

Gordon E Brown Jr

List of Publications by Year in descending order

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86
papers

13,814
citations

20759

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51492

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docs citations

86
times ranked

13757
citing authors

#	ARTICLE	IF	CITATIONS
1	Pauling's rules for oxide-based minerals: A re-examination based on quantum mechanical constraints and modern applications of bond-valence theory to Earth materials. <i>American Mineralogist</i> , 2022, 107, 1219-1248.	0.9	8
2	Global Sensitivity Analysis of a Reactive Transport Model for Mineral Scale Formation During Hydraulic Fracturing. <i>Environmental Engineering Science</i> , 2021, 38, 192-207.	0.8	6
3	Reactive Transport Modeling of Shale-Fluid Interactions after Imbibition of Fracturing Fluids. <i>Energy & Fuels</i> , 2020, 34, 5511-5523.	2.5	25
4	Thicknesses of Chemically Altered Zones in Shale Matrices Resulting from Interactions with Hydraulic Fracturing Fluid. <i>Energy & Fuels</i> , 2019, 33, 6878-6889.	2.5	46
5	Sulfidation mechanisms of Fe-(oxyhydr)oxide nanoparticles: a spectroscopic study. <i>Environmental Science: Nano</i> , 2018, 5, 1012-1026.	2.2	43
6	Shale Kerogen: Hydraulic Fracturing Fluid Interactions and Contaminant Release. <i>Energy & Fuels</i> , 2018, 32, 8966-8977.	2.5	40
7	Element release and reaction-induced porosity alteration during shale-hydraulic fracturing fluid interactions. <i>Applied Geochemistry</i> , 2017, 82, 47-62.	1.4	116
8	Oxidation of Ni-Rich Mangrove Sediments after Isolation from the Sea (Dumbea Bay, New Caledonia): Fe and Ni Behavior and Environmental Implications. <i>ACS Earth and Space Chemistry</i> , 2017, 1, 455-464.	1.2	21
9	Partitioning of uranyl between ferrihydrite and humic substances at acidic and circum-neutral pH. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 215, 122-140.	1.6	31
10	Kinetics and Products of Chromium(VI) Reduction by Iron(II/III)-Bearing Clay Minerals. <i>Environmental Science & Technology</i> , 2017, 51, 9817-9825.	4.6	90
11	Improving Mitigation of the Long-Term Legacy of Mining Activities: Nano- and Molecular-Level Concepts and Methods. <i>Elements</i> , 2017, 13, 325-330.	0.5	10
12	Silver Sulfidation in Thermophilic Anaerobic Digesters and Effects on Antibiotic Resistance Genes. <i>Environmental Engineering Science</i> , 2016, 33, 1-10.	0.8	13
13	Arsenic(III) and Arsenic(V) Speciation during Transformation of Lepidocrocite to Magnetite. <i>Environmental Science & Technology</i> , 2014, 48, 14282-14290.	4.6	66
14	Properties of impurity-bearing ferrihydrite III. Effects of Si on the structure of 2-line ferrihydrite. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 133, 168-185.	1.6	67
15	Sulfidation of copper oxide nanoparticles and properties of resulting copper sulfide. <i>Environmental Science: Nano</i> , 2014, 1, 347-357.	2.2	91
16	Quantification of the ferric/ferrous iron ratio in silicates by scanning transmission X-ray microscopy at the Fe L _{2,3} edges. <i>Contributions To Mineralogy and Petrology</i> , 2013, 166, 423-434.	1.2	77
17	Sulfidation of Silver Nanoparticles: Natural Antidote to Their Toxicity. <i>Environmental Science & Technology</i> , 2013, 47, 13440-13448.	4.6	364
18	Properties of impurity-bearing ferrihydrite II: Insights into the surface structure and composition of pure, Al- and Si-bearing ferrihydrite from Zn(II) sorption experiments and Zn K-edge X-ray absorption spectroscopy. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 119, 46-60.	1.6	68

