Plutonium Transport in the Environment

Inorganic Chemistry 52, 3533-3546 DOI: 10.1021/ic3018908

Citation Report

#	Article	IF	CITATIONS
1	Synthesis and Structural Characterization of Hydrolysis Products within the Uranyl Iminodiacetate and Malate Systems. Inorganic Chemistry, 2013, 52, 10191-10198.	1.9	21
2	Surface-Mediated Formation of Pu(IV) Nanoparticles at the Muscovite-Electrolyte Interface. Environmental Science & Technology, 2013, 47, 14178-14184.	4.6	27
3	Trench â€~Bathtubbing' and Surface Plutonium Contamination at a Legacy Radioactive Waste Site. Environmental Science & Technology, 2013, 47, 13284-13293.	4.6	26
6	Impact of Environmental Curium on Plutonium Migration and Isotopic Signatures. Environmental Science & Technology, 2014, 48, 13985-13991.	4.6	9
7	High quality epitaxial thin films of actinide oxides, carbides, and nitrides: Advancing understanding of electronic structure of f-element materials. Coordination Chemistry Reviews, 2014, 266-267, 137-154.	9.5	45
8	Redox and environmentally relevant aspects of actinide(IV) coordination chemistry. Coordination Chemistry Reviews, 2014, 266-267, 171-193.	9.5	81
9	Colloid-borne forms of tetravalent actinides: A brief review. Journal of Contaminant Hydrology, 2014, 157, 87-105.	1.6	71
10	Plutonium sorption and precipitation in the presence of goethite at 25 and 80 ○C. Radiochimica Acta, 2014, .	0.5	10
11	Sorption interactions of plutonium and europium with ordered mesoporous carbon. Journal of Materials Chemistry A, 2014, 2, 11209-11221.	5.2	27
12	A DGT Technique for Plutonium Bioavailability Measurements. Environmental Science & Technology, 2014, 48, 10829-10834.	4.6	17
13	Analysis of trace neptunium in the vicinity of underground nuclear tests at the Nevada National Security Site. Journal of Environmental Radioactivity, 2014, 137, 163-172.	0.9	13
14	Solution Speciation of Plutonium and Americium at an Australian Legacy Radioactive Waste Disposal Site. Environmental Science & Technology, 2014, 48, 10045-10053.	4.6	25
15	Ultraâ€ S mall Plutonium Oxide Nanocrystals: An Innovative Material in Plutonium Science. Chemistry - A European Journal, 2014, 20, 10431-10438.	1.7	40
16	Plutonium in wildlife and soils at the Maralinga legacy site: persistence over decadal time scales. Journal of Environmental Radioactivity, 2014, 131, 72-80.	0.9	24
17	Organ Dose-Rate Calculations for Small Mammals at Maralinga, the Nevada Test Site, Hanford and Fukushima: A Comparison of Ellipsoidal and Voxelized Dosimetric Methodologies. Radiation Research, 2015, 184, 433.	0.7	4
18	Plutonium Transport in Soil and Plants. Geophysical Monograph Series, 0, , 181-208.	0.1	1
19	Dynamics of Fluids and Transport in Complex Fractured-Porous Systems. Geophysical Monograph Series, 2015, , .	0.1	10
20	Formation of Neptunium(IV)–Silica Colloids at Near-Neutral and Slightly Alkaline pH. Environmental Science & Technology, 2015, 49, 665-671.	4.6	17

