

# Brian A Powell

## List of Publications by Year in descending order

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91  
papers

2,394  
citations

201385

27  
h-index

233125

45  
g-index

94  
all docs

94  
docs citations

94  
times ranked

2651  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Adaptive Interactions between Zinc Oxide Nanoparticles and <i>Chlorella</i> sp.. Environmental Science & Technology, 2012, 46, 12178-12185.  | 4.6 | 139       |
| 2  | Pu(V)O <sub>2</sub> +Adsorption and Reduction by Synthetic Magnetite (Fe <sub>3</sub> O <sub>4</sub> ). Environmental Science & Technology, 2004, 38, 6016-6024.   | 4.6 | 129       |
| 3  | Formation of a Protein Corona on Silver Nanoparticles Mediates Cellular Toxicity via Scavenger Receptors. Toxicological Sciences, 2015, 143, 136-146.  | 1.4 | 125       |
| 4  | Pu(V)O <sub>2</sub> +Adsorption and Reduction by Synthetic Hematite and Goethite. Environmental Science & Technology, 2005, 39, 2107-2114.   | 4.6 | 115       |
| 5  | Stabilization of Plutonium Nano-Colloids by Epitaxial Distortion on Mineral Surfaces. Environmental Science & Technology, 2011, 45, 2698-2703.   | 4.6 | 90        |
| 6  | Surface Complexation Modeling of Eu(III) and U(VI) Interactions with Graphene Oxide. Environmental Science & Technology, 2016, 50, 1821-1827.  | 4.6 | 82        |
| 7  | Influence of Oxidation States on Plutonium Mobility during Long-Term Transport through an Unsaturated Subsurface Environment. Environmental Science & Technology, 2004, 38, 5053-5058.                         | 4.6 | 80        |
| 8  | Plant litter chemistry alters the content and composition of organic carbon associated with soil mineral and aggregate fractions in invaded ecosystems. Global Change Biology, 2017, 23, 4002-4018.            | 4.2 | 77        |
| 9  | Thermodynamics and Electronic Properties of Heterometallic Multinuclear Actinide-Containing Metal-Organic Frameworks with Structural Memory. Journal of the American Chemical Society, 2019, 141, 11628-11640. | 6.6 | 71        |
| 10 | Plutonium Oxidation and Subsequent Reduction by Mn(IV) Minerals in Yucca Mountain Tuff. Environmental Science & Technology, 2006, 40, 3508-3514.   | 4.6 | 70        |
| 11 | Np(V) and Pu(V) Ion Exchange and Surface-Mediated Reduction Mechanisms on Montmorillonite. Environmental Science & Technology, 2012, 46, 2692-2698.  | 4.6 | 70        |
| 12 | Elevated concentrations of primordial radionuclides in sediments from the Reedy River and surrounding creeks in Simpsonville, South Carolina. Journal of Environmental Radioactivity, 2007, 94, 121-128.       | 0.9 | 61        |
| 13 | Pu(V) and Pu(IV) Sorption to Montmorillonite. Environmental Science & Technology, 2013, 47, 5146-5153.   | 4.6 | 58        |
| 14 | Evaluation of a Radioiodine Plume Increasing in Concentration at the Savannah River Site. Environmental Science & Technology, 2011, 45, 489-495.   | 4.6 | 56        |
| 15 | Quantitative Measurement of Ligand Exchange on Iron Oxides via Radiolabeled Oleic Acid. Langmuir, 2014, 30, 10918-10925.   | 1.6 | 56        |
| 16 | Influence of Sources on Plutonium Mobility and Oxidation State Transformations in Vadose Zone Sediments. Environmental Science & Technology, 2007, 41, 7417-7423.  | 4.6 | 55        |
| 17 | A self-consistent model describing the thermodynamics of Eu(III) adsorption onto hematite. Geochimica Et Cosmochimica Acta, 2013, 122, 430-447.  | 1.6 | 52        |
| 18 | Mobilization of actinides by dissolved organic compounds at the Nevada Test Site. Applied Geochemistry, 2011, 26, 308-318.   | 1.4 | 51        |

