Jean-Francois Boily

List of Publications by Year
in descending order

99	2,858	159585 30	214800 47
papers	citations	h-index	g-index

99	99	99	3593
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ordered ferrimagnetic form of ferrihydrite reveals links among structure, composition, and magnetism. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 2787-2792.	7.1	312
2	Surface chemistry of carbon dioxide revisited. Surface Science Reports, 2016, 71, 595-671.	7.2	132
3	Benzenecarboxylate surface complexation at the goethite (Î±-FeOOH)/water interface: II. Linking IR spectroscopic observations to mechanistic surface complexation models for phthalate, trimellitate, and pyromellitate. Geochimica Et Cosmochimica Acta, 2000, 64, 3453-3470.	3.9	104
4	Mineralogical transformations controlling acid mine drainage chemistry. Chemical Geology, 2009, 262, 169-178.	3.3	83
5	On the protonation of oxo- and hydroxo-groups of the goethite (Î±-FeOOH) surface: A FTIR spectroscopic investigation of surface Oâ€“H stretching vibrations. Geochimica Et Cosmochimica Acta, 2008, 72, 3338-3357.	3.9	79
6	FTIR Spectral Components of Schwertmannite. Environmental Science & Technology, 2010, 44, 1185-1190.	10.0	75
7	Electrochemical Impedance Study of the Hematite/Water Interface. Langmuir, 2012, 28, 7914-7920.	3.5	73
8	Water Structure and Hydrogen Bonding at Goethite/Water Interfaces: Implications for Proton Affinities. Journal of Physical Chemistry C, 2012, 116, 4714-4724.	3.1	59
9	Particle Size Controls on Water Adsorption and Condensation Regimes at Mineral Surfaces. Scientific Reports, 2016, 6, 32136.	3.3	52
10	Influence of Sb⁵⁺as a Double Donor on Hematite (Fe³⁺) Photoanodes for Surface-Enhanced Photoelectrochemical Water Oxidation. ACS Applied Materials & Interfaces, 2018, 10, 16467-16473.	8.0	50
11	Structural controls on OH site availability and reactivity at iron oxyhydroxide particle surfaces. Physical Chemistry Chemical Physics, 2012, 14, 2579.	2.8	46
12	XPS of Fast-Frozen Hematite Colloids in NaCl Aqueous Solutions:â€‰ I. Evidence for the Formation of Multiple Layers of Hydrated Sodium and Chloride Ions Induced by the {001} Basal Plane. Journal of Physical Chemistry C, 2007, 111, 18307-18316.	3.1	44
13	Identification of Fluoride and Phosphate Binding Sites at FeOOH Surfaces. Journal of Physical Chemistry C, 2012, 116, 21939-21947.	3.1	44
14	A combined FTIR and TPD study on the bulk and surface dehydroxylation and decarbonation of synthetic goethite. Geochimica Et Cosmochimica Acta, 2006, 70, 3613-3624.	3.9	43
15	High-throughput characterization of sediment organic matter by pyrolysisâ€“gas chromatography/mass spectrometry and multivariate curve resolution: A promising analytical tool in (paleo)limnology. Analytica Chimica Acta, 2015, 880, 93-102.	5.4	41
16	Oxolinic Acid Binding at Goethite and AkaganÃ©ite Surfaces: Experimental Study and Modeling. Environmental Science & Technology, 2016, 50, 660-668.	10.0	39
17	The impact of hydrothermal carbonization on the surface functionalities of wet waste materials for water treatment applications. Environmental Science and Pollution Research, 2020, 27, 24369-24379.	5.3	39
18	The Effect of pH and Time on the Extractability and Speciation of Uranium(VI) Sorbed to SiO₂. Environmental Science & Technology, 2012, 46, 6604-6611.	10.0	38