CITATION REPORT

#	Article	IF	CITATIONS
21	Trace-level plutonium(IV) polymer stability and its transport in coarse-grained granites. Chemical Geology, 2015, 398, 1-10.	1.4	8
22	Intrinsic formation of nanocrystalline neptunium dioxide under neutral aqueous conditions relevant to deep geological repositories. Chemical Communications, 2015, 51, 1301-1304.	2.2	16
23	Effect of Fulvic Acid Surface Coatings on Plutonium Sorption and Desorption Kinetics on Goethite. Environmental Science & Technology, 2015, 49, 2776-2785.	4.6	32
24	In situ Spectroscopic Identification of Neptunium(V) Inner-Sphere Complexes on the Hematite–Water Interface. Environmental Science & Technology, 2015, 49, 2560-2567.	4.6	21
25	Modeling plutonium sorption to kaolinite: Accounting for redox equilibria and the stability of surface species. Chemical Geology, 2015, 400, 1-10.	1.4	23
26	Multiscale Speciation of U and Pu at Chernobyl, Hanford, Los Alamos, McGuire AFB, Mayak, and Rocky Flats. Environmental Science & Technology, 2015, 49, 6474-6484.	4.6	43
27	DFT and two-dimensional correlation analysis methods for evaluating the Pu3+–Pu4+ electronic transition of plutonium-doped zircon. Journal of Hazardous Materials, 2015, 294, 47-56.	6.5	15
28	Microbial mobilization of plutonium and other actinides from contaminated soil. Journal of Environmental Radioactivity, 2015, 150, 277-285.	0.9	21
29	Affinity capillary electrophoresis in studying the complex formation equilibria of radionuclides in aqueous solutions. Electrophoresis, 2016, 37, 2558-2566.	1.3	17
30	Chemical speciation of U, Fe, and Pu in melt glass from nuclear weapons testing. Journal of Applied Physics, 2016, 119, 195102.	1.1	10
31	Influence of the goethite (α-FeOOH) surface on the stability of distorted PuO ₂ and PuO _{2–x} phases. Radiochimica Acta, 2016, 104, 821-841.	0.5	3
32	Probing the Kinetic Parameters of Plutonium–Naturally Occurring Organic Matter Interactions in Freshwaters Using the Diffusive Gradients in Thin Films Technique. Environmental Science & Technology, 2016, 50, 5103-5110.	4.6	14
33	Experimental evidence for ternary colloid-facilitated transport of Th(IV) with hematite (α-Fe2O3) colloids and Suwannee River fulvic acid. Journal of Environmental Radioactivity, 2016, 165, 168-181.	0.9	12
34	Neptunium ^V Retention by Siderite under Anoxic Conditions: Precipitation of NpO ₂ –Like Nanoparticles and of Np ^{IV} Pentacarbonate. Environmental Science & Technology, 2016, 50, 10413-10420.	4.6	13
35	Influence of Dissolved Silicate on Rates of Fe(II) Oxidation. Environmental Science & Technology, 2016, 50, 11663-11671.	4.6	59
36	Interactions of Plutonium with Pseudomonas sp. Strain EPS-1W and Its Extracellular Polymeric Substances. Applied and Environmental Microbiology, 2016, 82, 7093-7101.	1.4	24
37	Oxyhydroxy Silicate Colloids: A New Type of Waterborne Actinide(IV) Colloids. ChemistryOpen, 2016, 5, 174-182.	0.9	14
38	Decreased solubilization of Pu(IV) polymers by humic acids under anoxic conditions. Geochimica Et Cosmochimica Acta, 2016, 192, 122-134.	1.6	9

