

Richard N Collins

List of Publications by Year in descending order

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78
papers

3,860
citations

109321

35
h-index

128289

60
g-index

79
all docs

79
docs citations

79
times ranked

4289
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of reactive iron in coal mine dust on oxidant generation and epithelial lung cell viability. <i>Science of the Total Environment</i> , 2022, 810, 152277.	8.0	15
2	Radioactive particles from a range of past nuclear events: Challenges posed by highly varied structure and composition. <i>Science of the Total Environment</i> , 2022, 842, 156755.	8.0	5
3	Phosphate recovery as vivianite using a flow-electrode capacitive desalination (FCDI) and fluidized bed crystallization (FBC) coupled system. <i>Water Research</i> , 2021, 194, 116939.	11.3	52
4	Arsenic (III) removal by mechanochemically sulfidated microscale zero valent iron under anoxic and oxic conditions. <i>Water Research</i> , 2021, 198, 117132.	11.3	45
5	Key Considerations When Assessing Novel Fenton Catalysts: Iron Oxychloride (FeOCl) as a Case Study. <i>Environmental Science & Technology</i> , 2021, 55, 13317-13325.	10.0	37
6	Production of a Surface-Localized Oxidant during Oxygenation of Mackinawite (FeS). <i>Environmental Science & Technology</i> , 2020, 54, 1167-1176.	10.0	45
7	Labile Fe(III) from sorbed Fe(II) oxidation is the key intermediate in Fe(II)-catalyzed ferrihydrite transformation. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 272, 105-120.	3.9	72
8	Iron Transformation and Its Role in Phosphorus Immobilization in a UCT-MBR with Vivianite Formation Enhancement. <i>Environmental Science & Technology</i> , 2020, 54, 12539-12549.	10.0	19
9	Water Recovery Rate in Short-Circuited Closed-Cycle Operation of Flow-Electrode Capacitive Deionization (FCDI). <i>Environmental Science & Technology</i> , 2019, 53, 13859-13867.	10.0	57
10	Flow-Electrode CDI Removes the Uncharged Ca ²⁺ CO ₃ Ternary Complex from Brackish Potable Groundwater: Complex Dissociation, Transport, and Sorption. <i>Environmental Science & Technology</i> , 2019, 53, 2739-2747.	10.0	54
11	Immobilisation of geogenic arsenic and vanadium in iron-rich sediments and iron stone deposits. <i>Science of the Total Environment</i> , 2019, 654, 1072-1081.	8.0	12
12	Effects of Good TM s Buffers and pH on the Structural Transformation of Zero Valent Iron and the Oxidative Degradation of Contaminants. <i>Environmental Science & Technology</i> , 2018, 52, 1393-1403.	10.0	35
13	Effect of <i>Shewanella oneidensis</i> on the Kinetics of Fe(II)-Catalyzed Transformation of Ferrihydrite to Crystalline Iron Oxides. <i>Environmental Science & Technology</i> , 2018, 52, 114-123.	10.0	80
14	Advances in Surface Passivation of Nanoscale Zerovalent Iron: A Critical Review. <i>Environmental Science & Technology</i> , 2018, 52, 12010-12025.	10.0	225
15	Investigating the effect of ascorbate on the Fe(II)-catalyzed transformation of the poorly crystalline iron mineral ferrihydrite. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2018, 1862, 1760-1769.	2.4	8
16	The short-term reduction of uranium by nanoscale zero-valent iron (nZVI): role of oxide shell, reduction mechanism and the formation of U(^v)-carbonate phases. <i>Environmental Science: Nano</i> , 2017, 4, 1304-1313.	4.3	47
17	Redox characterization of the Fe(II)-catalyzed transformation of ferrihydrite to goethite. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 218, 257-272.	3.9	63
18	Fe(II) Interactions with Smectites: Temporal Changes in Redox Reactivity and the Formation of Green Rust. <i>Environmental Science & Technology</i> , 2017, 51, 12573-12582.	10.0	26