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19	Surface and Bulk Thermal Dehydroxylation of FeOOH Polymorphs. Journal of Physical Chemistry A, 2016, 120, 6249-6257.	2.5	37
20	Phosphate Sorption Speciation and Precipitation Mechanisms on Amorphous Aluminum Hydroxide. Soil Systems, 2019, 3, 20.	2.6	36
21	Determining individual mineral contributions to U(VI) adsorption in a contaminated aquifer sediment: A fluorescence spectroscopy study. Geochimica Et Cosmochimica Acta, 2011, 75, 2965-2979.	3.9	35
22	Inner-Helmholtz potential development at the hematite (Î±-Fe2O3) (001) surface. Geochimica Et Cosmochimica Acta, 2011, 75, 4113-4124.	3.9	35
23	Water Vapor Adsorption on Goethite. Environmental Science & Technology, 2013, 47, 7171-7177.	10.0	35
24	Benzenecarboxylate Surface Complexation at the Goethite (Î±-FeOOH)/Water Interface. Journal of Colloid and Interface Science, 2000, 227, 132-140.	9.4	34
25	Density functional calculation of the infrared spectrum of surface hydroxyl groups on goethite (Â-FeOOH). American Mineralogist, 2010, 95, 414-417.	1.9	34
26	X-ray Photoelectron Spectroscopy of Fast-Frozen Hematite Colloids in Aqueous Solutions. 3. Stabilization of Ammonium Species by Surface (Hydr)oxo Groups. Journal of Physical Chemistry C, 2011, 115, 6796-6801.	3.1	34
27	Variable Hydrogen Bond Strength in AkaganÃ©ite. Journal of Physical Chemistry C, 2012, 116, 2303-2312.	3.1	32
28	X-ray Photoelectron Spectroscopy of Fast-Frozen Hematite Colloids in Aqueous Solutions. 5. Halide Ion (Fâ€“, Clâ€“, Brâ€“, Iâ€“) Adsorption. Langmuir, 2013, 29, 2623-2630.	3.5	32
29	Electrochemical Properties and Relaxation Times of the Hematite/Water Interface. Langmuir, 2014, 30, 9591-9598.	3.5	32
30	Proton Binding and Ion Exchange at the AkaganÃ©ite/Water Interface. Journal of Physical Chemistry C, 2013, 117, 6409-6419.	3.1	31
31	Sorption of Two Naphthoic Acids to Goethite Surface under Flow through Conditions. Environmental Science & Technology, 2010, 44, 8863-8869.	10.0	30
32	Surface Hydroxyl Identity and Reactivity in AkaganÃ©ite. Journal of Physical Chemistry C, 2011, 115, 17036-17045.	3.1	30
33	X-ray photoelectron spectroscopy of fast-frozen hematite colloids in aqueous solutions. 4. Coexistence of alkali metal (Na+, K+, Rb+, Cs+) and chloride ions. Surface Science, 2012, 606, 1005-1009.	1.9	30
34	Kinetics and Mechanisms of Ciprofloxacin Oxidation on Hematite Surfaces. Environmental Science & Technology, 2015, 49, 12197-12205.	10.0	29
35	Acid-Induced Phosphorus Release from Hydrothermally Carbonized Sewage Sludge. Waste and Biomass Valorization, 2021, 12, 6555-6568.	3.4	28
36	Binding Geometries of Silicate Species on Ferrihydrite Surfaces. ACS Earth and Space Chemistry, 2018, 2, 125-134.	2.7	27

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37	Direct observation of anisotropic growth of water films on minerals driven by defects and surface tension. Science Advances, 2020, 6, eaaz9708.	10.3	27
38	On the Dissociation of Methyl Orange: Spectrophotometric Investigation in Aqueous Solutions from 10 to 90 â˚C and Theoretical Evidence for Intramolecular Dihydrogen Bonding. Journal of Solution Chemistry, 2005, 34, 1387-1406.	1.2	26
39	XPS study of the hematiteâ€“aqueous solution interface. Surface and Interface Analysis, 2008, 40, 349-353.	1.8	26
40	Sorption of Phthalic Acid at Goethite Surfaces under Flow-Through Conditions. Langmuir, 2014, 30, 6800-6807.	3.5	26
41	Silicate Binding and Precipitation on Iron Oxyhydroxides. Environmental Science & Technology, 2018, 52, 1827-1833.	10.0	26
42	Cohesive Vibrational and Structural Depiction of Intercalated Water in Montmorillonite. ACS Earth and Space Chemistry, 2018, 2, 38-47.	2.7	26
43	Direct identification of reaction sites on ferrihydrite. Communications Chemistry, 2020, 3, .	4.5	26
44	X-ray Photoelectron Spectroscopy of Fast-Frozen Hematite Colloids in Aqueous Solutions. 2. Tracing the Relationship between Surface Charge and Electrolyte Adsorption. Journal of Physical Chemistry C, 2010, 114, 2613-2616.	3.1	25
45	Co-Binding of Pharmaceutical Compounds at Mineral Surfaces: Molecular Investigations of Dimer Formation at Goethite/Water Interfaces. Environmental Science & Technology, 2017, 51, 8343-8349.	10.0	25
46	Competitive ligand exchange on akaganÃ©ite surfaces enriches bulk chloride loadings. Journal of Colloid and Interface Science, 2012, 376, 331-333.	9.4	24
47	Electrolyte Ion Binding at Iron Oxyhydroxide Mineral Surfaces. Langmuir, 2013, 29, 12129-12137.	3.5	24
48	Thin Water Films at Multifaceted Hematite Particle Surfaces. Langmuir, 2015, 31, 13127-13137.	3.5	24
49	Cobinding of Pharmaceutical Compounds at Mineral Surfaces: Mechanistic Modeling of Binding and Cobinding of Nalidixic Acid and Niflumic Acid at Goethite Surfaces. Environmental Science & Technology, 2017, 51, 11617-11624.	10.0	24
50	AIM and ELF Analyses and Gas-Phase Acidities of Some Main-Group Oxyacids (HzXO4, X = Cl, S, P, Si and) Tj ETQq0 0 0 rgBT /Overlock 1	2.5	23
51	Water vapor interactions with FeOOH particle surfaces. Chemical Physics Letters, 2013, 560, 1-9.	2.6	22
52	Carbon Dioxide Binding at Dry FeOOH Mineral Surfaces: Evidence for Structure-Controlled Speciation. Environmental Science & Technology, 2013, 47, 9241-9248.	10.0	21
53	Particle morphological and roughness controls on mineral surface charge development. Geochimica Et Cosmochimica Acta, 2014, 141, 567-578.	3.9	21
54	Mapping Electrochemical Heterogeneity at Iron Oxide Surfaces: A Local Electrochemical Impedance Study. Langmuir, 2015, 31, 13618-13624.	3.5	21

