Alain Manceau

List of Publications by Year
in descending order

88 papers	7,934 citations	41344 49 h-index	51608 86 g-index
88 all docs	88 docs citations	88 times ranked	6356 citing authors

#	Article	IF	Citations
1	Structure of synthetic monoclinic Na-rich birnessite and hexagonal birnessite; I, Results from X-ray diffraction and selected-area electron diffraction. American Mineralogist, 1997, 82, 946-961.	1.9	353
2	Arsenic(III) Oxidation by Birnessite and Precipitation of Manganese(II) Arsenate. Environmental Science & Technology, 2002, 36, 493-500.	10.0	294
3	Structural model for the biogenic Mn oxide produced by Pseudomonas putida. American Mineralogist, 2006, 91, 489-502.	1.9	288
4	Structure of synthetic monoclinic Na-rich birnessite and hexagonal birnessite; II, Results from chemical studies and EXAFS spectroscopy. American Mineralogist, 1997, 82, 962-978.	1.9	256
5	Determination of Mn valence states in mixed-valent manganates by XANES spectroscopy. American Mineralogist, 2012, 97, 816-827.	1.9	256
6	Chemical and structural control of the partitioning of Co, Ce, and Pb in marine ferromanganese oxides. Geochimica Et Cosmochimica Acta, 2007, 71, 984-1008.	3.9	249
7	Beamline 10.3.2 at ALS: a hard X-ray microprobe for environmental and materials sciences. Journal of Synchrotron Radiation, 2004, 11, 239-247.	2.4	245
8	Structure of heavy metal sorbed birnessite. Part III: Results from powder and polarized extended X-ray absorption fine structure spectroscopy. Geochimica Et Cosmochimica Acta, 2002, 66, 2639-2663.	3.9	242
9	Structural mechanism of Co (super 2+) oxidation by the phyllomanganate buserite. American Mineralogist, 1997, 82, 1150-1175.	1.9	235
10	Formation of Metallic Copper Nanoparticles at the Soilâˆ'Root Interface. Environmental Science & Technology, 2008, 42, 1766-1772.	10.0	221
11	Structure and Stability of Cd2+ Surface Complexes on Ferric Oxides. Journal of Colloid and Interface Science, 1994, 168, 73-86.	9.4	215
12	Natural speciation of Ni, Zn, Ba, and As in ferromanganese coatings on quartz using X-ray fluorescence, absorption, and diffraction. Geochimica Et Cosmochimica Acta, 2007, 71, 95-128.	3.9	204
13	Structure of H-exchanged hexagonal birnessite and its mechanism of formation from Na-rich monoclinic buserite at low pH. American Mineralogist, 2000, 85, 826-838.	1.9	191
14	Accumulation Forms of Zn and Pb inPhaseolus vulgarisin the Presence and Absence of EDTA. Environmental Science & Technology, 2001, 35, 2854-2859.	10.0	185
15	Zinc sorption to biogenic hexagonal-birnessite particles within a hydrated bacterial biofilm. Geochimica Et Cosmochimica Acta, 2006, 70, 27-43.	3.9	177
16	Molecular-Scale Speciation of Zn and Ni in Soil Ferromanganese Nodules from Loess Soils of the Mississippi Basin. Environmental Science & Technology, 2003, 37, 75-80.	10.0	171
17	Structure of Synthetic K-rich Birnessite Obtained by High-Temperature Decomposition of KMnO4. I. Two-Layer Polytype from 800 Â°C Experiment. Chemistry of Materials, 2003, 15, 4666-4678.	6.7	169
18	The nature of Cu bonding to natural organic matter. Geochimica Et Cosmochimica Acta, 2010, 74, 2556-2580.	3.9	162

