

# Brian A Powell

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91 papers	1,898 citations	25 h-index	40 g-index
94 ext. papers	2,165 ext. citations	6.1 avg, IF	4.86 L-index

#	Paper	IF	Citations
91	Pu(V)O <sub>2</sub> <sup>+</sup> adsorption and reduction by synthetic magnetite (Fe <sub>3</sub> O <sub>4</sub> ). <i>Environmental Science &amp; Technology</i> , <b>2004</b> , 38, 6016-24	10.3	112
90	Adaptive interactions between zinc oxide nanoparticles and <i>Chlorella</i> sp. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 12178-85	10.3	101
89	Formation of a protein corona on silver nanoparticles mediates cellular toxicity via scavenger receptors. <i>Toxicological Sciences</i> , <b>2015</b> , 143, 136-46	4.4	98
88	Pu(V)O <sub>2</sub> <sup>+</sup> adsorption and reduction by synthetic hematite and goethite. <i>Environmental Science &amp; Technology</i> , <b>2005</b> , 39, 2107-14	10.3	96
87	Stabilization of plutonium nano-colloids by epitaxial distortion on mineral surfaces. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 2698-703	10.3	81
86	Surface Complexation Modeling of Eu(III) and U(VI) Interactions with Graphene Oxide. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 1821-7	10.3	71
85	Influence of oxidation states on plutonium mobility during long-term transport through an unsaturated subsurface environment. <i>Environmental Science &amp; Technology</i> , <b>2004</b> , 38, 5053-8	10.3	66
84	Plutonium oxidation and subsequent reduction by Mn(IV) minerals in Yucca Mountain tuff. <i>Environmental Science &amp; Technology</i> , <b>2006</b> , 40, 3508-14	10.3	64
83	Np(V) and Pu(v) ion exchange and surface-mediated reduction mechanisms on montmorillonite. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 2692-8	10.3	59
82	Elevated concentrations of primordial radionuclides in sediments from the Reedy River and surrounding creeks in Simpsonville, South Carolina. <i>Journal of Environmental Radioactivity</i> , <b>2007</b> , 94, 1213-4	3.4	56
81	Evaluation of a radioiodine plume increasing in concentration at the Savannah River Site. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 489-95	10.3	50
80	Influence of sources on plutonium mobility and oxidation state transformations in vadose zone sediments. <i>Environmental Science &amp; Technology</i> , <b>2007</b> , 41, 7417-23	10.3	50
79	Quantitative measurement of ligand exchange on iron oxides via radiolabeled oleic acid. <i>Langmuir</i> , <b>2014</b> , 30, 10918-25	4	49
78	Pu(V) and Pu(IV) sorption to montmorillonite. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 5146-53	10.3	48
77	Mobilization of actinides by dissolved organic compounds at the Nevada Test Site. <i>Applied Geochemistry</i> , <b>2011</b> , 26, 308-318	3.5	47
76	Plant litter chemistry alters the content and composition of organic carbon associated with soil mineral and aggregate fractions in invaded ecosystems. <i>Global Change Biology</i> , <b>2017</b> , 23, 4002-4018	11.4	45
75	Thermodynamics and Electronic Properties of Heterometallic Multinuclear Actinide-Containing Metal-Organic Frameworks with "Structural Memory". <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 11628-11640	16.4	42

