John R Bargar

List of Publications by Year
in descending order

95 papers	5,552 citations	71102 41 h-index	79698 73 g-index
96 all docs	96 docs citations	96 times ranked	4328 citing authors

#	Article	IF	Citations
1	Acoustic velocity and permeability of acidized and propped fractures in shale. Geophysics, 2022, 87, MR13-MR24.	2.6	0
2	Export of Organic Carbon from Reduced Fine-Grained Zones Governs Biogeochemical Reactivity in a Simulated Aquifer. Environmental Science & Technology, 2022, 56, 2738-2746.	10.0	8
3	<i>In Situ</i> Determination of Speciation and Local Structure of NaClâ€“SrCl₂ and LiFâ€“ZrF₄ Molten Salts. Journal of Physical Chemistry B, 2022, 126, 1539-1550.	2.6	5
4	Geochemical Modeling of Celestite (SrSO₄) Precipitation and Reactive Transport in Shales. Environmental Science & Technology, 2022, 56, 4336-4344.	10.0	7
5	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.	5.2	12
6	Diverse ecophysiological adaptations of subsurface Thaumarchaeota in floodplain sediments revealed through genome-resolved metagenomics. ISME Journal, 2022, 16, 1140-1152.	9.8	28
7	Chemical and Reactive Transport Processes Associated with Hydraulic Fracturing of Unconventional Oil/Gas Shales. Chemical Reviews, 2022, 122, 9198-9263.	47.7	25
8	Impact of Acidâ€“Base Stimulation Sequence on Mineral Stability for Tight/Impermeable Unconventional Carbonate-Rich Rocks: A Delaware Basin Case Study. Energy & Fuels, 2022, 36, 4746-4756.	5.1	1
9	Trace Impurities Identified as Forensic Signatures in CMX-5 Fuel Pellets Using X-ray Spectroscopic Techniques. Analytical Chemistry, 2022, 94, 7084-7091.	6.5	4
10	Simulated Aquifer Heterogeneity Leads to Enhanced Attenuation and Multiple Retention Processes of Zinc. Environmental Science & Technology, 2021, 55, 2939-2948.	10.0	8
11	Global Sensitivity Analysis of a Reactive Transport Model for Mineral Scale Formation During Hydraulic Fracturing. Environmental Engineering Science, 2021, 38, 192-207.	1.6	6
12	Porewater Lead Concentrations Limited by Particulate Organic Matter Coupled With Ephemeral Iron(III) and Sulfide Phases during Redox Cycles Within Contaminated Floodplain Soils. Environmental Science & Technology, 2021, 55, 5878-5886.	10.0	13
13	Uranium(VI) attenuation in a carbonate-bearing oxic alluvial aquifer. Journal of Hazardous Materials, 2021, 412, 125089.	12.4	8
14	Multiphysics Investigation of Geochemical Alterations in Marcellus Shale Using Reactive Core-Floods. Energy & Fuels, 2021, 35, 10733-10745.	5.1	13
15	A Critical Review of the Physicochemical Impacts of Water Chemistry on Shale in Hydraulic Fracturing Systems. Environmental Science & Technology, 2021, 55, 1377-1394.	10.0	51
16	Diagenetic formation of uranium-silica polymers in lake sediments over 3,300 years. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	10
17	Controlling Strontium Scaling in the Permian Basin through Manipulation of Base Fluid Chemistry and Additives. , 2021, , .		3
18	Experimental redox transformations of uranium phosphate minerals and mononuclear species in a contaminated wetland. Journal of Hazardous Materials, 2020, 384, 121362.	12.4	15