#	Article	IF	CITATIONS
39	Hydrolysis of trivalent plutonium and solubility of Pu(OH) ₃ (am) under electrolytic reducing conditions. Dalton Transactions, 2016, 45, 19449-19457.	1.6	12
40	A Comparison of Adsorption, Reduction, and Polymerization of the Plutonyl(VI) and Uranyl(VI) Ions from Solution onto the Muscovite Basal Plane. Langmuir, 2016, 32, 10473-10482.	1.6	8
41	Uptake of plutonium on a novel thin film for use in spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 2016, 307, 2333-2338.	0.7	10
42	Effects of Titanium Doping in Titanomagnetite on Neptunium Sorption and Speciation. Environmental Science & Technology, 2016, 50, 1853-1858.	4.6	15
43	Association and migration behavior of trace metals with humus colloidal particles in aquatic subsurface medium. Journal of Radioanalytical and Nuclear Chemistry, 2017, 311, 503-511.	0.7	4
44	Insights into the sonochemical synthesis and properties of salt-free intrinsic plutonium colloids. Scientific Reports, 2017, 7, 43514.	1.6	42
45	Atmospheric fallout radionuclides in peatland from Southern Poland. Journal of Environmental Radioactivity, 2017, 175-176, 25-33.	0.9	17
46	Desorption of plutonium from montmorillonite: An experimental and modeling study. Geochimica Et Cosmochimica Acta, 2017, 197, 278-293.	1.6	12
47	An ab initio study of the adsorption of Eu3+, Pu3+, Am3+, and Cm3+ hydroxide complexes on hematite (001) surface: Role of magnetism on adsorption. Surface Science, 2017, 664, 120-128.	0.8	10
48	Geochemical Interactions of Plutonium with Opalinus Clay Studied by Spatially Resolved Synchrotron Radiation Techniques. Environmental Science & amp; Technology, 2017, 51, 7892-7902.	4.6	10
49	Plutonium interaction studies with the Mont Terri Opalinus Clay isolate Sporomusa sp. MT-2.99: changes in the plutonium speciation by solvent extractions. Environmental Science and Pollution Research, 2017, 24, 13497-13508.	2.7	2
51	Effect of Natural Organic Matter on Plutonium Sorption to Goethite. Environmental Science & Technology, 2017, 51, 699-708.	4.6	20
52	Pressure Dependence of Carbonate Exchange with [NpO2(CO3)3]4– in Aqueous Solutions. Inorganic Chemistry, 2017, 56, 661-666.	1.9	5
53	Response of Microbial Community Function to Fluctuating Geochemical Conditions within a Legacy Radioactive Waste Trench Environment. Applied and Environmental Microbiology, 2017, 83, .	1.4	12
54	Asymmetrical flow field-flow fractionation coupled with a liquid waveguide capillary cell for monitoring natural colloids in groundwater. Applied Geochemistry, 2017, 87, 102-107.	1.4	7
55	Reaction of ozone with Np(IV) and Pu(IV) oxalates in water. Radiochemistry, 2017, 59, 570-578.	0.2	5
56	Development of small particle speciation for nuclear forensics by soft X-ray scanning transmission spectromicroscopy. Analyst, The, 2018, 143, 1349-1357.	1.7	6
57	Rates of Ligand Exchange around the Bisâ€Oxalato Complex [NpO ₂ (C ₂ O ₄) ₂] ^{3â^'} Measured by Using Multinuclear NMR Spectroscopy under Neutral to Semiâ€Alkaline Conditions. ChemPlusChem, 2018, 83, 590	1.3	0

