicine. , 2018, , 159-169.		15
60	Cloning and Heterologous Expression of a Methanococcus vannielii Gene Encoding a Selenium-Binding Protein. IUBMB Life, 2004, 56, 501-507.	3.4	12
61	Bioavailability of selenium from the selenotrisulphide derivative of lipoic acid. Photodermatology Photoimmunology and Photomedicine, 2006, 22, 315-323.	1.5	7
62	Molybdate-dependent transcription of hyc and nar operons of Escherichia coli requires MoeA protein and ModE-molybdate. FEMS Microbiology Letters, 1998, 169, 111-116.	1.8	6
63	Hypochlorite scavenging activity of cerium oxide nanoparticles. RSC Advances, 2016, 6, 62911-62915.	3.6	6
64	<scp>d</scp> -Proline Reductase Underlies Proline-Dependent Growth of Clostridioides difficile. Journal of Bacteriology, 2022, 204, .	2.2	6
65	Isolation and characterization of mutated FhlA proteins which activate transcription of the hyc operon (formate hydrogenlyase) of Escherichia coli in the absence of molybdate. FEMS Microbiology Letters, 2000, 184, 47-52.	1.8	3
66	Specific and Nonspecific Incorporation of Selenium into Macromolecules. , 2010, , 121-148.		3
67	Exploring the selenium-over-sulfur substrate specificity and kinetics of a bacterial selenocysteine lyase. Biochimie, 2021, 182, 166-176.	2.6	3
68	Xanthine Dehydrogenase (Se-Dependent). , 2013, , 2335-2336.		0
69	Selenotrisulfide Derivatives of Alpha-Lipoic Acid. Oxidative Stress and Disease, 2008, , .	0.3	0