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19	Complexation by Organic Matter Controls Uranium Mobility in Anoxic Sediments. Environmental Science & Technology, 2020, 54, 1493-1502.	10.0	37
20	Synchrotron X-ray Imaging of Element Transport Resulting from Unconventional Stimulation. , 2020, , .		5
21	Time-Lapse Acoustic Monitoring of Facture Alteration in Marcellus Shale. , 2020, , .		1
22	Strontium Behavior in Midland Basin Unconventional Reservoirs: The Importance of Base Fluids. , 2020, , .		7
23	Stability of Floodplain Subsurface Microbial Communities Through Seasonal Hydrological and Geochemical Cycles. Frontiers in Earth Science, 2020, 8, .	1.8	14
24	Chemical Speciation and Stability of Uranium in Unconventional Shales: Impact of Hydraulic Fracture Fluid. Environmental Science & Technology, 2020, 54, 7320-7329.	10.0	9
25	Diverse Thaumarchaeota Dominate Subsurface Ammonia-oxidizing Communities in Semi-arid Floodplains in the Western United States. Microbial Ecology, 2020, 80, 778-792.	2.8	19
26	Redox Heterogeneities Promote Thioarsenate Formation and Release into Groundwater from Low Arsenic Sediments. Environmental Science & Technology, 2020, 54, 3237-3244.	10.0	36
27	Calcium-Uranyl-Carbonato Species Kinetically Limit U(VI) Reduction by Fe(II) and Lead to U(V)-Bearing Ferrihydrite. Environmental Science & Technology, 2020, 54, 6021-6030.	10.0	17
28	Reactive Transport Modeling of Shaleâ€"Fluid Interactions after Imbibition of Fracturing Fluids. Energy & Fuels, 2020, 34, 5511-5523.	5.1	25
29	FeS colloids â€" formation and mobilization pathways in natural waters. Environmental Science: Nano, 2020, 7, 2102-2116.	4.3	13
30	Thicknesses of Chemically Altered Zones in Shale Matrices Resulting from Interactions with Hydraulic Fracturing Fluid. Energy & Fuels, 2019, 33, 6878-6889.	5.1	46
31	Advancing Informational Gain from Synchrotron Techniques in Subsurface Science. Synchrotron Radiation News, 2019, 32, 24-26.	0.8	0
32	Isotopic Fingerprint of Uranium Accumulation and Redox Cycling in Floodplains of the Upper Colorado River Basin. Environmental Science & Technology, 2019, 53, 3399-3409.	10.0	14
33	A New Approach to Controlling Barite Scaling in Unconventional Systems. , 2019, , .		3
34	Geochemical Modeling of Iron (Hydr)oxide Scale Formation During Hydraulic Fracturing Operations. , 2019, , .		8
35	Uranium storage mechanisms in wet-dry redox cycled sediments. Water Research, 2019, 152, 251-263.	11.3	32
36	Effects of Hydraulic Fracturing Fluid Chemistry on Shale Matrix Permeability. , 2018, , .		12

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37	Barium Sources in Hydraulic Fracturing Systems and Chemical Controls on its Release into Solution. , 2018, , .		11
38	Redox Fluctuations and Organic Complexation Govern Uranium Redistribution from U(IV)-Phosphate Minerals in a Mining-Polluted Wetland Soil, Brittany, France. Environmental Science & Technology, 2018, 52, 13099-13109.	10.0	40
39	Imaging Pyrite Oxidation and Barite Precipitation in Gas and Oil Shales. , 2018, , .		15
40	Shale Kerogen: Hydraulic Fracturing Fluid Interactions and Contaminant Release. Energy & Fuels, 2018, 32, 8966-8977.	5.1	40
41	Carbonate Facilitated Mobilization of Uranium from Lacustrine Sediments under Anoxic Conditions. Environmental Science & Technology, 2018, 52, 9615-9624.	10.0	29
42	A Molecular Investigation of Soil Organic Carbon Composition across a Subalpine Catchment. Soil Systems, 2018, 2, 6.	2.6	13
43	Uranium(IV) adsorption by natural organic matter in anoxic sediments. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 711-716.	7.1	142
44	Water Table Dynamics and Biogeochemical Cycling in a Shallow, Variably-Saturated Floodplain. Environmental Science & Technology, 2017, 51, 3307-3317.	10.0	100
45	Understanding controls on redox processes in floodplain sediments of the Upper Colorado River Basin. Science of the Total Environment, 2017, 603-604, 663-675.	8.0	55
46	Thermodynamically controlled preservation of organic carbon in floodplains. Nature Geoscience, 2017, 10, 415-419.	12.9	234
47	Impact of Organics and Carbonates on the Oxidation and Precipitation of Iron during Hydraulic Fracturing of Shale. Energy & Fuels, 2017, 31, 3643-3658.	5.1	104
48	Element release and reaction-induced porosity alteration during shale-hydraulic fracturing fluid interactions. Applied Geochemistry, 2017, 82, 47-62.	3.0	116
49	Oxidative Corrosion of the UO2 (001) Surface by Nonclassical Diffusion. Langmuir, 2017, 33, 13189-13196.	3.5	12
50	Oxidative Uranium Release from Anoxic Sediments under Diffusion-Limited Conditions. Environmental Science & Technology, 2017, 51, 11039-11047.	10.0	21
51	Redox Controls over the Stability of U(IV) in Floodplains of the Upper Colorado River Basin. Environmental Science & Technology, 2017, 51, 10954-10964.	10.0	33
52	Partitioning of uranyl between ferrihydrite and humic substances at acidic and circum-neutral pH. Geochimica Et Cosmochimica Acta, 2017, 215, 122-140.	3.9	31
53	Mineralogical and Porosity Alteration Following Fracture Fluid-Shale Reaction. , 2017, , .		5
54	Tetra- and Hexavalent Uranium Forms Bidentate-Mononuclear Complexes with Particulate Organic Matter in a Naturally Uranium-Enriched Peatland. Environmental Science & Technology, 2016, 50, 10465-10475.	10.0	55