#	Article	IF	CITATIONS
58	Formation and Aggregation of ZrO ₂ Nanoparticles on Muscovite (001). Journal of Physical Chemistry C, 2018, 122, 3865-3874.	1.5	9
59	Complexation of An(<scp>vi</scp>) with succinic acid in aqueous acid solutions: uranyl <i>vs.</i> plutonyl. New Journal of Chemistry, 2018, 42, 7780-7788.	1.4	9
61	Plutonium isotopic signatures in soils and their variation (2011-2014) in sediment transiting a coastal river in the Fukushima Prefecture, Japan. Environmental Pollution, 2018, 240, 167-176.	3.7	16
62	Focus on speciation assessment in marine radiochemistry using X-ray absorption spectroscopy. New Journal of Chemistry, 2018, 42, 7582-7591.	1.4	3
63	(Ce-Al)-oxide pillared bentonite: A high affinity sorbent for plutonium. Journal of Hazardous Materials, 2018, 352, 121-129.	6.5	13
64	Plutonium chlorido nitrato complexes: ligand competition and computational metrics for assembly and bonding. Chemical Communications, 2018, 54, 12014-12017.	2.2	7
66	Plutonium environmental chemistry: mechanisms for the surface-mediated reduction of Pu(<scp>v</scp> / <scp>vi</scp>). Environmental Sciences: Processes and Impacts, 2018, 20, 1306-1322.	1.7	13
67	Reduction of Plutonium(VI) to (V) by Hydroxamate Compounds at Environmentally Relevant pH. Environmental Science & Technology, 2018, 52, 6448-6456.	4.6	9
68	Stability, Composition, and Core–Shell Particle Structure of Uranium(IV)-Silicate Colloids. Environmental Science & Technology, 2018, 52, 9118-9127.	4.6	21
69	In situ spatial distribution mapping of radionuclides in minerals by nanoSIMS. Geochemistry: Exploration, Environment, Analysis, 2019, 19, 245-254.	0.5	11
70	Effect of colloids on non-Fickian transport of strontium in sediments elucidated by continuous-time random walk analysis. Environmental Pollution, 2019, 252, 1491-1499.	3.7	6
71	The speciation, transformation kinetics and fate of spiked Pu (IV) in highly saline groundwater. Journal of Contaminant Hydrology, 2019, 225, 103505.	1.6	1
72	A Novel Metastable Pentavalent Plutonium Solid Phase on the Pathway from Aqueous Plutonium(VI) to PuO ₂ Nanoparticles. Angewandte Chemie, 2019, 131, 17722-17726.	1.6	5
73	A Novel Metastable Pentavalent Plutonium Solid Phase on the Pathway from Aqueous Plutonium(VI) to PuO ₂ Nanoparticles. Angewandte Chemie - International Edition, 2019, 58, 17558-17562.	7.2	37
74	A Laboratory Simulation Research Method for Speciation Distribution of Ultratrace Pu in Groundwater and Its Application. IOP Conference Series: Earth and Environmental Science, 2019, 281, 012005.	0.2	1
75	Nagasaki sediments reveal that long-term fate of plutonium is controlled by select organic matter moieties. Science of the Total Environment, 2019, 678, 409-418.	3.9	14
76	Quantum-Mechanical Investigation of the Structures and Energetics of Uranium and Plutonium Incorporated into the Magnetite (Fe3O4) Lattice. ACS Earth and Space Chemistry, 2019, 3, 637-651.	1.2	8
77	Fifteen Years of Radionuclide Research at the KIT Synchrotron Source in the Context of the Nuclear Waste Disposal Safety Case. Geosciences (Switzerland), 2019, 9, 91.	1.0	19

#	Article	IF	CITATIONS
78	Distribution and Source Identification of Pu in River Basins in Southern China. ACS Omega, 2019, 4, 22646-22654.	1.6	10
79	Janus multi-responsive superparamagnetic nanoparticles functionalized with two on-demand and independently cleavable ligands for Actinide separation. Journal of Colloid and Interface Science, 2019, 538, 546-558.	5.0	9
80	Radionuclide distributions and migration pathways at a legacy trench disposal site. Journal of Environmental Radioactivity, 2020, 211, 106081.	0.9	16
81	Focused ion beam for improved spatially-resolved mass spectrometry and analysis of radioactive materials for uranium isotopic analysis. Talanta, 2020, 211, 120720.	2.9	15
82	Plutonium migration in a rough single fractured granite. Journal of Radioanalytical and Nuclear Chemistry, 2020, 323, 953-958.	0.7	1
83	Radionuclides in sea turtles at the Montebello Islands former nuclear test sites: Current and historical dose rates for adults and embryos. Marine Pollution Bulletin, 2020, 158, 111390.	2.3	6
84	Relevance of formation conditions to the size, morphology and local structure of intrinsic plutonium colloids. Environmental Science: Nano, 2020, 7, 2252-2266.	2.2	13
85	Speciation of Uranium and Plutonium From Nuclear Legacy Sites to the Environment: A Mini Review. Frontiers in Chemistry, 2020, 8, 630.	1.8	40
86	Stability of plutonium oxide nanoparticles in the presence of montmorillonite and implications for colloid facilitated transport. Applied Geochemistry, 2020, 122, 104725.	1.4	11
87	Synthesis, Structural, and Electronic Properties of K4PuVIO2(CO3)3(cr): An Environmentally Relevant Plutonium Carbonate Complex. Inorganic Chemistry, 2020, 59, 11889-11893.	1.9	7
88	Future migration: Key environmental indicators of Pu accumulation in terrestrial sediments of Queensland, Australia. Journal of Environmental Radioactivity, 2020, 223-224, 106398.	0.9	3
89	Interaction of Polyoxometalates and Nanoparticles with Collector Surfaces—Focus on the Use of Streaming Current Measurements at Flat Surfaces. Colloids and Interfaces, 2020, 4, 39.	0.9	1
90	Behavior of Radionuclides in the Environment I. , 2020, , .		3
91	Impact of Natural Organic Matter on Plutonium Vadose Zone Migration from an NH ₄ Pu(V)O ₂ CO ₃ (s) Source. Environmental Science & Technology, 2020, 54, 2688-2697.	4.6	3
92	Colloid-facilitated transport of 238Pu, 233U and 137Cs through fractured chalk: Laboratory experiments, modelling, and implications for nuclear waste disposal. Science of the Total Environment, 2021, 757, 143818.	3.9	21
93	Characterizing the solid hydrolysis product, UF ₄ (H ₂ O) _{2.5} , generated from neat water reactions with UF ₄ at room temperature. Dalton Transactions, 2021, 50, 2462-2471.	1.6	9
94	Influences on Subsurface Plutonium and Americium Migration. ACS Earth and Space Chemistry, 2021, 5, 279-294.	1.2	4
95	The nature of Pu-bearing particles from the Maralinga nuclear testing site, Australia. Scientific Reports, 2021, 11, 10698.	1.6	15

