John B Vincent

List of Publications by Year
in descending order

113	7,563	71102	51608
papers	citations	41 h-index	86 g-index

134	134	134	4826
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-spin molecules: [Mn12O12(O2CR)16(H2O)4]. Journal of the American Chemical Society, 1993, 115, 1804-1816.	13.7	2,156
2	The Biochemistry of Chromium. Journal of Nutrition, 2000, 130, 715-718.	2.9	339
3	Chromium Oligopeptide Activates Insulin Receptor Tyrosine Kinase Activity. Biochemistry, 1997, 36, 4382-4385.	2.5	268
4	Elucidating a Biological Role for Chromium at a Molecular Level. Accounts of Chemical Research, 2000, 33, 503-510.	15.6	266
5	Modeling the photosynthetic water oxidation center. Preparation and properties of tetranuclear manganese complexes containing [Mn4O2]6+,7+,8+ cores, and the crystal structures of Mn4O2(O2CMe)6(bipy)2 and [Mn4O2(O2CMe)7(bipy)2](ClO4). Journal of the American Chemical Society, 1989, 111, 2086-2097.	13.7	247
6	The bioinorganic chemistry of chromium(III). Polyhedron, 2001, 20, 1-26.	2.2	217
7	Quest for the Molecular Mechanism of Chromium Action and Its Relationship to Diabetes. Nutrition Reviews, 2000, 58, 67-72.	5.8	186
8	Chromium is not an essential trace element for mammals: effects of a â€œlow-chromiumâ€•diet. Journal of Biological Inorganic Chemistry, 2011, 16, 381-390.	2.6	185
9	Recent advances in the nutritional biochemistry of trivalent chromium. Proceedings of the Nutrition Society, 2004, 63, 41-47.	1.0	167
10	The Nutritional Supplement Chromium(III) Tris(picolinate) Cleaves DNA. Chemical Research in Toxicology, 1999, 12, 483-487.	3.3	165
11	Chromium: celebrating 50 years as an essential element?. Dalton Transactions, 2010, 39, 3787.	3.3	161
12	New Evidence against Chromium as an Essential Trace Element. Journal of Nutrition, 2017, 147, 2212-2219.	2.9	139
13	The binding and transport of alternative metals by transferrin. Biochimica Et Biophysica Acta - General Subjects, 2012, 1820, 362-378.	2.4	132
14	Mechanisms of Chromium Action: Low-Molecular-Weight Chromium-Binding Substance. Journal of the American College of Nutrition, 1999, 18, 6-12.	1.8	128
15	The Potential Value and Toxicity of Chromium Picolinate as a Nutritional Supplement, Weight Loss Agent and Muscle Development Agent. Sports Medicine, 2003, 33, 213-230.	6.5	124
16	A Biologically Active Form of Chromium May Activate a Membrane Phosphotyrosine Phosphatase (PTP)â€. Biochemistry, 1996, 35, 12963-12969.	2.5	120
17	Isolation and Characterization of a Biologically Active Chromium Oligopeptide from Bovine Liver. Archives of Biochemistry and Biophysics, 1997, 339, 335-343.	3.0	109
18	Synthetic Multinuclear Chromium Assembly Activates Insulin Receptor Kinase Activity:Â Functional Model for Low-Molecular-Weight Chromium-Binding Substance. Inorganic Chemistry, 1997, 36, 5316-5320.	4.0	105