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55	Uranium Immobilization and Nanofilm Formation on Magnesium-Rich Minerals. Environmental Science & Technology, 2016, 50, 3435-3443.	10.0	17
56	Physico-Chemical Heterogeneity of Organic-Rich Sediments in the Rifle Aquifer, CO: Impact on Uranium Biogeochemistry. Environmental Science & Technology, 2016, 50, 46-53.	10.0	77
57	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>UO</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></m Corrosion by Nonclassical Diffusion. Physical Review Letters, 2015, 114, 246103.	7.8	25
58	Synchrotron-based transmission x-ray microscopy for improved extraction in shale during hydraulic fracturing. Proceedings of SPIE, 2015, , .	0.8	2
59	Probing the sorption reactivity of the edge surfaces in birnessite nanoparticles using nickel(II). Geochimica Et Cosmochimica Acta, 2015, 164, 191-204.	3.9	75
60	Copper sorption by the edge surfaces of synthetic birnessite nanoparticles. Chemical Geology, 2015, 396, 196-207.	3.3	64
61	Long-Term in Situ Oxidation of Biogenic Uraninite in an Alluvial Aquifer: Impact of Dissolved Oxygen and Calcium. Environmental Science & Technology, 2015, 49, 7340-7347.	10.0	23
62	The product of microbial uranium reduction includes multiple species with U(IV)â€“phosphate coordination. Geochimica Et Cosmochimica Acta, 2014, 131, 115-127.	3.9	114
63	Geochemical and mineralogical investigation of uranium in multi-element contaminated, organic-rich subsurface sediment. Applied Geochemistry, 2014, 42, 77-85.	3.0	40
64	Competing retention pathways of uranium upon reaction with Fe(II). Geochimica Et Cosmochimica Acta, 2014, 142, 166-185.	3.9	60
65	Speciation and Reactivity of Uranium Products Formed during <i>in Situ</i> Bioremediation in a Shallow Alluvial Aquifer. Environmental Science & Technology, 2014, 48, 12842-12850.	10.0	56
66	Processes of Zinc Attenuation by Biogenic Manganese Oxides Forming in the Hyporheic Zone of Pinal Creek, Arizona. Environmental Science & Technology, 2014, 48, 2165-2172.	10.0	46
67	Evaluating Chemical Extraction Techniques for the Determination of Uranium Oxidation State in Reduced Aquifer Sediments. Environmental Science & Technology, 2013, 47, 9225-9232.	10.0	27
68	Persistence of uranium groundwater plumes: Contrasting mechanisms at two DOE sites in the groundwaterâ€“river interaction zone. Journal of Contaminant Hydrology, 2013, 147, 45-72.	3.3	136
69	Biogeochemical Controls on the Product of Microbial U(VI) Reduction. Environmental Science & Technology, 2013, 47, 12351-12358.	10.0	79
70	Uranium Association with Iron-Bearing Phases in Mill Tailings from Gunnar, Canada. Environmental Science & Technology, 2013, 47, 12695-12702.	10.0	31
71	Bioremediation of uranium-contaminated groundwater: a systems approach to subsurface biogeochemistry. Current Opinion in Biotechnology, 2013, 24, 489-497.	6.6	119
72	Environmental Speciation of Actinides. Inorganic Chemistry, 2013, 52, 3510-3532.	4.0	318