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|----|---|-----|-----------|
| 19 | Quantitative Measurement of Ligand Exchange with Small-Molecule Ligands on Iron Oxide Nanoparticles via Radioanalytical Techniques. <i>Langmuir</i> , 2016, 32, 13716-13727.  | 1.6 | 49        |
| 20 | Influence of pH on Plutonium Desorption/Solubilization from Sediment. <i>Environmental Science &amp; Technology</i> , 2006, 40, 5937-5942.  | 4.6 | 38        |
| 21 | Phosphorus Stress-Induced Changes in Plant Root Exudation Could Potentially Facilitate Uranium Mobilization from Stable Mineral Forms. <i>Environmental Science &amp; Technology</i> , 2018, 52, 7652-7662.   | 4.6 | 38        |
| 22 | Kinetics of neptunium(V) sorption and desorption on goethite: An experimental and modeling study. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 6584-6599.   | 1.6 | 33        |
| 23 | 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> , 2014, 48, 9255-9262.   | 4.6 | 32        |
| 24 | Effect of Fulvic Acid Surface Coatings on Plutonium Sorption and Desorption Kinetics on Goethite. <i>Environmental Science &amp; Technology</i> , 2015, 49, 2776-2785.  | 4.6 | 32        |
| 25 | Influence of iron redox transformations on plutonium sorption to sediments. <i>Radiochimica Acta</i> , 2010, 98, 685-692.   | 0.5 | 31        |
| 26 | Eleven-Year Field Study of Pu Migration from Pu III, IV, and VI Sources. <i>Environmental Science &amp; Technology</i> , 2006, 40, 443-448.   | 4.6 | 30        |
| 27 | A Pro<sub>106</sub>to Ala Substitution is Associated with Resistance to Glyphosate in Annual Bluegrass (<i>Poa annua</i>). <i>Weed Science</i> , 2015, 63, 613-622.   | 0.8 | 28        |
| 28 | Removal capacity and chemical speciation of groundwater iodide (I <sup>-</sup> ) and iodate (IO <sub>3</sub> <sup>-</sup> ) sequestered by organoclays and granular activated carbon. <i>Journal of Environmental Radioactivity</i> , 2018, 192, 505-512. | 0.9 | 28        |
| 29 | 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> , 2013, 403, 105-112.   | 5.0 | 27        |
| 30 | Complexation of U(VI) with 1-Hydroxyethane-1,1-diphosphonic Acid in Acidic to Basic Solutions. <i>Inorganic Chemistry</i> , 2007, 46, 2870-2876.  | 1.9 | 26        |
| 31 | Enthalpy of Uranium Adsorption onto Hematite. <i>Environmental Science &amp; Technology</i> , 2020, 54, 15004-15012.  | 4.6 | 26        |
| 32 | Geochemical controls of iodine uptake and transport in Savannah River Site subsurface sediments. <i>Applied Geochemistry</i> , 2014, 45, 105-113.   | 1.4 | 22        |
| 33 | 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> , 2014, 131, 47-56.   | 0.9 | 20        |
| 34 | Effect of Natural Organic Matter on Plutonium Sorption to Goethite. <i>Environmental Science &amp; Technology</i> , 2017, 51, 699-708.  | 4.6 | 20        |
| 35 | Compounds of Hexavalent Uranium and Dibutylphosphate in Nitric Acid Systems. <i>Solvent Extraction and Ion Exchange</i> , 2003, 21, 347-368.  | 0.8 | 19        |
| 36 | Mobility of radionuclides in soil/groundwater system: Comparing the influence of EDTA and four of its degradation products. <i>Environmental Pollution</i> , 2010, 158, 3077-3084.  | 3.7 | 17        |