74	Quantitative Measurement of Ligand Exchange with Small-Molecule Ligands on Iron Oxide Nanoparticles via Radioanalytical Techniques. <i>Langmuir</i> , <b>2016</b> , 32, 13716-13727	4	40
73	A self-consistent model describing the thermodynamics of Eu(III) adsorption onto hematite. <i>Geochimica Et Cosmochimica Acta</i> , <b>2013</b> , 122, 430-447	5.5	37
72	Influence of pH on plutonium desorption/solubilization from sediment. <i>Environmental Science &amp; Technology</i> , <b>2006</b> , 40, 5937-42	10.3	33
71	Observed changes in the mechanism and rates of Pu(V) reduction on hematite as a function of total plutonium concentration. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 9255-62	10.3	29
70	Kinetics of neptunium(V) sorption and desorption on goethite: An experimental and modeling study. <i>Geochimica Et Cosmochimica Acta</i> , <b>2011</b> , 75, 6584-6599	5.5	29
69	Effect of fulvic acid surface coatings on plutonium sorption and desorption kinetics on goethite. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 2776-85	10.3	27
68	Influence of iron redox transformations on plutonium sorption to sediments. <i>Radiochimica Acta</i> , <b>2010</b> , 98, 685-692	1.9	27
67	Eleven-year field study of Pu migration from Pu III, IV, and VI sources. <i>Environmental Science &amp; Technology</i> , <b>2006</b> , 40, 443-8	10.3	26
66	Examination of the effect of alpha radiolysis on plutonium(V) sorption to quartz using multiple plutonium isotopes. <i>Journal of Colloid and Interface Science</i> , <b>2013</b> , 403, 105-12	9.3	24
65	A Pro106 to Ala Substitution is Associated with Resistance to Glyphosate in Annual Bluegrass ( <i>Poa annua</i> ). <i>Weed Science</i> , <b>2015</b> , 63, 613-622	2	23
64	Phosphorus Stress-Induced Changes in Plant Root Exudation Could Potentially Facilitate Uranium Mobilization from Stable Mineral Forms. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 7652-7662	10.3	23
63	Complexation of UVI with 1-hydroxyethane-1,1-diphosphonic acid in acidic to basic solutions. <i>Inorganic Chemistry</i> , <b>2007</b> , 46, 2870-6	5.1	23
62	Geochemical controls of iodine uptake and transport in Savannah River Site subsurface sediments. <i>Applied Geochemistry</i> , <b>2014</b> , 45, 105-113	3.5	21
61	Pu(V) transport through Savannah River Site soils - an evaluation of a conceptual model of surface-mediated reduction to Pu (IV). <i>Journal of Environmental Radioactivity</i> , <b>2014</b> , 131, 47-56	2.4	19
60	Removal capacity and chemical speciation of groundwater iodide (I) and iodate (IO) sequestered by organoclays and granular activated carbon. <i>Journal of Environmental Radioactivity</i> , <b>2018</b> , 192, 505-512	2.4	17
59	Chemical stabilization of chromate in blast furnace slag mixed cementitious materials. <i>Chemosphere</i> , <b>2015</b> , 138, 247-52	8.4	15
58	PAMAM dendrimer for mitigating humic foulant. <i>RSC Advances</i> , <b>2012</b> , 2, 7997	3.7	15
57	Effect of Natural Organic Matter on Plutonium Sorption to Goethite. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 699-708	10.3	14

56	Effects of Titanium Doping in Titanomagnetite on Neptunium Sorption and Speciation. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 1853-8	10.3	14
55	Compounds of Hexavalent Uranium and Dibutylphosphate in Nitric Acid Systems. <i>Solvent Extraction and Ion Exchange</i> , <b>2003</b> , 21, 347-368	2.5	14
54	Mobility of radionuclides in soil/groundwater system: comparing the influence of EDTA and four of its degradation products. <i>Environmental Pollution</i> , <b>2010</b> , 158, 3077-84	9.3	13
53	Anomalously high levels of uranium and other naturally occurring radionuclides in private wells in the piedmont region of South Carolina. <i>Health Physics</i> , <b>2005</b> , 88, 248-52	2.3	13
52	Evaluation of Surface Sorption Processes Using Spectral Induced Polarization and a (22)Na Tracer. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 9866-73	10.3	11
51	Influence of humic acid on plutonium sorption to gibbsite: Determination of Pu-humic acid complexation constants and ternary sorption studies. <i>Radiochimica Acta</i> , <b>2014</b> , 102, 629-643	1.9	11
50	Plutonium binding affinity to sediments increases with contact time. <i>Chemical Geology</i> , <b>2019</b> , 505, 100-107	10.3	11
49	Stability constant determination of sulfur and selenium amino acids with Cu(II) and Fe(II). <i>Journal of Inorganic Biochemistry</i> , <b>2019</b> , 195, 20-30	4.2	10
48	Rapid quantification of TBP and TBP degradation product ratios by FTIR-ATR. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , <b>2013</b> , 296, 859-868	1.5	10
47	Enthalpy of Uranium Adsorption onto Hematite. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 15004-15010	10.3	10
46	Increase in the reduction potential of uranyl upon interaction with graphene oxide surfaces. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 1752-1760	3.6	10
45	High-Resolution 4D Preclinical Single-Photon Emission Computed Tomography/X-ray Computed Tomography Imaging of Technetium Transport within a Heterogeneous Porous Media. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 2864-2870	10.3	9
44	Observations of surface-mediated reduction of Pu(VI) to Pu(IV) on hematite nanoparticles by ATR FT-IR. <i>Radiochimica Acta</i> , <b>2015</b> , 103, 553-563	1.9	9
43	Nuclear Magnetic Resonance Spectroscopy of Aqueous Plutonium(IV) Desferrioxamine B Complexes. <i>European Journal of Inorganic Chemistry</i> , <b>2014</b> , 2014, 3312-3321	2.3	9
42	Theoretical organically bound tritium dose estimates. <i>Health Physics</i> , <b>2004</b> , 86, 183-6	2.3	9
41	The effect of post-synthesis aging on the ligand exchange activity of iron oxide nanoparticles. <i>Journal of Colloid and Interface Science</i> , <b>2018</b> , 511, 374-382	9.3	8
40	A novel technique for the rapid determination of tributyl phosphate degradation from alkaline hydrolysis in aqueous and organic phases using FTIR-ATR and verification of this technique by gas chromatography. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , <b>2016</b> , 307, 1891-1899	1.5	8
39	Uptake of plutonium on a novel thin film for use in spectrometry. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , <b>2016</b> , 307, 2333-2338	1.5	8