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19	Mechanisms and Rates of U(VI) Reduction by Fe(II) in Homogeneous Aqueous Solution and the Role of U(V) Disproportionation. <i>Journal of Physical Chemistry A</i> , 2017, 121, 6603-6613.	2.5	22
20	Use of fourier transform infrared spectroscopy to examine the Fe(II)-Catalyzed transformation of ferrihydrite. <i>Talanta</i> , 2017, 175, 30-37.	5.5	38
21	Uranium extraction from a low-grade, stockpiled, non-sulfidic ore: Impact of added iron and the native microbial consortia. <i>Hydrometallurgy</i> , 2017, 167, 81-91.	4.3	12
22	Uranium Reduction by Fe(II) in the Presence of Montmorillonite and Nontronite. <i>Environmental Science & Technology</i> , 2016, 50, 8223-8230.	10.0	52
23	An in situ XAS study of ferric iron hydrolysis and precipitation in the presence of perchlorate, nitrate, chloride and sulfate. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 177, 150-169.	3.9	27
24	Fate of Plutonium at a Former Nuclear Testing Site in Australia. <i>Environmental Science & Technology</i> , 2016, 50, 9098-9104.	10.0	21
25	Influence of Dissolved Silicate on Rates of Fe(II) Oxidation. <i>Environmental Science & Technology</i> , 2016, 50, 11663-11671.	10.0	59
26	The reduction of 4-chloronitrobenzene by Fe(II)-Fe(III) oxide systems - correlations with reduction potential and inhibition by silicate. <i>Journal of Hazardous Materials</i> , 2016, 320, 143-149.	12.4	31
27	The tortoise versus the hare - Possible advantages of microparticulate zerovalent iron (mZVI) over nanoparticulate zerovalent iron (nZVI) in aerobic degradation of contaminants. <i>Water Research</i> , 2016, 105, 331-340.	11.3	46
28	Donnan membrane speciation of Al, Fe, trace metals and REEs in coastal lowland acid sulfate soil-impacted drainage waters. <i>Science of the Total Environment</i> , 2016, 547, 104-113.	8.0	19
29	Microbial communities reflect temporal changes in cyanobacterial composition in a shallow ephemeral freshwater lake. <i>ISME Journal</i> , 2016, 10, 1337-1351.	9.8	212
30	Reduced Uranium Phases Produced from Anaerobic Reaction with Nanoscale Zerovalent Iron. <i>Environmental Science & Technology</i> , 2016, 50, 2595-2601.	10.0	43
31	Effect of Structural Transformation of Nanoparticulate Zero-Valent Iron on Generation of Reactive Oxygen Species. <i>Environmental Science & Technology</i> , 2016, 50, 3820-3828.	10.0	124
32	Reductive reactivity of borohydride- and dithionite-synthesized iron-based nanoparticles: A comparative study. <i>Journal of Hazardous Materials</i> , 2016, 303, 101-110.	12.4	26
33	Isotopically exchangeable Al in coastal lowland acid sulfate soils. <i>Science of the Total Environment</i> , 2016, 542, 129-135.	8.0	1
34	Uranium Binding Mechanisms of the Acid-Tolerant Fungus <i>Coniochaeta fodinicola</i> . <i>Environmental Science & Technology</i> , 2015, 49, 8487-8496.	10.0	36
35	Characterisation of the Physical Composition and Microbial Community Structure of Biofilms within a Model Full-Scale Drinking Water Distribution System. <i>PLoS ONE</i> , 2015, 10, e0115824.	2.5	70
36	<i>Fodinomyces uranophilus</i> gen. nov. sp. nov. and <i>Coniochaeta fodinicola</i> sp. nov., two uranium mine-inhabiting Ascomycota fungi from northern Australia. <i>Mycologia</i> , 2014, 106, 1073-1089.	1.9	43