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73	Adsorption of Uranium(VI) to Manganese Oxides: X-ray Absorption Spectroscopy and Surface Complexation Modeling. Environmental Science & Technology, 2013, 47, 850-858.	10.0	187
74	Relative Reactivity of Biogenic and Chemogenic Uraninite and Biogenic Noncrystalline U(IV). Environmental Science & Technology, 2013, 47, 9756-9763.	10.0	81
75	Impact of Microbial Mn Oxidation on the Remobilization of Bioreduced U(IV). Environmental Science & Technology, 2013, 47, 3606-3613.	10.0	18
76	Reduction of U(VI) Incorporated in the Structure of Hematite. Environmental Science & Technology, 2012, 46, 9428-9436.	10.0	82
77	Quantitative Separation of Monomeric U(IV) from UO₂ in Products of U(VI) Reduction. Environmental Science & Technology, 2012, 46, 6150-6157.	10.0	107
78	Oxidative Dissolution of Biogenic Uraninite in Groundwater at Old Rifle, CO. Environmental Science & Technology, 2011, 45, 8748-8754.	10.0	66
79	Reduction of Uranium(VI) by Soluble Iron(II) Conforms with Thermodynamic Predictions. Environmental Science & Technology, 2011, 45, 4718-4725.	10.0	70
80	Products of abiotic U(VI) reduction by biogenic magnetite and vivianite. Geochimica Et Cosmochimica Acta, 2011, 75, 2512-2528.	3.9	130
81	Evidence for multiple modes of uranium immobilization by an anaerobic bacterium. Geochimica Et Cosmochimica Acta, 2011, 75, 2684-2695.	3.9	56
82	Uranium speciation and stability after reductive immobilization in aquifer sediments. Geochimica Et Cosmochimica Acta, 2011, 75, 6497-6510.	3.9	112
83	Uranium Isotope Fractionation during Adsorption to Mn-Oxyhydroxides. Environmental Science & Technology, 2011, 45, 1370-1375.	10.0	154
84	Bacteriogenic Manganese Oxides. Accounts of Chemical Research, 2010, 43, 2-9.	15.6	213
85	Non-uraninite Products of Microbial U(VI) Reduction. Environmental Science & Technology, 2010, 44, 9456-9462.	10.0	220
86	Influence of Dynamical Conditions on the Reduction of U^{VI} at the Magnetiteâ˘'Solution Interface. Environmental Science & Technology, 2010, 44, 170-176.	10.0	110
87	The exceptionally stable cobalt(III)â€"desferrioxamine B complex. Marine Chemistry, 2009, 113, 114-122.	2.3	51
88	Effect of Mn(II) on the Structure and Reactivity of Biogenic Uraninite. Environmental Science & Technology, 2009, 43, 6541-6547.	10.0	32
89	Structural characterization of terrestrial microbial Mn oxides from Pinal Creek, AZ. Geochimica Et Cosmochimica Acta, 2009, 73, 889-910.	3.9	112
90	Comparative dissolution kinetics of biogenic and chemogenic uraninite under oxidizing conditions in the presence of carbonate. Geochimica Et Cosmochimica Acta, 2009, 73, 6065-6083.	3.9	98

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91	Structural Similarities between Biogenic Uraninites Produced by Phylogenetically and Metabolically Diverse Bacteria. Environmental Science & Technology, 2009, 43, 8295-8301.	10.0	50
92	Structure of Biogenic Uraninite Produced by <i>Shewanella oneidensis</i> Strain MR-1. Environmental Science & Technology, 2008, 42, 7898-7904.	10.0	119
93	In Situ Grazing-Incidence Extended X-ray Absorption Fine Structure Study of Pb(II) Chemisorption on Hematite (0001) and (1-102) Surfaces. Langmuir, 2004, 20, 1667-1673.	3.5	68
94	Characterization of U(VI)-carbonato ternary complexes on hematite: EXAFS and electrophoretic mobility measurements. Geochimica Et Cosmochimica Acta, 2000, 64, 2737-2749.	3.9	320
95	Spectroscopic Confirmation of Uranium(VI)â^’Carbonato Adsorption Complexes on Hematite. Environmental Science & Technology, 1999, 33, 2481-2484.	10.0	216