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19	Sulfidation Mechanism for Zinc Oxide Nanoparticles and the Effect of Sulfidation on Their Solubility. <i>Environmental Science & Technology</i> , 2013, 47, 2527-2534.	4.6	159
20	Environmental Speciation of Actinides. <i>Inorganic Chemistry</i> , 2013, 52, 3510-3532.	1.9	318
21	Structure and reactivity of As(III)- and As(V)-rich schwertmannites and amorphous ferric arsenate sulfate from the Carnoul's acid mine drainage, France: Comparison with biotic and abiotic model compounds and implications for As remediation. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 104, 310-329.	1.6	86
22	Effect of Chloride on the Dissolution Rate of Silver Nanoparticles and Toxicity to <i>E. coli</i> . <i>Environmental Science & Technology</i> , 2013, 47, 5738-5745.	4.6	355
23	Properties of impurity-bearing ferrihydrite I. Effects of Al content and precipitation rate on the structure of 2-line ferrihydrite. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 92, 275-291.	1.6	96
24	Environmental Transformations of Silver Nanoparticles: Impact on Stability and Toxicity. <i>Environmental Science & Technology</i> , 2012, 46, 6900-6914.	4.6	1,269
25	Size-Controlled Dissolution of Organic-Coated Silver Nanoparticles. <i>Environmental Science & Technology</i> , 2012, 46, 752-759.	4.6	374
26	Sulfidation Processes of PVP-Coated Silver Nanoparticles in Aqueous Solution: Impact on Dissolution Rate. <i>Environmental Science & Technology</i> , 2011, 45, 5260-5266.	4.6	432
27	Distinctive Arsenic(V) Trapping Modes by Magnetite Nanoparticles Induced by Different Sorption Processes. <i>Environmental Science & Technology</i> , 2011, 45, 7258-7266.	4.6	94
28	Environmental mineralogy – Understanding element behavior in ecosystems. <i>Comptes Rendus - Geoscience</i> , 2011, 343, 90-112.	0.4	54
29	Molecular-level modes of As binding to Fe(III) (oxyhydr)oxides precipitated by the anaerobic nitrate-reducing Fe(II)-oxidizing Acidovorax sp. strain BoFeN1. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 4699-4712.	1.6	99
30	Neutron Pair Distribution Function Study of Two-Line Ferrihydrite. <i>Environmental Science & Technology</i> , 2011, 45, 9883-9890.	4.6	37
31	Characterization of the Active Bacterial Community Involved in Natural Attenuation Processes in Arsenic-Rich Creek Sediments. <i>Microbial Ecology</i> , 2011, 61, 793-810.	1.4	67
32	Probing Ag nanoparticle surface oxidation in contact with (in)organics: an X-ray scattering and fluorescence yield approach. <i>Journal of Synchrotron Radiation</i> , 2011, 18, 871-878.	1.0	31
33	XANES Evidence for Rapid Arsenic(III) Oxidation at Magnetite and Ferrihydrite Surfaces by Dissolved O_2 via Fe^{2+} -Mediated Reactions. <i>Environmental Science & Technology</i> , 2010, 44, 5416-5422.	4.6	165
34	Evidence for Different Surface Speciation of Arsenite and Arsenate on Green Rust: An EXAFS and XANES Study. <i>Environmental Science & Technology</i> , 2010, 44, 109-115.	4.6	98
35	Ordered ferrimagnetic form of ferrihydrite reveals links among structure, composition, and magnetism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 2787-2792.	3.3	312
36	Speciation of Arsenic in <i>Euglena gracilis</i> Cells Exposed to As(V). <i>Environmental Science & Technology</i> , 2009, 43, 3315-3321.	4.6	27