#	Article	IF	Citations
19	Natural speciation of Zn at the micrometer scale in a clayey soil using X-ray fluorescence, absorption, and diffraction. Geochimica Et Cosmochimica Acta, 2004, 68, 2467-2483.	3.9	156
20	Quantitative Zn speciation in a contaminated dredged sediment by Î¼-PIXE, Î¼-SXRF, EXAFS spectroscopy and principal component analysis. Geochimica Et Cosmochimica Acta, 2002, 66, 1549-1567.	3.9	154
21	Structure of synthetic Na-birnessite: Evidence for a triclinic one-layer unit cell. American Mineralogist, 2002, 87, 1662-1671.	1.9	152
22	Structure and mechanisms of formation of iron oxide hydroxide (chloride) polymers. Langmuir, 1994, 10, 316-319.	3.5	147
23	Quantitative analysis of sulfur functional groups in natural organic matter by XANES spectroscopy. Geochimica Et Cosmochimica Acta, 2012, 99, 206-223.	3.9	146
24	Formation of todorokite from vernadite in Ni-rich hemipelagic sediments. Geochimica Et Cosmochimica Acta, 2007, 71, 5698-5716.	3.9	145
25	Mn, Fe, Zn and As speciation in a fast-growing ferromanganese marine nodule. Geochimica Et Cosmochimica Acta, 2004, 68, 3125-3136.	3.9	142
26	Structure of nanocrystalline phyllomanganates produced by freshwater fungi. American Mineralogist, 2010, 95, 1608-1616.	1.9	138
27	Structure of heavy-metal sorbed birnessite: Part 1. Results from X-ray diffraction. American Mineralogist, 2002, 87, 1631-1645.	1.9	115
28	Zinc distribution and speciation in <i>Arabidopsis halleri</i>â€ƒÃ—â€ƒ<i>Arabidopsis lyrata</i> progenies presenting various zinc accumulation capacities. New Phytologist, 2009, 184, 581-595.	7.3	114
29	Formation of Mercury Sulfide from Hg(II)â€"Thiolate Complexes in Natural Organic Matter. Environmental Science & Technology, 2015, 49, 9787-9796.	10.0	111
30	Zn sorption modifies dynamically the layer and interlayer structure of vernadite. Geochimica Et Cosmochimica Acta, 2012, 85, 302-313.	3.9	110
31	Natural speciation of Mn, Ni, and Zn at the micrometer scale in a clayey paddy soil using X-ray fluorescence, absorption, and diffraction. Geochimica Et Cosmochimica Acta, 2005, 69, 4007-4034.	3.9	109
32	Mineralogy and crystal chemistry of Mn, Fe, Co, Ni, and Cu in a deep-sea Pacific polymetallic nodule. American Mineralogist, 2014, 99, 2068-2083.	1.9	106
33	Zinc Sorption by a Bacterial Biofilm. Environmental Science & Technology, 2005, 39, 8288-8294.	10.0	105
34	7. Quantitative Speciation of Heavy Metals in Soils and Sediments by Synchrotron X-ray Techniques. , 2002, , 341-428.		103
35	Deciphering Ni sequestration in soil ferromanganese nodules by combining X-ray fluorescence, absorption, and diffraction at micrometer scales of resolution. American Mineralogist, 2002, 87, 1494-1499.	1.9	102
36	Zinc mobility and speciation in soil covered by contaminated dredged sediment using micrometer-scale and bulk-averaging X-ray fluorescence, absorption and diffraction techniques. Geochimica Et Cosmochimica Acta, 2005, 69, 1173-1198.	3.9	89