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37	Solid phases responsible for Mn II , Cr III , Co II , Ni, Cu II and Zn immobilization by a modified bauxite refinery residue (red mud) at pH 7.5. <i>Chemical Engineering Journal</i> , 2014, 236, 419-429.	12.7	22
38	Speciation of metal(loid)s in environmental samples by X-ray absorption spectroscopy: A critical review. <i>Analytica Chimica Acta</i> , 2014, 822, 1-22.	5.4	150
39	Metal(loid) Bioaccessibility Dictates Microbial Community Composition in Acid Sulfate Soil Horizons and Sulfidic Drain Sediments. <i>Environmental Science & Technology</i> , 2014, 48, 8514-8521.	10.0	14
40	Ferrous iron oxidation under acidic conditions – The effect of ferric oxide surfaces. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 145, 1-12.	3.9	106
41	Reduction of U(VI) by Fe(II) during the Fe(II)-Accelerated Transformation of Ferrihydrite. <i>Environmental Science & Technology</i> , 2014, 48, 9086-9093.	10.0	67
42	Effect of Solution and Solid-Phase Conditions on the Fe(II)-Accelerated Transformation of Ferrihydrite to Lepidocrocite and Goethite. <i>Environmental Science & Technology</i> , 2014, 48, 5477-5485.	10.0	265
43	Resolving Early Stages of Homogeneous Iron(III) Oxyhydroxide Formation from Iron(III) Nitrate Solutions at pH 3 Using Time-Resolved SAXS. <i>Langmuir</i> , 2014, 30, 3548-3556.	3.5	29
44	Exchangeable and secondary mineral reactive pools of aluminium in coastal lowland acid sulfate soils. <i>Science of the Total Environment</i> , 2014, 485-486, 232-240.	8.0	17
45	Improved detection of coastal acid sulfate soil hotspots through biomonitoring of metal(loid) accumulation in water lilies (<i>Nymphaea capensis</i>). <i>Science of the Total Environment</i> , 2014, 487, 500-505.	8.0	4
46	Anodic Reactivity of Ferrous Sulfide Precipitates Changing over Time due to Particulate Speciation. <i>Environmental Science & Technology</i> , 2013, 47, 12366-12373.	10.0	9
47	An in situ quick-EXAFS and redox potential study of the Fe(II)-catalysed transformation of ferrihydrite. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2013, 435, 2-8.	4.7	48
48	Inhibition of Uranium(VI) Sorption on Titanium Dioxide by Surface Iron(III) Species in Ferric Oxide/Titanium Dioxide Systems. <i>Environmental Science & Technology</i> , 2012, 46, 11128-11134.	10.0	14
49	The impacts of low-cost treatment options upon scale formation potential in remote communities reliant on hard groundwaters. A case study: Northern Territory, Australia. <i>Science of the Total Environment</i> , 2012, 416, 22-31.	8.0	11
50	Effect of Amorphous Fe(III) Oxide Transformation on the Fe(II)-Mediated Reduction of U(VI). <i>Environmental Science & Technology</i> , 2011, 45, 1327-1333.	10.0	96
51	Mineral species control of aluminum solubility in sulfate-rich acidic waters. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 965-977.	3.9	55
52	Applications of Time-Resolved Laser Fluorescence Spectroscopy to the Environmental Biogeochemistry of Actinides. <i>Journal of Environmental Quality</i> , 2011, 40, 731-741.	2.0	35
53	Speciation and transport of arsenic in an acid sulfate soil-dominated catchment, eastern Australia. <i>Chemosphere</i> , 2011, 82, 879-887.	8.2	19
54	Pedogenic factors and measurements of the plant uptake of cobalt. <i>Plant and Soil</i> , 2011, 339, 499-512.	3.7	32