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37	EXAFS and HRTEM Evidence for As(III)-Containing Surface Precipitates on Nanocrystalline Magnetite: Implications for As Sequestration. <i>Langmuir</i> , 2009, 25, 9119-9128.	1.6	70
38	Iron biomineralization by anaerobic neutrophilic iron-oxidizing bacteria. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 696-711.	1.6	255
39	Arsenite sequestration at the surface of nano-Fe(OH) ₂ , ferrous-carbonate hydroxide, and green-rust after bioreduction of arsenic-sorbed lepidocrocite by <i>Shewanella putrefaciens</i> . <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 1359-1381.	1.6	88
40	Extended X-ray Absorption Fine Structure Analysis of Arsenite and Arsenate Adsorption on Maghemite. <i>Environmental Science & Technology</i> , 2008, 42, 2361-2366.	4.6	107
41	Arsenite sorption at the magnetite-water interface during aqueous precipitation of magnetite: EXAFS evidence for a new arsenite surface complex. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 2573-2586.	1.6	113
42	XAS Study of Arsenic Coordination in <i>Euglena gracilis</i> Exposed to Arsenite. <i>Environmental Science & Technology</i> , 2008, 42, 5342-5347.	4.6	33
43	Speciation and colloid transport of arsenic from mine tailings. <i>Applied Geochemistry</i> , 2007, 22, 1884-1898.	1.4	67
44	Coordination Environments of Highly Charged Cations (Ti, Cr, and Light REE™s) in Borosilicate Glass/Melts to 1120Å°C. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	2
45	EXAFS signature of structural Zn at trace levels in natural and synthetic trioctahedral 2:1 phyllosilicates. <i>American Mineralogist</i> , 2006, 91, 1432-1441.	0.9	15
46	Multi-spectroscopic study of Fe(II) in silicate glasses: Implications for the coordination environment of Fe(II) in silicate melts. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 4315-4332.	1.6	146
47	EXAFS Analysis of Arsenite Adsorption onto Two-Line Ferrihydrite, Hematite, Goethite, and Lepidocrocite. <i>Environmental Science & Technology</i> , 2005, 39, 9147-9155.	4.6	348
48	Analysis of uranyl-bearing phases by EXAFS spectroscopy: Interferences, multiple scattering, accuracy of structural parameters, and spectral differences. <i>American Mineralogist</i> , 2004, 89, 1004-1021.	0.9	90
49	Structure and reactivity of the hydrated hematite (0001) surface. <i>Surface Science</i> , 2004, 573, 204-224.	0.8	279
50	In Situ Grazing-Incidence Extended X-ray Absorption Fine Structure Study of Pb(II) Chemisorption on Hematite (0001) and (1-102) Surfaces. <i>Langmuir</i> , 2004, 20, 1667-1673.	1.6	68
51	Adsorption mechanisms of trivalent gold on iron- and aluminum-(oxy)hydroxides. Part 1: X-ray absorption and Raman scattering spectroscopic studies of Au(III) adsorbed on ferrihydrite, goethite, and boehmite. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 3019-3042.	1.6	46
52	The effect of redox state on the local structural environment of iron in silicate glasses: a combined XAFS spectroscopy, molecular dynamics, and bond valence study. <i>Journal of Non-Crystalline Solids</i> , 2004, 344, 176-188.	1.5	187
53	Geological and anthropogenic factors influencing mercury speciation in mine wastes: an EXAFS spectroscopy study. <i>Applied Geochemistry</i> , 2004, 19, 379-393.	1.4	113
54	Mercury Speciation by X-ray Absorption Fine Structure Spectroscopy and Sequential Chemical Extractions: A Comparison of Speciation Methods. <i>Environmental Science & Technology</i> , 2003, 37, 5102-5108.	4.6	153

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55	X-ray absorption fine structure study of As(V) and Se(IV) sorption complexes on hydrous Mn oxides. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 1937-1953.	1.6	183
56	Transition elements in water-bearing silicate glasses/melts. part II. Ni in water-bearing glasses. <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 1679-1693.	1.6	33
57	Transition elements in water-bearing silicate glasses/melts. part I. a high-resolution and anharmonic analysis of Ni coordination environments in crystals, glasses, and melts. <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 1665-1678.	1.6	77
58	Sorption of Trace Elements on Mineral Surfaces: Modern Perspectives from Spectroscopic Studies, and Comments on Sorption in the Marine Environment. <i>International Geology Review</i> , 2001, 43, 963-1073.	1.1	206
59	Oxidation state and coordination of Fe in minerals: An Fe K-edge XANES spectroscopic study. <i>American Mineralogist</i> , 2001, 86, 714-730.	0.9	934
60	Quantitative Speciation of Lead in Selected Mine Tailings from Leadville, CO. <i>Environmental Science & Technology</i> , 1999, 33, 1627-1636.	4.6	183
61	Metal Oxide Surfaces and Their Interactions with Aqueous Solutions and Microbial Organisms. <i>Chemical Reviews</i> , 1999, 99, 77-174.	23.0	981
62	Quantitative arsenic speciation in mine tailings using X-ray absorption spectroscopy. <i>American Mineralogist</i> , 1998, 83, 553-568.	0.9	345
63	Ti K-edge XANES studies of Ti coordination and disorder in oxide compounds: Comparison between theory and experiment. <i>Physical Review B</i> , 1997, 56, 1809-1819.	1.1	555
64	Selenium Redox Reactions and Transport between Ponded Waters and Sediments. <i>Environmental Science & Technology</i> , 1997, 31, 1419-1425.	4.6	57
65	Coordination chemistry of titanium (IV) in silicate glasses and melts: IV. XANES studies of synthetic and natural volcanic glasses and tektites at ambient temperature and pressure. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 1863-1870.	1.6	92
66	Differential redox and sorption of Cr (III/VI) on natural silicate and oxide minerals: EXAFS and XANES results. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 3399-3412.	1.6	265
67	X-ray absorption spectroscopy of Co(II) sorption complexes on quartz (α -SiO ₂) and rutile (TiO ₂). <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 2515-2532.	1.6	103
68	Coordination chemistry of Ti(IV) in silicate glasses and melts: I. XAFS study of titanium coordination in oxide model compounds. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 3023-3038.	1.6	298
69	Coordination chemistry of Ti(IV) in silicate glasses and melts: II. Glasses at ambient temperature and pressure. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 3039-3053.	1.6	166
70	Coordination chemistry of Ti(IV) in silicate glasses and melts: III. Glasses and melts from ambient to high temperatures. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 3055-3065.	1.6	98
71	Quantitative Speciation of Selenium in Soils Using X-ray Absorption Spectroscopy. <i>Environmental Science & Technology</i> , 1995, 29, 2456-2459.	4.6	157
72	Molecular Structure and Binding Sites of Cobalt(II) Surface Complexes on Kaolinite from X-ray Absorption Spectroscopy. <i>Clays and Clay Minerals</i> , 1994, 42, 337-355.	0.6	113