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19	Nutritional supplement chromium picolinate causes sterility and lethal mutations in Drosophila melanogaster. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 3766-3771.	7.1	100
20	The trail of chromium(III) in vivo from the blood to the urine: the roles of transferrin and chromodulin. Journal of Biological Inorganic Chemistry, 2001, 6, 608-617.	2.6	86
21	Characterization of Chromodulin by X-ray Absorption and Electron Paramagnetic Resonance Spectroscopies and Magnetic Susceptibility Measurements. Journal of the American Chemical Society, 2003, 125, 774-780.	13.7	80
22	Is the Pharmacological Mode of Action of Chromium(III) as a Second Messenger?. Biological Trace Element Research, 2015, 166, 7-12.	3.5	75
23	Oral administration of the biomimetic [Cr3O(O2CCH2CH3)6(H2O)3]+ increases insulin sensitivity and improves blood plasma variables in healthy and type 2 diabetic rats. Journal of Biological Inorganic Chemistry, 2005, 10, 119-130.	2.6	71
24	Recent Developments in the Biochemistry of Chromium(III). Biological Trace Element Research, 2004, 99, 001-016.	3.5	70
25	The nutritional supplement chromium picolinate generates oxidative DNA damage and peroxidized lipids in vivo. Polyhedron, 2003, 22, 455-463.	2.2	65
26	The time-dependent transport of chromium in adult rats from the bloodstream to the urine. Journal of Biological Inorganic Chemistry, 2005, 10, 383-393.	2.6	62
27	In Vivo Distribution of Chromium from Chromium Picolinate in Rats and Implications for the Safety of the Dietary Supplement. Chemical Research in Toxicology, 2002, 15, 93-100.	3.3	61
28	Effects of chromium supplementation on body composition, human and animal health, and insulin and glucose metabolism. Current Opinion in Clinical Nutrition and Metabolic Care, 2019, 22, 483-489.	2.5	59
29	The biomimetic [Cr3O(O2CCH2CH3)6(H2O)3]+ decreases plasma insulin, cholesterol, and triglycerides in healthy and type II diabetic rats but not type I diabetic rats. Journal of Biological Inorganic Chemistry, 2002, 7, 852-862.	2.6	58
30	A comparison of the insulin-sensitive transport of chromium in healthy and model diabetic rats. Journal of Inorganic Biochemistry, 2004, 98, 522-533.	3.5	58
31	Tissue and subcellular distribution of chromium picolinate with time after entering the bloodstream. Journal of Inorganic Biochemistry, 2003, 94, 86-93.	3.5	57
32	Synthesis and characterization of symmetric and unsymmetric oxo-bridged trinuclear chromium benzoate complexes: Crystal and molecular structure of [Cr3O(O2CPh)6(py)3]ClO4. Inorganica Chimica Acta, 1994, 217, 171-179.	2.4	55
33	Absorption of the Biomimetic Chromium Cation Triaqua-Îœ‹SUB›3‹/SUB›-oxo-Îœ-hexapropionatotrichromium(III) in Rats. Biological Trace Element Research, 2004, 98, 159-170.	3.5	55
34	Low-molecular-weight chromium-binding substance and biomimetic [Cr3O(O2CCH2CH3)6(H2O)3]+ do not cleave DNA under physiologically-relevant conditions. Polyhedron, 1999, 18, 2617-2624.	2.2	54
35	A re-investigation the electronic spectra of chromium(III) picolinate complexes and high yield synthesis and characterization of Cr2(Î¼-OH)2(pic)4Â·5H2O (Hpic=picolinic acid). Polyhedron, 1999, 18, 2891-2897.	2.2	54
36	Nutritional supplement chromium picolinate generates chromosomal aberrations and impedes progeny development in Drosophila melanogaster. Mutation Research - Genetic Toxicology and Environmental Mutagenesis, 2006, 610, 101-113.	1.7	54

