Eric M Pierce

List of Publications by Year
in descending order

67 papers	2,791 citations	218592 26 h-index	197736 49 g-index
85 all docs	85 docs citations	85 times ranked	2640 citing authors

#	Article	IF	Citations
1	Competitive exchange between divalent metal ions [Cu(II), Zn(II), Ca(II)] and Hg(II) bound to thiols and natural organic matter. Journal of Hazardous Materials, 2022, 424, 127388.	6.5	2
2	Unravelling biogeochemical drivers of methylmercury production in an Arctic fen soil and a bog soil. Environmental Pollution, 2022, 299, 118878.	3.7	8
3	Machine learningâ€“based observation-constrained projections reveal elevated global socioeconomic risks from wildfire. Nature Communications, 2022, 13, 1250.	5.8	19
4	From legacy contamination to watershed systems science: a review of scientific insights and technologies developed through DOE-supported research in water and energy security. Environmental Research Letters, 2022, 17, 043004.	2.2	12
5	Isotope exchange between mercuric [Hg(II)] chloride and Hg(II) bound to minerals and thiolate ligands: Implications for enriched isotope tracer studies. Geochimica Et Cosmochimica Acta, 2021, 292, 468-481.	1.6	17
6	Dissolution kinetics of a sodium borosilicate glass in Tris buffer solutions: impact of Tris concentration and acid (HCl/HNO₃) identity. Physical Chemistry Chemical Physics, 2021, 23, 16165-16179.	1.3	7
7	Bedrock architecture, soil texture, and hyporheic zone characterization combining electrical resistivity and induced polarization imaging. Journal of Applied Geophysics, 2021, 188, 104306.	0.9	17
8	Spectroscopic and computational investigations of organometallic complexation of group 12 transition metals by methanobactins from Methylocystis sp. SB2. Journal of Inorganic Biochemistry, 2021, 223, 111496.	1.5	2
9	An insight into the corrosion of alkali aluminoborosilicate glasses in acidic environments. Physical Chemistry Chemical Physics, 2020, 22, 1881-1896.	1.3	35
10	Rates and Dynamics of Mercury Isotope Exchange between Dissolved Elemental Hg(0) and Hg(II) Bound to Organic and Inorganic Ligands. Environmental Science & Technology, 2020, 54, 15534-15545.	4.6	17
11	Energetics of Salt-Bearing Sodalites, Na₈Al₆Si₆O₂₄X₂ (X = SO₄,) Tj ETQq1 1 0.784314 rgBT / Earth and Space Chemistry, 2020, 4, 2153-2161.	1.2	9
12	Dissolved organic matter reduces the effectiveness of sorbents for mercury removal. Science of the Total Environment, 2019, 690, 410-416.	3.9	42
13	Mercury Sorption and Desorption on Organo-Mineral Particulates as a Source for Microbial Methylation. Environmental Science & Technology, 2019, 53, 2426-2433.	4.6	52
14	Influence of young cement water on the corrosion of the International Simple Glass. Npj Materials Degradation, 2019, 3, .	2.6	22
15	Mercury Adsorption on Minerals and Its Effect on Microbial Methylation. ACS Earth and Space Chemistry, 2019, 3, 1338-1345.	1.2	18
16	Soil Aggregate Microbial Communities: Towards Understanding Microbiome Interactions at Biologically Relevant Scales. Applied and Environmental Microbiology, 2019, 85, .	1.4	233
17	Mercury Uptake by Desulfovibrio desulfuricans ND132: Passive or Active?. Environmental Science & Technology, 2019, 53, 6264-6272.	4.6	33
18	Characterization of iron oxide nanoparticle films at the airâ€“water interface in Arctic tundra waters. Science of the Total Environment, 2018, 633, 1460-1468.	3.9	8