CITATION REPORT

#	Article	IF	CITATIONS
96	A consistent model for estimating the partitioning of Am, Pu and Se in agricultural soils. Journal of Radioanalytical and Nuclear Chemistry, 2021, 329, 769-784.	0.7	3
97	Biogeochemical Mobility of Contaminants from a Replica Radioactive Waste Trench in Response to Rainfall-Induced Redox Oscillations. Environmental Science & Technology, 2021, 55, 8793-8805.	4.6	9
98	Influence of ethylenediaminetetraacetic acid on the long-term oxidation state distribution of plutonium. Chemosphere, 2021, 274, 129741.	4.2	5
99	Effect of Background Electrolyte Composition on the Interfacial Formation of Th(IV) Nanoparticles on the Muscovite (001) Basal Plane. Journal of Physical Chemistry C, 2021, 125, 16524-16535.	1.5	7
100	Quantitative Microstructural Characterization of Plutonium Oxalate Autoâ€Degradation and Evidence for PuO ₂ Nanocrystal Formation. European Journal of Inorganic Chemistry, 2021, 2021, 3277-3291.	1.0	13
101	High-precision measurement of U-Pu-Np-Am concentrations and isotope ratios in environmental reference materials by mass spectrometry. Journal of Environmental Radioactivity, 2021, 237, 106689.	0.9	7
102	Application of Electron Microscopy to Understanding Colloid-Facilitated Transport of Radionuclides at the Mayak Production Association Facility, Near Lake Karachai, Russia. , 2020, , 177-200.		1
103	Characteristic and remediation of radioactive soil in nuclear facility sites: a critical review. Environmental Science and Pollution Research, 2021, 28, 67990-68005.	2.7	5
104	Actinides in Biological Systems. 2-Oxoglutarate-Dependent Oxygenases, 2014, , 800-832.	0.8	0
107	New horizons in microparticle forensics: Actinide imaging and detection of ²³⁸ Pu and ^{242m} Am in hot particles. Science Advances, 2021, 7, eabj1175.	4.7	13
108	Actinide Dioxide Nanoparticles. , 2020, , 579-592.		2
109	Plutonium Co-precipitation with Calcite. ACS Earth and Space Chemistry, 2021, 5, 3362-3374.	1.2	5
110	A review on the use of lichens as a biomonitoring tool for environmental radioactivity. Journal of Environmental Radioactivity, 2022, 243, 106797.	0.9	17
111	SAXS study of the formation and structure of polynuclear thorium(IV) colloids and thorium dioxide nanoparticles. Journal of Synchrotron Radiation, 2022, 29, 281-287.	1.0	4
112	Aggregated germanium saponite: Removal and retention of polymeric thorium and uranium complexes. Applied Clay Science, 2022, 216, 106382.	2.6	5
113	High-energy resolution X-ray spectroscopy at actinide M _{4,5} and ligand K edges: what we know, what we want to know, and what we can know. Chemical Communications, 2022, 58, 327-342.	2.2	29
114	To form or not to form: PuO ₂ nanoparticles at acidic pH. Environmental Science: Nano, 2022, 9, 1509-1518.	2.2	7
115	Hydrotalcite Colloidal Stability and Interactions with Uranium(VI) at Neutral to Alkaline pH. Langmuir, 2022, 38, 2576-2589.	1.6	8