38	Anion-Exchange Fibers for Improved Sample Loading in Ultra-Trace Analysis of Plutonium by Thermal Ionization Mass Spectrometry. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 8638-8642	7.8	8
37	Effect of bundling on the Plasmon energy in sub-nanometer single wall carbon nanotubes. <i>Carbon</i> , <b>2011</b> , 49, 3803-3807	10.4	8
36	Experimental evidence for ternary colloid-facilitated transport of Th(IV) with hematite (FeO) colloids and Suwannee River fulvic acid. <i>Journal of Environmental Radioactivity</i> , <b>2016</b> , 165, 168-181	2.4	8
35	Rhenium filament oxidation: Effect on TIMS performance and the roles of carburization and humidity. <i>Talanta</i> , <b>2017</b> , 168, 183-187	6.2	7
34	Long-term radiostrontium interactions and transport through sediment. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 8919-25	10.3	7
33	An ab initio study of the adsorption of Eu <sup>3+</sup> , Pu <sup>3+</sup> , Am <sup>3+</sup> , and Cm <sup>3+</sup> hydroxide complexes on hematite (001) surface: Role of magnetism on adsorption. <i>Surface Science</i> , <b>2017</b> , 664, 120-128	1.8	6
32	Effect of equilibration time on Pu desorption from goethite. <i>Radiochimica Acta</i> , <b>2015</b> , 103, 695-705	1.9	6
31	Integration of ecosystem science into radioecology: A consensus perspective. <i>Science of the Total Environment</i> , <b>2020</b> , 740, 140031	10.2	6
30	Dissolution and Vertical Transport of Uranium from Stable Mineral Forms by Plants as Influenced by the Co-occurrence of Uranium with Phosphorus. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 6602-6609	10.3	6
29	A Novel Method for Tracer Concentration Plutonium(V) Solution Preparation. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 4196-9	7.8	6
28	Plutonium environmental chemistry: mechanisms for the surface-mediated reduction of Pu(v/vi). <i>Environmental Sciences: Processes and Impacts</i> , <b>2018</b> , 20, 1306-1322	4.3	6
27	Linear Free Energy Relationship for Actinide Sorption to Graphene Oxide. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 32086-32092	9.5	6
26	Anion-exchange polymer filament coating for ultra-trace isotopic analysis of plutonium by thermal ionization mass spectrometry. <i>Talanta</i> , <b>2018</b> , 189, 502-508	6.2	5
25	Physical transformations of iron oxide and silver nanoparticles from an intermediate scale field transport study. <i>Journal of Nanoparticle Research</i> , <b>2014</b> , 16, 1	2.3	5
24	Ambient aging of rhenium filaments used in thermal ionization mass spectrometry: Growth of oxo-rhenium crystallites and anti-aging strategies. <i>Heliyon</i> , <b>2017</b> , 3, e00232	3.6	4
23	Functionalized Polymer Thin Films for Plutonium Capture and Isotopic Screening from Aqueous Sources. <i>Analytical Chemistry</i> , <b>2020</b> , 92, 5214-5221	7.8	4
22	Comparison of the surface ion density of silica gel evaluated via spectral induced polarization versus acid-base titration. <i>Journal of Applied Geophysics</i> , <b>2016</b> , 135, 427-435	1.7	4
21	Uranium Attenuated by a Wetland 50 Years after Release into a Stream. <i>ACS Earth and Space Chemistry</i> , <b>2020</b> , 4, 1360-1366	3.2	4

