

Timothy E Payne

List of Publications by Year in descending order

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87
papers

2,928
citations

218677

26
h-index

175258

52
g-index

92
all docs

92
docs citations

92
times ranked

2623
citing authors

#	ARTICLE	IF	CITATIONS
1	Beryllium in contaminated soils: Implication of beryllium bioaccessibility by different exposure pathways. <i>Journal of Hazardous Materials</i> , 2022, 421, 126757.	12.4	12
2	Rare earth elements and yttrium as tracers of waste/rock-groundwater interactions. <i>Science of the Total Environment</i> , 2022, 830, 154706.	8.0	5
3	Uranium adsorption—a review of progress from qualitative understanding to advanced model development. <i>Radiochimica Acta</i> , 2022, 110, 549-559.	1.2	5
4	Role of beryllium in the environment: Insights from specific sorption and precipitation studies under different conditions. <i>Science of the Total Environment</i> , 2022, 838, 155698.	8.0	4
5	The influence of soil properties on sorption-desorption of beryllium at a low level radioactive legacy waste site. <i>Chemosphere</i> , 2021, 268, 129338.	8.2	11
6	Priority issues and key findings from evaluation of disposal records for a legacy radioactive waste site. <i>Journal of Radiological Protection</i> , 2021, 41, S24-S38.	1.1	2
7	Biogeochemical Mobility of Contaminants from a Replica Radioactive Waste Trench in Response to Rainfall-Induced Redox Oscillations. <i>Environmental Science & Technology</i> , 2021, 55, 8793-8805.	10.0	9
8	Radionuclides and stable elements in vegetation in Australian arid environments: Concentration ratios and seasonal variation. <i>Journal of Environmental Radioactivity</i> , 2021, 234, 106627.	1.7	2
9	Emerging investigator series: a holistic approach to multicomponent EXAFS: Sr and Cs complexation in clayey soils. <i>Environmental Sciences: Processes and Impacts</i> , 2021, 23, 1101-1115.	3.5	4
10	Genomic Insights Into the Archaea Inhabiting an Australian Radioactive Legacy Site. <i>Frontiers in Microbiology</i> , 2021, 12, 732575.	3.5	5
11	Desorption and Migration Behavior of Beryllium from Contaminated Soils: Insights for Risk-Based Management. <i>ACS Omega</i> , 2021, 6, 30686-30697.	3.5	6
12	Radionuclide distributions and migration pathways at a legacy trench disposal site. <i>Journal of Environmental Radioactivity</i> , 2020, 211, 106081.	1.7	16
13	Geochemical evidence for the application of nanoparticulate colloidal silica gel for <i>in situ</i> containment of legacy nuclear wastes. <i>Environmental Science: Nano</i> , 2020, 7, 1481-1495.	4.3	7
14	Radium and strontium binding by a modified bauxite refinery residue — isotope exchange studies of pH-dependence, reversibility and ageing. <i>Geochemistry: Exploration, Environment, Analysis</i> , 2020, 20, 257-267.	0.9	2
15	Effects of pH, competing ions and aging on arsenic(V) sorption and isotopic exchange in contaminated soils. <i>Applied Geochemistry</i> , 2019, 105, 114-124.	3.0	34
16	Use of U-isotopes in exploring groundwater flow and inter-aquifer leakage in the south-western margin of the Great Artesian Basin and Arckaringa Basin, central Australia. <i>Applied Geochemistry</i> , 2018, 98, 331-344.	3.0	15
17	Arsenic solid-phase speciation and reversible binding in long-term contaminated soils. <i>Chemosphere</i> , 2017, 168, 1324-1336.	8.2	23
18	Environmental Tracers in Groundwaters and Porewaters to Understand Groundwater Movement Through an Argillaceous Aquitard. <i>Procedia Earth and Planetary Science</i> , 2017, 17, 420-423.	0.6	3