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37	Chromium: Is It Essential, Pharmacologically Relevant, or Toxic?. Metal Ions in Life Sciences, 2013, 13, 171-198.	2.8	53
38	Synthetic Models for Low-Molecular-Weight Chromium-Binding Substance: Synthesis and Characterization of Oxo-Bridged Tetranuclear Chromium(III) Assemblies. Inorganic Chemistry, 1994, 33, 5522-5527.	4.0	51
39	Is chromium pharmacologically relevant?. Journal of Trace Elements in Medicine and Biology, 2014, 28, 397-405.	3.0	51
40	Is glucose tolerance factor an artifact produced by acid hydrolysis of low-molecular-weight chromium-binding substance?. Polyhedron, 1997, 16, 4171-4177.	2.2	48
41	Nuclear magnetic resonance studies of chromium(III) pyridinecarboxylate complexes. Journal of Inorganic Biochemistry, 1998, 72, 79-88.	3.5	46
42	Characterization of the Organic Component of Low-Molecular-Weight Chromium-Binding Substance and Its Binding of Chromium. Journal of Nutrition, 2011, 141, 1225-1232.	2.9	43
43	Chromium. Advances in Nutrition, 2018, 9, 505-506.	6.4	43
44	Relationship between Glucose Tolerance Factor and Low-Molecular-Weight Chromium-Binding Substance. Journal of Nutrition, 1994, 124, 117-118.	2.9	41
45	An Unsymmetric Trinuclear Chromium(III) Oxo Carboxylate Assembly: Structure and Characterization of Cr3O(O2CPh)4(8-hqn)3.cntdot.1.25CH2Cl2. Inorganic Chemistry, 1995, 34, 3813-3820.	4.0	40
46	Binding of trivalent chromium to serum transferrin is sufficiently rapid to be physiologically relevant. Journal of Inorganic Biochemistry, 2015, 143, 48-55.	3.5	39
47	Synthesis and Characterization of Novel Oxo-Bridged Dinuclear and Hydroxo-Bridged Trinuclear Chromium(III) Assemblies. Inorganic Chemistry, 1997, 36, 4875-4882.	4.0	38
48	Recent advances in the biochemistry of chromium(III). Journal of Trace Elements in Experimental Medicine, 2003, 16, 227-236.	0.8	30
49	High-Dose Chromium(III) Supplementation Has No Effects on Body Mass and Composition While Altering Plasma Hormone and Triglycerides Concentrations. Biological Trace Element Research, 2006, 113, 53-66.	3.5	29
50	Enhancement of post-receptor insulin signaling by trivalent chromium in hepatoma cells is associated with differential inhibition of specific protein-tyrosine phosphatases. Journal of Trace Elements in Experimental Medicine, 2001, 14, 393-404.	0.8	28
51	Urinary chromium loss associated with diabetes is offset by increases in absorption. Journal of Inorganic Biochemistry, 2010, 104, 790-797.	3.5	27
52	The Need for Combined Inorganic, Biochemical, and Nutritional Studies of Chromium(III). Chemistry and Biodiversity, 2012, 9, 1923-1941.	2.1	26
53	Comparison of Tissue Metal Concentrations in Zucker Lean, Zucker Obese, and Zucker Diabetic Fatty Rats and the Effects of Chromium Supplementation on Tissue Metal Concentrations. Biological Trace Element Research, 2013, 151, 373-383.	3.5	26
54	The stability of the biomimetic cation triaqua-Î¼-oxohexapropionatotrichromium(III) in vivo in rats. Polyhedron, 2001, 20, 2241-2252.	2.2	25

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55	Concealed Asymmetry in an Exchange-Coupled Trichromium(III) Cluster:Â Structure and Magnetic Spectrum of [Cr3O(OOCPh)6(py)3](py)0.5ClO4. Inorganic Chemistry, 1998, 37, 5675-5677.	4.0	24
56	Effects of Pre- and Postnatal Exposure to Chromium Picolinate or Picolinic Acid on Neurological Development in CD-1 Mice. Biological Trace Element Research, 2008, 124, 70-82.	3.5	23
57	Heterotrinuclear Carboxylates of Chromium(III) and Iron(III): Mixtures or Pure Compounds?. Inorganic Chemistry, 1994, 33, 5604-5606.	4.0	21
58	The fate of the biomimetic cation triaqua-Î¼-oxohexapropionatotrichromium(III) in rats. Journal of Inorganic Biochemistry, 2002, 89, 272-278.	3.5	20
59	DNA nicking by a trinuclear chromium complex. Inorganica Chimica Acta, 1998, 268, 211-219.	2.4	19
60	Potential of Chromium(III) Picolinate for Reproductive or Developmental Toxicity Following Exposure of Male CD-1 Mice Prior to Mating. Biological Trace Element Research, 2011, 143, 1666-1672.	3.5	19
61	Release of trivalent chromium from serum transferrin is sufficiently rapid to be physiologically relevant. Journal of Inorganic Biochemistry, 2020, 202, 110901.	3.5	19
62	Cytochrome c: A Biochemistry Laboratory Course. Journal of Chemical Education, 2005, 82, 1211.	2.3	18
63	Potential and purported roles for chromium in insulin signaling: The search for the holy grail. , 2007, , 139-160.		16
64	Urinary Chromium Excretion in Response to an Insulin Challenge Is Not a Biomarker for Chromium Status. Biological Trace Element Research, 2013, 152, 57-65.	3.5	15
65	Systematic Review of the Effects of Chromium(III) on Chickens. Biological Trace Element Research, 2019, 188, 99-126.	3.5	15
66	Chromium-containing biomimetic cation triaqua-Î¼3-oxo-Î¼-hexapropionatotrichromium(III) inhibits colorectal tumor formation in rats. Journal of Inorganic Biochemistry, 2004, 98, 1303-1306.	3.5	13
67	Low-molecular-weight chromium-binding substance from chicken liver and American alligator liver. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2006, 144, 423-431.	1.6	13
68	The effects of chromium(III) coordination on the dissociation of acidic peptides. Journal of Mass Spectrometry, 2008, 43, 773-781.	1.6	13
69	Monocarboxylate Transporters are not Responsible for Cr3+ Transport from Endosomes. Biological Trace Element Research, 2012, 148, 409-414.	3.5	13
70	Spectroscopic and biological activity studies of the chromium-binding peptide EEEEGDD. Journal of Biological Inorganic Chemistry, 2016, 21, 369-381.	2.6	13
71	Transferrin metalloprotein affinity metal chromatography. Journal of Chemical Technology and Biotechnology, 1995, 62, 373-379.	3.2	12
72	The effects of the glycation of transferrin on chromium binding and the transport and distribution of chromium in vivo. Journal of Inorganic Biochemistry, 2016, 164, 26-33.	3.5	12