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55	Water Flow Variability Affects Adsorption and Oxidation of Ciprofloxacin onto Hematite. Environmental Science & Technology, 2019, 53, 10102-10109.	10.0	21
56	The gallium(III)â€“salicylidene acylhydrazide complex shows synergistic anti-biofilm effect and inhibits toxin production by Pseudomonas aeruginosa. Journal of Inorganic Biochemistry, 2014, 138, 1-8.	3.5	20
57	Oriented Aggregation of Lepidocrocite and Impact on Surface Charge Development. Langmuir, 2014, 30, 9017-9021.	3.5	20
58	An independent confirmation of the correlation of Uf4 primary peaks and satellite structures of UVI, UV and UIV in mixed valence uranium oxides by two-dimensional correlation spectroscopy. Surface Science, 2008, 602, 3637-3646.	1.9	19
59	Thin Ice Films at Mineral Surfaces. Journal of Physical Chemistry Letters, 2016, 7, 2849-2855.	4.6	17
60	Thermal decomposition of municipal solid waste fly ash and desorption of polychlorinated dibenzo-p-dioxins and furans from fly ash surfaces. Environmental Science and Pollution Research, 2016, 23, 22843-22851.	5.3	17
61	Electrochemical Signatures of Crystallographic Orientation and Counterion Binding at the Hematite/Water Interface. Journal of Physical Chemistry C, 2015, 119, 5988-5994.	3.1	16
62	Nanoscale Hydration in Layered Manganese Oxides. Langmuir, 2021, 37, 666-674.	3.5	16
63	Effects of Inorganic Acids and Organic Solutes on the Ice Nucleating Ability and Surface Properties of Potassium-Rich Feldspar. ACS Earth and Space Chemistry, 2021, 5, 1212-1222.	2.7	16
64	Surface Composition Dependence on the Ice Nucleating Ability of Potassium-Rich Feldspar. ACS Earth and Space Chemistry, 2020, 4, 873-881.	2.7	16
65	Water Vapor Binding on Organic Matter-Coated Minerals. Environmental Science & Technology, 2019, 53, 1252-1257.	10.0	15
66	Crystallographic controls on uranyl binding at the quartz/water interface. Physical Chemistry Chemical Physics, 2011, 13, 7845.	2.8	14
67	The Variable Capacitance Model: A Strategy for Treating Contrasting Charge-Neutralizing Capabilities of Counterions at the Mineral/Water Interface. Langmuir, 2014, 30, 2009-2018.	3.5	14
68	Intramolecular Bonding and Charge Distributions in XO4(X = Si, P, S, Cl and Ge, As, Se, Br) Oxyanions from Topological Analyses of the Electron Density. Journal of Physical Chemistry A, 2002, 106, 4718-4724.	2.5	13
69	Deconvolution of Smectite Hydration Isotherms. ACS Earth and Space Chemistry, 2019, 3, 2490-2498.	2.7	13
70	Effects of Surface Coordination on the Temperature-Programmed Desorption of Oxalate from Goethite. Journal of Physical Chemistry C, 2007, 111, 17072-17081.	3.1	12
71	Proton and gallium(III) binding properties of a biologically active salicylidene acylhydrazide. Journal of Inorganic Biochemistry, 2014, 138, 9-15.	3.5	12
72	Mineral surface charge development in mixed electrolyte solutions. Journal of Colloid and Interface Science, 2014, 418, 246-253.	9.4	12