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19	Response of Microbial Community Function to Fluctuating Geochemical Conditions within a Legacy Radioactive Waste Trench Environment. <i>Applied and Environmental Microbiology</i> , 2017, 83, .	3.1	12
20	Petrography and chemistry of tungsten-rich oxycalciobertholite in hydrothermal veins of the Adamello contact aureole, northern Italy. <i>Mineralogy and Petrology</i> , 2017, 111, 499-509.	1.1	3
21	Measurement of tributyl phosphate (TBP) in groundwater at a legacy radioactive waste site and its possible role in contaminant mobilisation. <i>Journal of Environmental Radioactivity</i> , 2017, 178-179, 377-384.	1.7	5
22	Fate of Plutonium at a Former Nuclear Testing Site in Australia. <i>Environmental Science & Technology</i> , 2016, 50, 9098-9104.	10.0	21
23	Influence of Dissolved Silicate on Rates of Fe(II) Oxidation. <i>Environmental Science & Technology</i> , 2016, 50, 11663-11671.	10.0	59
24	The Sorption Processes of U(VI) onto SiO ₂ in the Presence of Phosphate: from Binary Surface Species to Precipitation. <i>Environmental Science & Technology</i> , 2016, 50, 11610-11618.	10.0	27
25	Measurement of fallout radionuclides, ^{239,240} Pu and ¹³⁷ Cs, in soil and creek sediment: Sydney Basin, Australia. <i>Journal of Environmental Radioactivity</i> , 2016, 151, 579-586.	1.7	15
26	Measurement of ²³³ U/ ²³⁴ U ratios in contaminated groundwater using alpha spectrometry. <i>Journal of Environmental Radioactivity</i> , 2016, 151, 537-541.	1.7	8
27	Accumulation of plutonium in mammalian wildlife tissues following dispersal by accidental-release tests. <i>Journal of Environmental Radioactivity</i> , 2016, 151, 387-394.	1.7	17
28	Reversibility of uranium and thorium binding on a modified bauxite refinery residue: The effects of aging temperature. <i>Applied Geochemistry</i> , 2015, 53, 79-90.	3.0	8
29	Identification of sources and processes in a low-level radioactive waste site adjacent to landfills: groundwater hydrogeochemistry and isotopes. <i>Australian Journal of Earth Sciences</i> , 2015, 62, 123-141.	1.0	31
30	Interactions involving strontium and various organic acids on the surface of bentonite (MX-80). <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2015, 304, 95-105.	1.5	5
31	Treatment of multi-dentate surface complexes and diffuse layer implementation in various speciation codes. <i>Applied Geochemistry</i> , 2015, 55, 128-137.	3.0	27
32	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
33	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
34	Solution Speciation of Plutonium and Americium at an Australian Legacy Radioactive Waste Disposal Site. <i>Environmental Science & Technology</i> , 2014, 48, 10045-10053.	10.0	25
35	Plutonium in wildlife and soils at the Maralinga legacy site: persistence over decadal time scales. <i>Journal of Environmental Radioactivity</i> , 2014, 131, 72-80.	1.7	24
36	Guidelines for thermodynamic sorption modelling in the context of radioactive waste disposal. <i>Environmental Modelling and Software</i> , 2013, 42, 143-156.	4.5	69

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37	Trench "Bathtubbing"™ and Surface Plutonium Contamination at a Legacy Radioactive Waste Site. <i>Environmental Science & Technology</i> , 2013, 47, 13284-13293.	10.0	26
38	Electroacoustic Isoelectric Point Determinations of Bauxite Refinery Residues: Different Neutralization Techniques and Minor Mineral Effects. <i>Langmuir</i> , 2012, 28, 11802-11811.	3.5	27
39	Sorption of U(VI) at the TiO ₂ "water interface: An in situ vibrational spectroscopic study. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 76, 191-205.	3.9	52
40	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
41	Mobility of Radionuclides in Tropical Soils and Groundwater. <i>Radioactivity in the Environment</i> , 2012, , 93-120.	0.2	3
42	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
43	Uranium Sorption on Various Forms of Titanium Dioxide " Influence of Surface Area, Surface Charge, and Impurities. <i>Environmental Science & Technology</i> , 2011, 45, 5536-5542.	10.0	94
44	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
45	Assessment of surface area normalisation for interpreting distribution coefficients (K _d) for uranium sorption. <i>Journal of Environmental Radioactivity</i> , 2011, 102, 888-895.	1.7	36
46	Movement of a tritium plume in shallow groundwater at a legacy low-level radioactive waste disposal site in eastern Australia. <i>Journal of Environmental Radioactivity</i> , 2011, 102, 943-952.	1.7	28
47	The pH-dependence and reversibility of uranium and thorium binding on a modified bauxite refinery residue using isotopic exchange techniques. <i>Journal of Colloid and Interface Science</i> , 2011, 356, 699-705.	9.4	35
48	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
49	Laboratory studies of the diffusive transport of ¹³⁷ Cs and ⁶⁰ Co through potential waste repository soils. <i>Journal of Environmental Radioactivity</i> , 2010, 101, 723-729.	1.7	9
50	Appraisal of a cementitious material for waste disposal: Neutron imaging studies of pore structure and sorptivity. <i>Cement and Concrete Research</i> , 2010, 40, 1320-1326.	11.0	17
51	Water transport through cement-based barriers"A preliminary study using neutron radiography and tomography. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 605, 163-166.	1.6	32
52	Environmental mobility of cobalt" Influence of solid phase characteristics and groundwater chemistry. <i>Applied Radiation and Isotopes</i> , 2009, 67, 1269-1276.	1.5	9
53	Adsorption of a jet fuel on a model organic"clay soil: Application of small angle neutron scatteringA paper submitted to the <i>Journal of Environmental Engineering and Science.. Canadian Journal of Civil Engineering</i> , 2009, 36, 559-563.	1.3	0
54	Sorption Databases for Increasing Confidence in Performance Assessment. , 2009, , .		0