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73	Significance of conformation changes during the binding and release of chromium(III) from human serum transferrin. Journal of Inorganic Biochemistry, 2020, 206, 111040.	3.5	12
74	Mass Spectrometric and Spectroscopic Studies of the Nutritional Supplement Chromium(III) Nicotinate. Biological Trace Element Research, 2009, 130, 114-130.	3.5	11
75	Comment on: Padmavathi et al. (2010) Chronic Maternal Dietary Chromium Restriction Modulates Visceral Adiposity: Probable Underlying Mechanisms. Diabetes;59:98â€“104. Diabetes, 2010, 59, e2-e2.	0.6	10
76	Long-Term Exposure to [Cr3O(O2CCH2CH3)6(H2O)3]+ in Wistar Rats Fed Normal or High-Fat Diets Does Not Alter Glucose Metabolism. Biological Trace Element Research, 2013, 151, 406-414.	3.5	10
77	Aminopyridine complexes of Cr(III) basic carboxylates as potential polymer precursors: Synthesis, characterization, and crystal structure of [Cr3O(propionate)6(X-aminopyridine)3]+ (X = 3 or 4). Polyhedron, 2015, 100, 17-27.	2.2	10
78	Spectroscopic studies of the dodecanuclear chromium complex Cr12O9(OH)3(pivalate)15: confirmation of the presence of twelve Cr(III) centers and the crystal structure of Cr12O9(OH)3(pivalate)15Â·2PrOHÂ·9H2O. Polyhedron, 2002, 21, 155-165.	2.2	9
79	X-ray structure of chromium(III)-containing transferrin: First structure of a physiological Cr(III)-binding protein. Journal of Inorganic Biochemistry, 2020, 210, 111101.	3.5	9
80	Effects of Bitter Melon and a Chromium Propionate Complex on Symptoms of Insulin Resistance and Type 2 Diabetes in Rat Models. Biological Trace Element Research, 2021, 199, 1013-1026.	3.5	9
81	1H NMR studies of Cr(III)â€“imidazole complexes: can 1H NMR be used as a probe of Crâ€“guanine DNA adducts?. Inorganica Chimica Acta, 2003, 344, 265-269.	2.4	8
82	Copper binding and release by immobilized transferrin: A new approach to heavy metal removal and recovery. , 1997, 53, 01-09.		7
83	Beneficial Effects of Chromium(III) and Vanadium Supplements in Diabetes. , 2018, , 365-374.		7
84	Molecular Structure of Binary Chromium(III)â€“DNA Adducts. ChemBioChem, 2020, 21, 628-631.	2.6	7
85	Low-molecular-weight chromium-binding substance (LMWCr) may bind and carry Cr(III) from the endosome. Journal of Inorganic Biochemistry, 2021, 223, 111555.	3.5	7
86	Metal ion concentration, time, and pH dependence of metal ion binding to a transferrin metalloprotein affinity chromatography (MAMC) matrix. Journal of Chemical Technology and Biotechnology, 1995, 64, 96-100.	3.2	6
87	Introduction: A history of chromium studies (1955â€“1995). , 2007, , 1-40.		5
88	Formation of oxo-centered trinuclear chromium carboxylate complexes and hydrolysis of Cr3 as established by paramagnetic 2H NMR spectroscopy. Journal of Inorganic Biochemistry, 2014, 131, 12-20.	3.5	5
89	Examining the Potential Formation of Ternary Chromium-Histidine-DNA Complexes and Implications for Their Carcinogenicity. Biological Trace Element Research, 2021, , 1.	3.5	5
90	Beneficial Effects of Chromium(III) and Vanadium Supplements in Diabetes. , 2012, , 381-391.		4