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|----|--|-----|-----------|
| 37 | PAMAM dendrimer for mitigating humic foulant. RSC Advances, 2012, 2, 7997.   | 1.7 | 17        |
| 38 | Chemical stabilization of chromate in blast furnace slag mixed cementitious materials. Chemosphere, 2015, 138, 247-252.  | 4.2 | 17        |
| 39 | Dissolution and Vertical Transport of Uranium from Stable Mineral Forms by Plants as Influenced by the Co-occurrence of Uranium with Phosphorus. Environmental Science & Technology, 2020, 54, 6602-6609.                              | 4.6 | 17        |
| 40 | Evaluation of Surface Sorption Processes Using Spectral Induced Polarization and a <sup>22</sup> Na Tracer. Environmental Science & Technology, 2015, 49, 9866-9873.   | 4.6 | 16        |
| 41 | Effects of Titanium Doping in Titanomagnetite on Neptunium Sorption and Speciation. Environmental Science & Technology, 2016, 50, 1853-1858.   | 4.6 | 15        |
| 42 | ANOMALOUSLY HIGH LEVELS OF URANIUM AND OTHER NATURALLY OCCURRING RADIONUCLIDES IN PRIVATE WELLS IN THE PIEDMONT REGION OF SOUTH CAROLINA. Health Physics, 2005, 88, 248-252.   | 0.3 | 14        |
| 43 | Increase in the reduction potential of uranyl upon interaction with graphene oxide surfaces. Physical Chemistry Chemical Physics, 2018, 20, 1752-1760.   | 1.3 | 14        |
| 44 | Plutonium environmental chemistry: mechanisms for the surface-mediated reduction of Pu( <sup>v</sup> / <sub>scv</sub> )/( <sup>vi</sup> / <sub>scv</sub> ). Environmental Sciences: Processes and Impacts, 2018, 20, 1306-1322.        | 1.7 | 13        |
| 45 | Integration of ecosystem science into radioecology: A consensus perspective. Science of the Total Environment, 2020, 740, 140031.  | 3.9 | 13        |
| 46 | Rapid quantification of TBP and TBP degradation product ratios by FTIR-ATR. Journal of Radioanalytical and Nuclear Chemistry, 2013, 296, 859-868.  | 0.7 | 12        |
| 47 | Influence of humic acid on plutonium sorption to gibbsite: Determination of Pu-humic acid complexation constants and ternary sorption studies. Radiochimica Acta, 2014, 102, 629-643.  | 0.5 | 12        |
| 48 | Experimental evidence for ternary colloid-facilitated transport of Th(IV) with hematite ( $\pm$ -Fe <sub>2</sub> O <sub>3</sub> ) colloids and Suwannee River fulvic acid. Journal of Environmental Radioactivity, 2016, 165, 168-181. | 0.9 | 12        |
| 49 | The effect of post-synthesis aging on the ligand exchange activity of iron oxide nanoparticles. Journal of Colloid and Interface Science, 2018, 511, 374-382.  | 5.0 | 12        |
| 50 | Plutonium binding affinity to sediments increases with contact time. Chemical Geology, 2019, 505, 100-107.   | 1.4 | 12        |
| 51 | Anion-Exchange Fibers for Improved Sample Loading in Ultra-Trace Analysis of Plutonium by Thermal Ionization Mass Spectrometry. Analytical Chemistry, 2017, 89, 8638-8642.   | 3.2 | 11        |
| 52 | Linear Free Energy Relationship for Actinide Sorption to Graphene Oxide. ACS Applied Materials & Interfaces, 2018, 10, 32086-32092.  | 4.0 | 11        |
| 53 | Stability constant determination of sulfur and selenium amino acids with Cu(II) and Fe(II). Journal of Inorganic Biochemistry, 2019, 195, 20-30.   | 1.5 | 11        |
| 54 | High effectiveness of pure polydopamine in extraction of uranium and plutonium from groundwater and seawater. RSC Advances, 2019, 9, 30052-30063.  | 1.7 | 11        |

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|----|---|-----|-----------|
| 55 | THEORETICAL ORGANICALLY BOUND TRITIUM DOSE ESTIMATES. <i>Health Physics</i> , 2004, 86, 183-186.  | 0.3 | 10        |
| 56 | 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> , 2016, 307, 1891-1899. | 0.7 | 10        |
| 57 | Uptake of plutonium on a novel thin film for use in spectrometry. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2016, 307, 2333-2338.   | 0.7 | 10        |
| 58 | 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> , 2017, 51, 2864-2870.   | 4.6 | 10        |
| 59 | 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> , 2017, 664, 120-128.  | 0.8 | 10        |
| 60 | Nuclear Magnetic Resonance Spectroscopy of Aqueous Plutonium(IV) Desferrioxamine B Complexes. <i>European Journal of Inorganic Chemistry</i> , 2014, 2014, 3312-3321.   | 1.0 | 9         |
| 61 | Observations of surface-mediated reduction of Pu(VI) to Pu(IV) on hematite nanoparticles by ATR FT-IR. <i>Radiochimica Acta</i> , 2015, 103, 553-563.   | 0.5 | 9         |
| 62 | Functionalized Polymer Thin Films for Plutonium Capture and Isotopic Screening from Aqueous Sources. <i>Analytical Chemistry</i> , 2020, 92, 5214-5221.   | 3.2 | 9         |
| 63 | Effect of bundling on the $\pi$ plasmon energy in sub-nanometer single wall carbon nanotubes. <i>Carbon</i> , 2011, 49, 3803-3807.  | 5.4 | 8         |
| 64 | Long-Term Radiostrontium Interactions and Transport through Sediment. <i>Environmental Science &amp; Technology</i> , 2014, 48, 8919-8925.  | 4.6 | 8         |
| 65 | A Novel Method for Tracer Concentration Plutonium(V) Solution Preparation. <i>Analytical Chemistry</i> , 2016, 88, 4196-4199.   | 3.2 | 8         |
| 66 | Uranium Attenuated by a Wetland 50 Years after Release into a Stream. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 1360-1366.  | 1.2 | 8         |
| 67 | Comparison of the surface ion density of silica gel evaluated via spectral induced polarization versus acid-base titration. <i>Journal of Applied Geophysics</i> , 2016, 135, 427-435.  | 0.9 | 7         |
| 68 | Rhenium filament oxidation: Effect on TIMS performance and the roles of carburization and humidity. <i>Talanta</i> , 2017, 168, 183-187.  | 2.9 | 7         |
| 69 | Physical transformations of iron oxide and silver nanoparticles from an intermediate scale field transport study. <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.  | 0.8 | 6         |
| 70 | Effect of equilibration time on Pu desorption from goethite. <i>Radiochimica Acta</i> , 2015, 103, 695-705.   | 0.5 | 6         |
| 71 | Anion-exchange polymer filament coating for ultra-trace isotopic analysis of plutonium by thermal ionization mass spectrometry. <i>Talanta</i> , 2018, 189, 502-508.  | 2.9 | 6         |
| 72 | Mobility of Aqueous and Colloidal Neptunium Species in Field Lysimeter Experiments. <i>Environmental Science &amp; Technology</i> , 2018, 52, 1963-1970.  | 4.6 | 5         |

