

Richard N Collins

List of Publications by Year in descending order

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Version: 2024-02-01

78
papers

3,860
citations

125106

35
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145109

60
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79
all docs

79
docs citations

79
times ranked

4815
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. | 3.9 | 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. | 3.9 | 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. | 5.3 | 52 |
| 4 | Arsenic (III) removal by mechanochemically sulfidated microscale zero valent iron under anoxic and oxic conditions. <i>Water Research</i> , 2021, 198, 117132. | 5.3 | 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. | 4.6 | 37 |
| 6 | Production of a Surface-Localized Oxidant during Oxygenation of Mackinawite (FeS). <i>Environmental Science & Technology</i> , 2020, 54, 1167-1176. | 4.6 | 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. | 1.6 | 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. | 4.6 | 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. | 4.6 | 57 |
| 10 | Flow-Electrode CDI Removes the Uncharged $\text{Ca}^{2+}\text{CO}_3^{2-}$ Ternary Complex from Brackish Potable Groundwater: Complex Dissociation, Transport, and Sorption. <i>Environmental Science & Technology</i> , 2019, 53, 2739-2747. | 4.6 | 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. | 3.9 | 12 |
| 12 | Effects of Goodâ€™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. | 4.6 | 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. | 4.6 | 80 |
| 14 | Advances in Surface Passivation of Nanoscale Zerovalent Iron: A Critical Review. <i>Environmental Science & Technology</i> , 2018, 52, 12010-12025. | 4.6 | 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. | 1.1 | 8 |
| 16 | The short-term reduction of uranium by nanoscale zero-valent iron (nZVI): role of oxide shell, reduction mechanism and the formation of $\text{U}(\text{V})$ -carbonate phases. <i>Environmental Science: Nano</i> , 2017, 4, 1304-1313. | 2.2 | 47 |
| 17 | Redox characterization of the Fe(II)-catalyzed transformation of ferrihydrite to goethite. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 218, 257-272. | 1.6 | 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. | 4.6 | 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. | 1.1 | 22 |
| 20 | Use of fourier transform infrared spectroscopy to examine the Fe(II)-Catalyzed transformation of ferrihydrite. <i>Talanta</i> , 2017, 175, 30-37. | 2.9 | 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. | 1.8 | 12 |
| 22 | Uranium Reduction by Fe(II) in the Presence of Montmorillonite and Nontronite. <i>Environmental Science & Technology</i> , 2016, 50, 8223-8230. | 4.6 | 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. | 1.6 | 27 |
| 24 | Fate of Plutonium at a Former Nuclear Testing Site in Australia. <i>Environmental Science & Technology</i> , 2016, 50, 9098-9104. | 4.6 | 21 |
| 25 | Influence of Dissolved Silicate on Rates of Fe(II) Oxidation. <i>Environmental Science & Technology</i> , 2016, 50, 11663-11671. | 4.6 | 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. | 6.5 | 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. | 5.3 | 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. | 3.9 | 19 |
| 29 | Microbial communities reflect temporal changes in cyanobacterial composition in a shallow ephemeral freshwater lake. <i>ISME Journal</i> , 2016, 10, 1337-1351. | 4.4 | 212 |
| 30 | Reduced Uranium Phases Produced from Anaerobic Reaction with Nanoscale Zerovalent Iron. <i>Environmental Science & Technology</i> , 2016, 50, 2595-2601. | 4.6 | 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. | 4.6 | 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. | 6.5 | 26 |
| 33 | Isotopically exchangeable Al in coastal lowland acid sulfate soils. <i>Science of the Total Environment</i> , 2016, 542, 129-135. | 3.9 | 1 |
| 34 | Uranium Binding Mechanisms of the Acid-Tolerant Fungus <i>Coniochaeta fodinicola</i> . <i>Environmental Science & Technology</i> , 2015, 49, 8487-8496. | 4.6 | 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. | 1.1 | 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. | 0.8 | 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. | 6.6 | 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. | 2.6 | 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. | 4.6 | 14 |
| 40 | Ferrous iron oxidation under acidic conditions – The effect of ferric oxide surfaces. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 145, 1-12. | 1.6 | 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. | 4.6 | 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. | 4.6 | 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. | 1.6 | 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. | 3.9 | 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. | 3.9 | 4 |
| 46 | Anodic Reactivity of Ferrous Sulfide Precipitates Changing over Time due to Particulate Speciation. <i>Environmental Science & Technology</i> , 2013, 47, 12366-12373. | 4.6 | 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. | 2.3 | 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. | 4.6 | 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. | 3.9 | 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. | 4.6 | 96 |
| 51 | Mineral species control of aluminum solubility in sulfate-rich acidic waters. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 965-977. | 1.6 | 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. | 1.0 | 35 |
| 53 | Speciation and transport of arsenic in an acid sulfate soil-dominated catchment, eastern Australia. <i>Chemosphere</i> , 2011, 82, 879-887. | 4.2 | 19 |
| 54 | Pedogenic factors and measurements of the plant uptake of cobalt. <i>Plant and Soil</i> , 2011, 339, 499-512. | 1.8 | 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. | 5.0 | 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. | 4.6 | 32 |
| 57 | Schwertmannite stability in acidified coastal environments. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 482-496. | 1.6 | 61 |
| 58 | The aqueous phase speciation and chemistry of cobalt in terrestrial environments. <i>Chemosphere</i> , 2010, 79, 763-771. | 4.2 | 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. | 1.6 | 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. | 1.6 | 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. | 0.5 | 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. | 4.6 | 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. | 3.9 | 12 |
| 64 | Novel pattern of foliar metal distribution in a manganese hyperaccumulator. <i>Functional Plant Biology</i> , 2008, 35, 193. | 1.1 | 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. | 0.6 | 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. | 4.6 | 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. | 1.8 | 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. | 1.4 | 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. | 0.5 | 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. | 0.5 | 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. | 1.4 | 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. | 1.8 | 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. | 0.6 | 10 |
| 74 | Organic Ligand and pH Effects on Isotopically Exchangeable Cadmium in Polluted Soils. Soil Science Society of America Journal, 2003, 67, 112. | 1.2 | 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. | 2.2 | 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. | 4.6 | 77 |
| 77 | Enhanced anaerobic transformations of carbon tetrachloride by soil organic matter. Environmental Toxicology and Chemistry, 1999, 18, 2703-2710. | 2.2 | 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. | 1.6 | 10 |