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19	Toward an understanding of surface layer formation, growth, and transformation at the glassâ€“fluid interface. Geochimica Et Cosmochimica Acta, 2018, 229, 65-84.	1.6	19
20	Influence of Structural Defects on Biomineralized ZnS Nanoparticle Dissolution: An in-Situ Electron Microscopy Study. Environmental Science & Technology, 2018, 52, 1139-1149.	4.6	42
21	Understanding the structural drivers governing glassâ€“water interactions in borosilicate based model bioactive glasses. Acta Biomaterialia, 2018, 65, 436-449.	4.1	43
22	Removal of inorganic mercury by selective extraction and coprecipitation for determination of methylmercury in mercury-contaminated soils by chemical vapor generation inductively coupled plasma mass spectrometry (CVG-ICP-MS). Analytica Chimica Acta, 2018, 1041, 68-77.	2.6	35
23	Nanomolar Copper Enhances Mercury Methylation by Desulfovibrio desulfuricans ND132. Environmental Science and Technology Letters, 2018, 5, 372-376.	3.9	24
24	Improved ZnS nanoparticle properties through sequential NanoFermentation. Applied Microbiology and Biotechnology, 2018, 102, 8329-8339.	1.7	2
25	Quantitative Proteomic Analysis of Biological Processes and Responses of the Bacterium Desulfovibrio desulfuricans ND132 upon Deletion of Its Mercury Methylation Genes. Proteomics, 2018, 18, e1700479.	1.3	22
26	Low temperature heat capacity and thermodynamic functions of anion bearing sodalites Na8Al6Si6O24X2 (X = SO4, ReO4, Cl, I). Journal of Chemical Thermodynamics, 2017, 114, 14-24.	1.0	8
27	Structure and Thermochemistry of Perrhenate Sodalite and Mixed Guest Perrhenate/Pertechnetate Sodalite. Environmental Science & Technology, 2017, 51, 997-1006.	4.6	19
28	Modelling the sulfate capacity of simulated radioactive waste borosilicate glasses. Journal of Alloys and Compounds, 2017, 695, 656-667.	2.8	31
29	Contrasting Effects of Dissolved Organic Matter on Mercury Methylation by Geobacter sulfurreducens PCA and Desulfovibrio desulfuricans ND132. Environmental Science & Technology, 2017, 51, 10468-10475.	4.6	74
30	Glassâ€“water interaction: Effect of high-valence cations on glass structure and chemical durability. Geochimica Et Cosmochimica Acta, 2016, 181, 54-71.	1.6	36
31	Anaerobic Mercury Methylation and Demethylation by Geobacter bemidjiensis Bem. Environmental Science & Technology, 2016, 50, 4366-4373.	4.6	121
32	Response to Comment on â€œAnaerobic Mercury Methylation and Demethylation by Geobacter Bemidjiensis Bemâ€• Environmental Science & Technology, 2016, 50, 9800-9801.	4.6	2
33	Effects of Cellular Sorption on Mercury Bioavailability and Methylmercury Production by Desulfovibrio desulfuricans ND132. Environmental Science & Technology, 2016, 50, 13335-13341.	4.6	78
34	Evidence of technetium and iodine release from a sodalite-bearing ceramic waste form. Applied Geochemistry, 2016, 66, 210-218.	1.4	11
35	Mineral assemblage transformation of a metakaolin-based waste form after geopolymer encapsulation. Journal of Nuclear Materials, 2016, 473, 320-332.	1.3	13
36	Mercury-Pollution Induction of Intracellular Lipid Accumulation and Lysosomal Compartment Amplification in the Benthic Foraminifer Ammonia parkinsoniana. PLoS ONE, 2016, 11, e0162401.	1.1	17