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|----|--|-----|-----------|
| 73 | Interdisciplinary Round-Robin Test on Molecular Spectroscopy of the U(VI) Acetate System. ACS Omega, 2019, 4, 8167-8177.   | 1.6 | 5         |
| 74 | Sorption and desorption of radiocesium by muscovite separated from the Georgia kaolin. Journal of Environmental Radioactivity, 2020, 211, 106074.  | 0.9 | 5         |
| 75 | 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. Environmental Science and Pollution Research, 2021, 28, 8050-8073. | 2.7 | 5         |
| 76 | Ambient aging of rhenium filaments used in thermal ionization mass spectrometry: Growth of oxo-rhenium crystallites and anti-aging strategies. Heliyon, 2017, 3, e00232.   | 1.4 | 4         |
| 77 | Preferential flow systems amended with biogeochemical components: imaging of a two-dimensional study. Hydrology and Earth System Sciences, 2018, 22, 2487-2509.  | 1.9 | 4         |
| 78 | The Uptake and Translocation of <sup>99</sup> Tc, <sup>133</sup> Cs, <sup>237</sup> Np, and <sup>238</sup> U Into Andropogon Virginicus With Consideration of Plant Life Stage. Health Physics, 2018, 115, 550-560.  | 0.3 | 4         |
| 79 | Response to Comment on "Enthalpy of Uranium Adsorption onto Hematite". Environmental Science & Technology, 2021, 55, 3444-3446.  | 4.6 | 4         |
| 80 | Influence of the goethite (α-FeOOH) surface on the stability of distorted PuO <sub>2</sub> and PuO <sub>2-x</sub> phases. Radiochimica Acta, 2016, 104, 821-841.   | 0.5 | 3         |
| 81 | Postemergence Control and Glyphosate Tolerance of Dowweed ( <i>Murdannia nudiflora</i> ). Weed Technology, 2017, 31, 582-589.  | 0.4 | 3         |
| 82 | Impact of Natural Organic Matter on Plutonium Vadose Zone Migration from an NH <sub>4</sub> <sup>+</sup> Pu(V)O <sub>2</sub> CO <sub>3</sub> (s) Source. Environmental Science & Technology, 2020, 54, 2688-2697.  | 4.6 | 3         |
| 83 | Mechanisms and kinetics of citrate-promoted dissolution of a uranyl phosphate mineral. Geochimica Et Cosmochimica Acta, 2022, 318, 247-262.  | 1.6 | 3         |
| 84 | 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.  | 1.6 | 3         |
| 85 | Neptunium(V) sorption to vadose zone sediments: Reversible, not readily reducible, and predictable based on Fe-oxide content. Chemical Geology, 2018, 481, 53-64.  | 1.4 | 2         |
| 86 | Grain boundary facilitated dissolution of nanocrystalline NpO <sub>2</sub> (s) from legacy waste processing. Environmental Science: Nano, 2020, 7, 2293-2301.  | 2.2 | 2         |
| 87 | Examination of Uranium(VI) Leaching during Ligand Promoted Dissolution of Waste Tank Sludge Surrogates. Separation Science and Technology, 2008, 43, 3798-3812.  | 1.3 | 1         |
| 88 | Effect of 1-Hydroxyethane-1,1-diphosphonic Acid (HEDPA) on Partitioning of Np and Pu to Synthetic Boehmite. Separation Science and Technology, 2010, 45, 721-731.  | 1.3 | 1         |
| 89 | Plutonium Transport in Soil and Plants. Geophysical Monograph Series, 0, , 181-208.  | 0.1 | 1         |
| 90 | One-dimensional Spatial Distributions of Gamma-ray Emitting Contaminants in Field Lysimeters Using a Collimated Gamma-ray Spectroscopy System. Health Physics, 2018, 114, 532-536.   | 0.3 | 1         |

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|----|---|-----|-----------|
| 91 | Effect of calcination temperature on neptunium dioxide microstructure and dissolution. Environmental Science: Nano, 2020, 7, 3869-3876. | 2.2 | 1         |