20	Interdisciplinary Round-Robin Test on Molecular Spectroscopy of the U(VI) Acetate System. <i>ACS Omega</i> , <b>2019</b> , 4, 8167-8177	3.9	3
19	Influence of the goethite (FeOOH) surface on the stability of distorted PuO <sub>2</sub> and PuO <sub>2-x</sub> phases. <i>Radiochimica Acta</i> , <b>2016</b> , 104,	1.9	3
18	Experimental measurements and numerical simulations of the transport and retention of nanocrystal CdSe/ZnS quantum dots in saturated porous media: effects of pH, organic ligand, and natural organic matter. <i>Environmental Science and Pollution Research</i> , <b>2021</b> , 28, 8050-8073	5.1	3
17	Preferential flow systems amended with biogeochemical components: imaging of a two-dimensional study. <i>Hydrology and Earth System Sciences</i> , <b>2018</b> , 22, 2487-2509	5.5	3
16	Postemergence Control and Glyphosate Tolerance of Doweweed ( <i>Murdannia nudiflora</i> ). <i>Weed Technology</i> , <b>2017</b> , 31, 582-589	1.4	2
15	Mobility of Aqueous and Colloidal Neptunium Species in Field Lysimeter Experiments. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 1963-1970	10.3	2
14	The Uptake and Translocation of <sup>99</sup> Tc, <sup>133</sup> Cs, <sup>237</sup> Np, and <sup>238</sup> U Into <i>Andropogon Virginicus</i> With Consideration of Plant Life Stage. <i>Health Physics</i> , <b>2018</b> , 115, 550-560	2.3	2
13	High effectiveness of pure polydopamine in extraction of uranium and plutonium from groundwater and seawater.. <i>RSC Advances</i> , <b>2019</b> , 9, 30052-30063	3.7	2
12	Response to Comment on "Enthalpy of Uranium Adsorption onto Hematite". <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 3444-3446	10.3	2
11	Impact of Natural Organic Matter on Plutonium Vadose Zone Migration from an NHPu(V)OCO(s) Source. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 2688-2697	10.3	1
10	Plutonium Transport in Soil and Plants. <i>Geophysical Monograph Series</i> , <b>2015</b> , 181-208	1.1	1
9	Effect of 1-Hydroxyethane-1,1-diphosphonic Acid (HEDPA) on Partitioning of Np and Pu to Synthetic Boehmite. <i>Separation Science and Technology</i> , <b>2010</b> , 45, 721-731	2.5	1
8	Examination of Uranium(VI) Leaching during Ligand Promoted Dissolution of Waste Tank Sludge Surrogates. <i>Separation Science and Technology</i> , <b>2008</b> , 43, 3798-3812	2.5	1
7	Grain boundary facilitated dissolution of nanocrystalline NpO <sub>2</sub> (s) from legacy waste processing. <i>Environmental Science: Nano</i> , <b>2020</b> , 7, 2293-2301	7.1	1
6	Sorption and desorption of radiocesium by muscovite separated from the Georgia kaolin. <i>Journal of Environmental Radioactivity</i> , <b>2020</b> , 211, 106074	2.4	1
5	One-dimensional Spatial Distributions of Gamma-ray Emitting Contaminants in Field Lysimeters Using a Collimated Gamma-ray Spectroscopy System. <i>Health Physics</i> , <b>2018</b> , 114, 532-536	2.3	0
4	Neptunium(V) sorption to vadose zone sediments: Reversible, not readily reducible, and predictable based on Fe-oxide content. <i>Chemical Geology</i> , <b>2018</b> , 481, 53-64	4.2	0
3	Mechanisms and kinetics of citrate-promoted dissolution of a uranyl phosphate mineral. <i>Geochimica Et Cosmochimica Acta</i> , <b>2021</b> , 318, 247-247	5.5	0

- 2      Uranium partitioning from contaminated wetland soil to aqueous and suspended iron-floc phases: Implications of dynamic hydrologic conditions on contaminant release. *Geochimica Et Cosmochimica Acta*, **2022**, 318, 292-304      5.5      o
- 1      Effect of calcination temperature on neptunium dioxide microstructure and dissolution. *Environmental Science: Nano*, **2020**, 7, 3869-3876      7.1