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73	Structural environments of incompatible elements in silicate glass/melt systems: I. Zirconium at trace levels. <i>Geochimica Et Cosmochimica Acta</i> , 1991, 55, 1563-1574.	1.6	134
74	Spectroscopic investigation of Pb(II) complexes at the $\hat{\text{I}}^3\text{-Al}_2\text{O}_3/\text{water}$ interface. <i>Geochimica Et Cosmochimica Acta</i> , 1990, 54, 1897-1909.	1.6	119
75	Synchrotron-based X ray absorption studies of cation environments in Earth materials. <i>Reviews of Geophysics</i> , 1989, 27, 519-533.	9.0	52
76	Rare earth elements in silicate systems: I. Effects of composition on the coordination environments of La, Gd, and Yb. <i>Geochimica Et Cosmochimica Acta</i> , 1989, 53, 2893-2903.	1.6	87
77	Aspects of silicate surface and bulk structure analysis using X-ray photoelectron spectroscopy (XPS). <i>Geochimica Et Cosmochimica Acta</i> , 1988, 52, 1641-1648.	1.6	38
78	X-ray absorption spectroscopic studies of silicate glasses and minerals. <i>Physics and Chemistry of Minerals</i> , 1987, 15, 19-29.	0.3	61
79	X-ray K-edge absorption spectra of Fe minerals and model compounds: II. EXAFS. <i>Physics and Chemistry of Minerals</i> , 1986, 13, 31-47.	0.3	67
80	The structures of albite and jadeite composition glasses quenched from high pressure. <i>Geochimica Et Cosmochimica Acta</i> , 1985, 49, 1137-1142.	1.6	38
81	Structure and viscosity of rhyolitic composition melts. <i>Geochimica Et Cosmochimica Acta</i> , 1984, 48, 2631-2640.	1.6	45
82	X-ray K-edge absorption spectra of Fe minerals and model compounds: Near-edge structure. <i>Physics and Chemistry of Minerals</i> , 1983, 10, 1-9.	0.3	295
83	Structure of mineral glasses-III. $\text{NaAlSi}_3\text{O}_8$ supercooled liquid at 805Å°C and the effects of thermal history. <i>Geochimica Et Cosmochimica Acta</i> , 1980, 44, 109-117.	1.6	78
84	Structure energies of the alkali feldspars. <i>Physics and Chemistry of Minerals</i> , 1979, 4, 83-100.	0.3	13
85	Structure of mineral glasses-I. The feldspar glasses $\text{NaAlSi}_3\text{O}_8$, KAlSi_3O_8 , $\text{CaAl}_2\text{Si}_2\text{O}_8$. <i>Geochimica Et Cosmochimica Acta</i> , 1979, 43, 61-75.	1.6	341
86	Structure of mineral glasses-II. The $\text{SiO}_2\text{-NaAlSiO}_4$ join. <i>Geochimica Et Cosmochimica Acta</i> , 1979, 43, 1467-1473.	1.6	165