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37	Monte Carlo simulations of coupled diffusion and surface reactions during the aqueous corrosion of borosilicate glasses. Journal of Non-Crystalline Solids, 2015, 408, 142-149.	1.5	18
38	Immobilization and exchange of perrhenate in sodalite and cancrinite. Microporous and Mesoporous Materials, 2015, 214, 115-120.	2.2	22
39	Perrhenate incorporation into binary mixed sodalites: The role of anion size and implications for technetium-99 sequestration. Chemical Geology, 2015, 395, 138-143.	1.4	41
40	In situ remediation technologies for mercury-contaminated soil. Environmental Science and Pollution Research, 2015, 22, 8124-8147.	2.7	102
41	Formation of Soluble Mercury Oxide Coatings: Transformation of Elemental Mercury in Soils. Environmental Science & Technology, 2015, 49, 12105-12111.	4.6	17
42	Mercury source zone identification using soil vapor sampling and analysis. Frontiers of Environmental Science and Engineering, 2015, 9, 596-604.	3.3	2
43	Topography and Mechanical Property Mapping of International Simple Glass Surfaces with Atomic Force Microscopy. , 2014, 7, 216-222.		23
44	Modeling Interfacial Glassâ€Water Reactions: Recent Advances and Current Limitations. International Journal of Applied Glass Science, 2014, 5, 421-435.	1.0	34
45	Performance of the Fluidized Bed Steam Reforming product under hydraulically unsaturated conditions. Journal of Environmental Radioactivity, 2014, 131, 119-128.	0.9	10
46	Competitive Incorporation of Perrhenate and Nitrate into Sodalite. Environmental Science & Technology, 2014, 48, 12851-12857.	4.6	66
47	Experimental determination of the speciation, partitioning, and release of perrhenate as a chemical surrogate for pertechnetate from a sodalite-bearing multiphase ceramic waste form. Applied Geochemistry, 2014, 42, 47-59.	1.4	20
48	Monte Carlo simulations of the corrosion of aluminoborosilicate glasses. Journal of Non-Crystalline Solids, 2013, 378, 273-281.	1.5	26
49	An international initiative on long-term behavior of high-level nuclear waste glass. Materials Today, 2013, 16, 243-248.	8.3	417
50	Characterization of soils from an industrial complex contaminated with elemental mercury. Environmental Research, 2013, 125, 20-29.	3.7	54
51	Rapid Removal of Hg(II) from Aqueous Solutions Using Thiol-Functionalized Zn-Doped Biomagnetite Particles. ACS Applied Materials & Interfaces, 2012, 4, 4373-4379.	4.0	96
52	Monte Carlo simulations of the dissolution of borosilicate glasses in near-equilibrium conditions. Journal of Non-Crystalline Solids, 2012, 358, 1324-1332.	1.5	20
53	Diffusive release of uranium from contaminated sediments into capillary fringe pore water. Journal of Contaminant Hydrology, 2012, 140-141, 164-172.	1.6	4
54	Monte Carlo simulations of the dissolution of borosilicate and aluminoborosilicate glasses in dilute aqueous solutions. Geochimica Et Cosmochimica Acta, 2011, 75, 5296-5309.	1.6	25

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55	Deep-UV Raman spectroscopic analysis of structure and dissolution rates of silica-rich sodium borosilicate glasses. Journal of Non-Crystalline Solids, 2011, 357, 2170-2177.	1.5	24
56	Development of long-term behavior models for radioactive waste forms. , 2011, , 433-454.		3
57	Combined Experimental and Computational Approach to Predict the Glass-Water Reaction. Nuclear Technology, 2011, 176, 22-39.	0.7	9
58	Experimental determination of the effect of the ratio of B/Al on glass dissolution along the nepheline (NaAlSiO4)â€“malinkoite (NaBSiO4) join. Geochimica Et Cosmochimica Acta, 2010, 74, 2634-2654.	1.6	85
59	Aluminoborosilicate waste glass dissolution under alkaline conditions at 40Â°C: implications for a chemical affinity-based rate equation. Environmental Chemistry, 2008, 5, 73.	0.7	24
60	An experimental study of the dissolution rates of simulated aluminoborosilicate waste glasses as a function of pH and temperature under dilute conditions. Applied Geochemistry, 2008, 23, 2559-2573.	1.4	75
61	Experimentally determined dissolution kinetics of Na-rich borosilicate glass at far from equilibrium conditions: Implications for Transition State Theory. Geochimica Et Cosmochimica Acta, 2008, 72, 2767-2788.	1.6	59
62	Sequestration and retention of uranium(VI) in the presence of hydroxylapatite under dynamic geochemical conditions. Environmental Chemistry, 2008, 5, 40.	0.7	34
63	Accelerated weathering of high-level and plutonium-bearing lanthanide borosilicate waste glasses under hydraulically unsaturated conditions. Applied Geochemistry, 2007, 22, 1841-1859.	1.4	51
64	Experimental determination of the dissolution kinetics of zero-valent iron in the presence of organic complexants. Environmental Chemistry, 2007, 4, 260.	0.7	26
65	Efficacy of soluble sodium tripolyphosphate amendments for the in-situ immobilisation of uranium. Environmental Chemistry, 2007, 4, 293.	0.7	15
66	The Accelerated Weathering of a Radioactive Low-Activity Waste Glass under Hydraulically Unsaturated Conditions: Experimental Results from a Pressurized Unsaturated Flow Test. Nuclear Technology, 2006, 155, 149-165.	0.7	31
67	Experimental determination of UO2(cr) dissolution kinetics: Effects of solution saturation state and pH. Journal of Nuclear Materials, 2005, 345, 206-218.	1.3	68