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55	Durability of a Cementitious Wasteform for Intermediate Level Waste. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	4
56	Can synchrotron micro-X-ray fluorescence spectroscopy be used to map the distribution of cadmium in soil particles?. Soil Research, 2007, 45, 624.	1.1	2
57	Application of FEPs Analysis to Identify Research Priorities Relevant to the Safety Case for an Australian Radioactive Waste Facility. , 2007, , .		0
58	Radionuclide migration at the Koongarra uranium deposit, Northern Australia â€“ Lessons from the Alligator Rivers analogue project. Physics and Chemistry of the Earth, 2006, 31, 572-586.	2.9	33
59	Partitioning and Leaching Behavior of Actinides and Rare Earth Elements in a Zirconolite-bearing Hydrothermal Vein System. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	2
60	Effect of Stainless Steel Can/Glass-ceramic Interaction Layer on Aqueous Durability. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	0
61	Use of thermodynamic sorption models to derive radionuclide K _d values for performance assessment: selected results and recommendations of the NEA sorption project. Radiochimica Acta, 2006, 94, 779-785.	1.2	5
62	Comparative Evaluation of Surface Complexation Models for Radionuclide Sorption by Diverse Geologic Materials. Interface Science and Technology, 2006, , 605-633.	3.3	4
63	Uranium adsorption on weathered schist â€“ intercomparison of modelling approaches. Radiochimica Acta, 2004, 92, 651-661.	1.2	31
64	Radionuclide applications in laboratory studies of environmental surface reactions. Journal of Environmental Radioactivity, 2004, 76, 237-251.	1.7	13
65	Soilâ€™s water distribution coefficients and plant transfer factors for ¹³⁴ Cs, ⁸⁵ Sr and ⁶⁵ Zn under field conditions in tropical Australia. Journal of Environmental Radioactivity, 2004, 71, 71-87.	1.7	61
66	The effect of sulfate-reducing bacteria on adsorption of ¹³⁷ Cs by soils from arid and tropical regions. Journal of Environmental Radioactivity, 2004, 74, 151-158.	1.7	8
67	Surface complexation model of uranyl sorption on Georgia kaolinite. Applied Clay Science, 2004, 26, 151-162.	5.2	100
68	Kinetics of trace element uptake and release by particles in estuarine waters: effects of pH, salinity, and particle loading. Environment International, 2003, 29, 619-629.	10.0	195
69	Relationship of quantitative X-ray diffraction measurements of geologic materials to cesium sorption. Radiochimica Acta, 2002, 90, .	1.2	14
70	Diffusion and Sorption of Radioactive Cesium and Cobalt in Regolith Materials of Central Australia. Materials Research Society Symposia Proceedings, 2002, 713, 1.	0.1	0
71	Comparison of laboratory uranium sorption data with â€“in situ distribution coefficientsâ€™™ at the Koongarra uranium deposit, Northern Australia. Journal of Environmental Radioactivity, 2001, 57, 35-55.	1.7	34
72	SHRIMP measurements of U and Pb isotopes in the Koongarra secondary ore deposit, Northern Australia.. Geochemical Journal, 2000, 34, 349-358.	1.0	3

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73	Migration of Cs-137 and Co-60 in the Australian Arid Zone. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	1
74	Geochemistry of Hydrothermal Veins Containing Zirconolite and Betafite at Adamello, Italy. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	0
75	Partitioning of Actinides, Rare Earth Elements, and Other Trace Elements In Titanium-Rich Veins From Adamello, Italy. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	3
76	Approaches to modelling uranium(VI) adsorption on natural mineral assemblages. Radiochimica Acta, 2000, 88, 687-694.	1.2	80
77	Adsorption of Cs and U(VI) on soils of the Australian arid zone. Radiochimica Acta, 2000, 88, 799-802.	1.2	9
78	UraniumVI Adsorption on Model Minerals: Controlling Factors and Surface Complexation Modeling. , 1998, , 75-97.		44
79	Uranium Micro-isotopic Analysis of Weathered Rock by a Sensitive High Resolution Ion Microprobe (SHRIMP II). Radiochimica Acta, 1998, 82, 335-340.	1.2	6
80	Iron Nodules Scavenging Uranium from Groundwater. Environmental Science & Technology, 1997, 31, 2854-2858.	10.0	83
81	Uranium Adsorption on Ferrihydrite - Effects of Phosphate and Humic Acid. Radiochimica Acta, 1996, 74, 239-244.	1.2	134
82	Groundwater geochemistry in the Koongarra ore deposit, Australia (I): Implications for uranium migration.. Geochemical Journal, 1995, 29, 1-29.	1.0	25
83	Groundwater geochemistry in the Koongarra ore deposit, Australia (II): Activity ratios and migration mechanisms of uranium series radionuclides.. Geochemical Journal, 1995, 29, 31-54.	1.0	23
84	Uranium(VI) adsorption to ferrihydrite: Application of a surface complexation model. Geochimica Et Cosmochimica Acta, 1994, 58, 5465-5478.	3.9	795
85	Radionuclide Transport by Groundwater Colloids at the Koongarra Uranium Deposit. Materials Research Society Symposia Proceedings, 1991, 257, 481.	0.1	8
86	Uranium Distribution in Mineral Phases of Rock by Sequential Extraction Procedure. Radiochimica Acta, 1991, 52-53, 387-394.	1.2	62
87	Simulating the pH and CO_2 Dependence of Uranium(VI) Adsorption by a Weathered Schist with Surface Complexation Models. SSSA Special Publication Series, 0, , 61-86.	0.2	14