CITATION REPORT

#	Article	IF	CITATIONS
116	Pu distribution among mixed waste components at the Hanford legacy site, USA and implications to long-term migration. Applied Geochemistry, 2022, , 105304.	1.4	4
117	Transport and migration of plutonium in different soil types and rainfall regimes. Journal of Environmental Radioactivity, 2022, 248, 106883.	0.9	1
119	Recognition of radiation-induced injuries as sentinel indicators of uncontrolled radioactive material. Environmental Advances, 2022, 8, 100244.	2.2	0
120	Temporal Evolution of Pu and Cs Sediment Contamination in a Seasonally Stratified Pond. SSRN Electronic Journal, 0, , .	0.4	0
121	Plutonium Mobilization from Contaminated Estuary Sediments, Esk Estuary (UK). SSRN Electronic Journal, O, , .	0.4	0
122	Environmental Chemistry of Radionuclides : Open Questions and Perspectives. ChemPlusChem, 2022, 8 ·	7, _{1.3}	2
123	U(VI), Np(V), Eu(III) sorption on goethite: A wide-ranging multiradionuclide dataset and uncertainty-aware parametrization of surface complexation models. , 0, 1, .		1
124	Contaminant release, mixing and microbial fluctuations initiated by infiltrating water within a replica field-scale legacy radioactive waste trench. Science of the Total Environment, 2022, , 158241.	3.9	0
125	Plutonium mobilization from contaminated estuarine sediments, Esk Estuary (UK). Chemosphere, 2022, 308, 136240.	4.2	2
126	Synthesis and multi-scale properties of PuO ₂ nanoparticles: recent advances and open questions. Nanoscale Advances, 2022, 4, 4938-4971.	2.2	7
127	First observation of [Pu ₆ (OH) ₄ O ₄] ¹²⁺ cluster during the hydrolytic formation of PuO ₂ nanoparticles using H/D kinetic isotope effect. Chemical Communications, 2022, 58, 13147-13150.	2.2	4
128	Hybrid extractive scintillator resin for simultaneous concentration and detection of plutonium from aqueous solutions. Journal of Environmental Radioactivity, 2022, 255, 107048.	0.9	2
129	Temporal evolution of Pu and Cs sediment contamination in a seasonally stratified pond. Science of the Total Environment, 2023, 857, 159320.	3.9	2
130	Short review of plutonium applications for the sediment transport studies. Journal of Environmental Radioactivity, 2023, 257, 107066.	0.9	2
131	Role of Manganese Oxides in Controlling Subsurface Metals and Radionuclides Mobility: A Review. ACS Earth and Space Chemistry, 2023, 7, 1-10.	1.2	5
132	Temporal evolution of plutonium concentrations and isotopic ratios in the Ukedo - Takase Rivers draining the Difficult-To-Return zone in Fukushima, Japan (2013–2020). Environmental Pollution, 2023, 319, 120963.	3.7	1
133	Ultrasonically controlled synthesis of UO _{2+<i>x</i>} colloidal nanoparticles. Dalton Transactions, 2023, 52, 2135-2144.	1.6	1
134	Behavior of Plutonium(V) in the Environment. Radiochemistry, 2022, 64, 680-685.	0.2	0

ARTICLE

IF CITATIONS