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91	Comment on Purification and Characterization of Chromium-Binding Substances from High-Chromium Yeast. Journal of Agricultural and Food Chemistry, 2013, 61, 9280-9281.	5.2	4
92	Paramagnetic 19F NMR and electrospray ionization mass spectrometric studies of substituted pyridine complexes of chromium(III): Models for potential use of 19F NMR to probe Cr(III)â€“nucleotide interaction. Polyhedron, 2013, 64, 136-141.	2.2	4
93	Roles of Chromium(III), Vanadium, and Zinc in Sports Nutrition. , 2013, , 447-454.		4
94	[Cr3O(O2CCH2CH3)6(H2O)3]NO3Â·H2O (Cr3) Toxicity Potential in Bacterial and Mammalian Cells. Biological Trace Element Research, 2018, 183, 342-350.	3.5	4
95	Mechanistic Study of Enhanced Protonation by Chromium(III) in Electrospray Ionization: A Superacid Bound to a Peptide. Journal of the American Society for Mass Spectrometry, 2020, 31, 308-318.	2.8	4
96	Immobilization of conalbumin onto polystyrene/divinylbenzene co-polymers: Towards finding the best support for MAMC. , 1996, 9, 558-563.		3
97	The Identity of â€œChromium Malateâ€• Biological Trace Element Research, 2018, 181, 369-377.	3.5	3
98	Introduction: A history of chromium studies (1955â€“2007). , 2019, , 1-58.		3
99	The absorption and transport of chromium in the body. , 2019, , 129-174.		3
100	Use of thermolysin metalloprotein affinity metal chromatography in the decontamination of actinide-bearing solutions. Journal of Chemical Technology and Biotechnology, 1995, 64, 149-152.	3.2	2
101	Simulating the Shroud of Turin: A Laboratory Experiment. The Chemical Educator, 1999, 4, 102-104.	0.0	1
102	Propagation of Errors in Freshman Chemistry Textbooks: A Case Study Using the Magnetic Moment of a Spinning Electron. Journal of Chemical Education, 1999, 76, 1460.	2.3	1
103	Piltdown Man: Combining the Instruction of Scientific Ethics and Qualitative Analysis. Journal of Chemical Education, 1999, 76, 1501.	2.3	1
104	The Potential of Cr3 [Triaquaâ€¼₃â€Oxoâ€Hexaâ€¼â€Propionatotrichromium(III) Chloride] to Reduce Birth Defects in the Offspring of Diabetic CDâ€1 Mice. Birth Defects Research Part B: Developmental and Reproductive Toxicology, 2015, 104, 65-70.	1.4	1
105	Editorial. Biological Trace Element Research, 2015, 163, 1-1.	3.5	1
106	Trivalent Chromium has no Effect on Delaying Azoxymethane-Induced Colorectal Cancer in FVB/NJ Mice. Biological Trace Element Research, 2015, 168, 221-226.	3.5	1
107	The use of chromium(III) complexes to enhance peptide protonation by electrospray ionization mass spectrometry. Journal of Mass Spectrometry, 2018, 53, 1198-1206.	1.6	1
108	Roles of Chromium(III), Vanadium, Iron, and Zinc in Sports Nutrition. , 2019, , 653-664.		1

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109	Electron paramagnetic spectrum of dimanganic human serum transferrin. Polyhedron, 2021, 203, 115224.	2.2	1
110	Silicaâ€conalbumin conjugate as an inexpensive alternative for metalloprotein affinity metal chromatography. Journal of Environmental Science and Health Part A: Environmental Science and Engineering, 1996, 31, 2337-2347.	0.1	0
111	Over Thirty Years of REU Programs in the Department of Chemistry and Biochemistry at The University of Alabama. ACS Symposium Series, 2018, , 17-31.	0.5	0
112	Sequence of the peptide component of lowâ€molecularâ€weight chromiumâ€binding substance. FASEB Journal, 2010, 24, 537.5.	0.5	0
113	Binding of Trivalent Chromium to Transferrin is Sufficiently Rapid to be Physiologically Relevant. FASEB Journal, 2015, 29, 921.8.	0.5	0