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55	Influence of calcium and silica on hydraulic properties of sodium montmorillonite assemblages under alkaline conditions. <i>Journal of Colloid and Interface Science</i> , 2010, 343, 366-373.	9.4	7
56	Uptake, Localization, and Speciation of Cobalt in <i>Triticum aestivum</i> L. (Wheat) and <i>Lycopersicon esculentum</i> M. (Tomato). <i>Environmental Science & Technology</i> , 2010, 44, 2904-2910.	10.0	32
57	Schwertmannite stability in acidified coastal environments. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 482-496.	3.9	61
58	The aqueous phase speciation and chemistry of cobalt in terrestrial environments. <i>Chemosphere</i> , 2010, 79, 763-771.	8.2	79
59	Dissociation kinetics of Fe(III) and Al(III) natural organic matter complexes at pH 6.0 and 8.0 and 25°C. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 2875-2887.	3.9	35
60	The effect of silica and natural organic matter on the Fe(II)-catalysed transformation and reactivity of Fe(III) minerals. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 4409-4422.	3.9	318
61	Assessment of uranium and selenium speciation in human and bacterial biological models to probe changes in their structural environment. <i>Radiochimica Acta</i> , 2009, 97, 375-383.	1.2	3
62	Isotopically Exchangeable Concentrations of Elements Having Multiple Oxidation States: The Case of Fe(II)/Fe(III) Isotope Self-Exchange in Coastal Lowland Acid Sulfate Soils. <i>Environmental Science & Technology</i> , 2009, 43, 5365-5370.	10.0	8
63	Potential phytoavailability of anthropogenic cobalt in soils as measured by isotope dilution techniques. <i>Science of the Total Environment</i> , 2008, 406, 108-115.	8.0	12
64	Novel pattern of foliar metal distribution in a manganese hyperaccumulator. <i>Functional Plant Biology</i> , 2008, 35, 193.	2.1	23
65	Impact of soil consolidation and solution composition on the hydraulic properties of coastal acid sulfate soils. <i>Soil Research</i> , 2008, 46, 112.	1.1	4
66	Assessment of Isotope Exchange Methodology to Determine the Sorption Coefficient and Isotopically Exchangeable Concentration of Selenium in Soils and Sediments. <i>Environmental Science & Technology</i> , 2006, 40, 7778-7783.	10.0	30
67	Anion exchange liquid chromatography-inductively coupled plasma-mass spectrometry detection of the Co ²⁺ , Cu ²⁺ , Fe ³⁺ and Ni ²⁺ complexes of mugineic and deoxymugineic acid. <i>Journal of Chromatography A</i> , 2006, 1129, 208-215.	3.7	69
68	Seleno-L-Methionine Is the Predominant Organic Form of Selenium in <i>Cupriavidus metallidurans</i> CH34 Exposed to Selenite or Selenate. <i>Applied and Environmental Microbiology</i> , 2006, 72, 6414-6416.	3.1	4
69	Resistance, accumulation and transformation of selenium by the cyanobacterium <i>Synechocystis</i> sp. PCC 6803 after exposure to inorganic SeVI or SeIV. <i>Radiochimica Acta</i> , 2005, 93, 683-689.	1.2	17
70	Influence of thermodynamic database on the modelisation of americium(III) speciation in a simulated biological medium. <i>Radiochimica Acta</i> , 2005, 93, 715-718.	1.2	12
71	Chemical Forms of Selenium in the Metal-Resistant Bacterium <i>Ralstonia metallidurans</i> CH34 Exposed to Selenite and Selenate. <i>Applied and Environmental Microbiology</i> , 2005, 71, 2331-2337.	3.1	96
72	Separation of low-molecular mass organic acid-metal complexes by high-performance liquid chromatography. <i>Journal of Chromatography A</i> , 2004, 1059, 1-12.	3.7	44

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73	Transformation and fixation of Zn in two polluted soils by changes of pH and organic ligands. Soil Research, 2003, 41, 905.	1.1	10
74	Organic Ligand and pH Effects on Isotopically Exchangeable Cadmium in Polluted Soils. Soil Science Society of America Journal, 2003, 67, 112.	2.2	37
75	Uptake of intact zinc-ethylenediaminetetraacetic acid from soil is dependent on plant species and complex concentration. Environmental Toxicology and Chemistry, 2002, 21, 1940-1945.	4.3	57
76	Determination of Metal-EDTA Complexes in Soil Solution and Plant Xylem by Ion Chromatography-Electrospray Mass Spectrometry. Environmental Science & Technology, 2001, 35, 2589-2593.	10.0	77
77	Enhanced anaerobic transformations of carbon tetrachloride by soil organic matter. Environmental Toxicology and Chemistry, 1999, 18, 2703-2710.	4.3	40
78	Soil- and surfactant-enhanced reductive dechlorination of carbon tetrachloride in the presence of <i>Shewanella putrefaciens</i> 200. Journal of Contaminant Hydrology, 1997, 28, 337-361.	3.3	10