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73	Bifluoride ([HF₂]^{â˜’}) formation at the fluoridated aluminium hydroxide/water interface. Dalton Transactions, 2016, 45, 9045-9050.	3.3	12
74	Hydrogen bonding and molecular orientations across thin water films on sapphire. Journal of Colloid and Interface Science, 2019, 555, 810-817.	9.4	12
75	Dissociation of Fumaric Acid: Spectrophotometric Investigation in Aqueous Solutions from 10 to 90 â˜C and Theoretical Considerations. Journal of Solution Chemistry, 2005, 34, 1167-1190.	1.2	11
76	Elucidation of oxyanion coordination geometries at solid surfaces of varied electric field strengths. Physical Chemistry Chemical Physics, 2009, 11, 8133.	2.8	11
77	Water Vapor Diffusion into a Nanostructured Iron Oxyhydroxide. Inorganic Chemistry, 2013, 52, 7107-7113.	4.0	11
78	Electrolyte ion adsorption and charge blocking effect at the hematite/aqueous solution interface: an electrochemical impedance study using multivariate data analysis. Physical Chemistry Chemical Physics, 2015, 17, 11560-11568.	2.8	11
79	Effects of organic matterâ€“goethite interactions on reactive transport of nalidixic acid: Column study and modeling. Environmental Research, 2020, 191, 110187.	7.5	11
80	Silicate surface coverage controls quinolone transport in saturated porous media. Journal of Colloid and Interface Science, 2022, 607, 347-356.	9.4	11
81	Electrochemical Response of Bound Electrolyte Ions at Oriented Hematite Surfaces: A Local Electrochemical Impedance Spectroscopy Study. Journal of Physical Chemistry C, 2017, 121, 27976-27982.	3.1	10
82	Influence of water matrix and hydrochar properties on removal of organic and inorganic contaminants. Environmental Science and Pollution Research, 2020, 27, 30333-30341.	5.3	10
83	Influence of chelation strength and bacterial uptake of gallium salicylidene acylhydrazide on biofilm formation and virulence of Pseudomonas aeruginosa. Journal of Inorganic Biochemistry, 2016, 160, 24-32.	3.5	9
84	Residence times of nanoconfined CO2 in layered aluminosilicates. Environmental Science: Nano, 2019, 6, 146-151.	4.3	8
85	Interactions of Anti-Inflammatory and Antibiotic Drugs at Mineral Surfaces Can Control Environmental Fate and Transport. Environmental Science & Technology, 2022, 56, 2378-2385.	10.0	8
86	Link between Fly Ash Properties and Polychlorinated Organic Pollutants Formed during Simulated Municipal Solid Waste Incineration. Energy & Fuels, 2014, 28, 2761-2769.	5.1	7
87	Thermal Stability of Goethite-Bound Natural Organic Matter Is Impacted by Carbon Loading. Journal of Physical Chemistry A, 2015, 119, 12790-12796.	2.5	7
88	Oxygen Interactions with Covalently Grafted 2D Nanometric Carboxyphenyl Thin Filmsâ€”An Experimental and DFT Study. Coatings, 2022, 12, 49.	2.6	7
89	Charge Localization in Cationâ˜’Sulfate Complexes:â€‰ Implications for Thermodynamic Surface Complexation Models of the Mineral/Water Interface. Journal of Physical Chemistry C, 2007, 111, 1299-1306.	3.1	6
90	Electrostatic Cooperativity of Hydroxyl Groups at Metal Oxide Surfaces. Journal of Physical Chemistry C, 2009, 113, 16568-16570.	3.1	6

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91	Millennia-old organic carbon in a boreal paleosol: chemical properties and their link to mineralizable carbon fraction. Journal of Soils and Sediments, 2016, 16, 85-94.	3.0	6
92	Ice and Cryosalt Formation in Saline Microporous Clay Gels. ACS Earth and Space Chemistry, 2018, 2, 314-319.	2.7	5
93	Improved in vivo measurement of alternative oxidase respiration in fieldâ€collected pine roots. Physiologia Plantarum, 2019, 167, 34-47.	5.2	5
94	Competitive Carboxylateâ€“Silicate Binding at Iron Oxyhydroxide Surfaces. Langmuir, 2021, 37, 13107-13115.	3.5	5
95	Sodium hypochlorite as an oxidizing agent for removal of soil organic matter before microplastics analyses. Journal of Environmental Quality, 2022, 51, 112-122.	2.0	5
96	A gateway for ion transport on gas bubbles pinned onto solids. Communications Chemistry, 2021, 4, .	4.5	4
97	Water film-driven Mn (oxy)(hydr)oxide nanocoating growth on rhodochrosite. Geochimica Et Cosmochimica Acta, 2022, 329, 87-105.	3.9	4
98	X-ray Photoelectron Spectroscopy of Fast-Frozen Hematite Colloids in Aqueous Solutions. 6. Sodium Halide (Fâ€“, Clâ€“, Brâ€“, Iâ€“) Ion Binding on Microparticles. Langmuir, 2018, 34, 13497-13504.	3.5	1
99	Carbon dioxide binding in supercooled water nanofilms on nanominerals. Environmental Science: Nano, 2020, 7, 437-442.	4.3	1