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37	Biogenesis of Mercuryâ€“Sulfur Nanoparticles in Plant Leaves from Atmospheric Gaseous Mercury. Environmental Science & Technology, 2018, 52, 3935-3948.	10.0	75
38	In Vivo Formation of HgSe Nanoparticles and Hgâ€“Tetraselenolate Complex from Methylmercury in Seabirdsâ€"Implications for the Hgâ€“Se Antagonism. Environmental Science & Technology, 2021, 55, 1515-1526.	10.0	75
39	Formation of Znâ€“Ca phyllomanganate nanoparticles in grass roots. Geochimica Et Cosmochimica Acta, 2008, 72, 2478-2490.	3.9	74
40	Ba and Ni speciation in a nodule of binary Mn oxide phase composition from Lake Baikal. Geochimica Et Cosmochimica Acta, 2007, 71, 1967-1981.	3.9	73
41	Relationships between Hg(ii)â€“S bond distance and Hg(ii) coordination in thiolates. Dalton Transactions, 2008, , 1421.	3.3	73
42	Structure of the synthetic K-rich phyllomanganate birnessite obtained by high-temperature decomposition of KMnO4. Microporous and Mesoporous Materials, 2007, 98, 267-282.	4.4	72
43	Short-range and long-range order of phyllomanganate nanoparticles determined using high-energy X-ray scattering. Journal of Applied Crystallography, 2013, 46, 193-209.	4.5	70
44	High energy-resolution x-ray spectroscopy at ultra-high dilution with spherically bent crystal analyzers of 0.5 m radius. Review of Scientific Instruments, 2017, 88, 013108.	1.3	62
45	Reaction Rates and Products of Manganese Oxidation at the Sediment-Water Interface. Advances in Chemistry Series, 1995, , 111-134.	0.6	61
46	Demethylation of Methylmercury in Bird, Fish, and Earthworm. Environmental Science & Technology, 2021, 55, 1527-1534.	10.0	61
47	Structure and Mechanisms of Formation of FeOOH(NO3) Oligomers in the Early Stages of Hydrolysis. Langmuir, 1997, 13, 3240-3246.	3.5	59
48	Metallothionein-Like Multinuclear Clusters of Mercury(II) and Sulfur in Peat. Environmental Science & Technology, 2011, 45, 7298-7306.	10.0	59
49	Structure, Bonding, and Stability of Mercury Complexes with Thiolate and Thioether Ligands from High-Resolution XANES Spectroscopy and First-Principles Calculations. Inorganic Chemistry, 2015, 54, 11776-11791.	4.0	57
50	Chemical Forms of Mercury in Human Hair Reveal Sources of Exposure. Environmental Science & Technology, 2016, 50, 10721-10729.	10.0	53
51	Removal of Selenocyanate in Water by Precipitation:Â Characterization of Copperâˆ'Selenium Precipitate by X-ray Diffraction, Infrared, and X-ray Absorption Spectroscopy. Environmental Science & Technology, 1997, 31, 968-976.	10.0	42
52	Structure of heavy-metal sorbed birnessite: Part 2. Results from electron diffraction. American Mineralogist, 2002, 87, 1646-1661.	1.9	42
53	Estimating the number of pure chemical componentsÂin a mixture by X-ray absorption spectroscopy. Journal of Synchrotron Radiation, 2014, 21, 1140-1147.	2.4	39
54	Revealing the Chemical Form of â€œInvisibleâ€•Gold in Natural Arsenian Pyrite and Arsenopyrite with High Energy-Resolution X-ray Absorption Spectroscopy. ACS Earth and Space Chemistry, 2019, 3, 1905-1914.	2.7	39

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55	Chemical Forms of Mercury in Pyrite: Implications for Predicting Mercury Releases in Acid Mine Drainage Settings. Environmental Science & Technology, 2018, 52, 10286-10296.	10.0	37
56	Cellular remains in a ~3.42-billion-year-old subseafloor hydrothermal environment. Science Advances, 2021, 7, .	10.3	34
57	Divalent Mercury in Dissolved Organic Matter Is Bioavailable to Fish and Accumulates as Dithiolate and Tetrathiolate Complexes. Environmental Science & Technology, 2019, 53, 4880-4891.	10.0	30
58	PDF analysis of ferrihydrite: Critical assessment of the under-constrained akdalaite model. American Mineralogist, 2014, 99, 102-108.	1.9	27
59	Mercuryâ€Sequestering Pseudopeptides with a Tris(cysteine) Environment in Water. European Journal of Inorganic Chemistry, 2012, 2012, 3835-3843.	2.0	26
60	Mercury(II) Binding to Metallothionein in <i>Mytilus edulis</i> revealed by High Energyâ€Resolution XANES Spectroscopy. Chemistry - A European Journal, 2019, 25, 997-1009.	3.3	23
61	Analysis of the Major Fe Bearing Mineral Phases in Recent Lake Sediments by EXAFS Spectroscopy. Aquatic Geochemistry, 2003, 9, 1-17.	1.3	22
62	Nucleation of mercury sulfide by dealkylation. Scientific Reports, 2016, 6, 39359.	3.3	21
63	Chemical Forms of Mercury in Blue Marlin Billfish: Implications for Human Exposure. Environmental Science and Technology Letters, 2021, 8, 405-411.	8.7	21
64	Incorporation of Ge in ferrihydrite: Implications for the structure of ferrihydrite. American Mineralogist, 2013, 98, 848-858.	1.9	19
65	TEXS: in-vacuum tender X-ray emission spectrometer with 11 Johansson crystal analyzers. Journal of Synchrotron Radiation, 2020, 27, 813-826.	2.4	19
66	Mercury Isotope Fractionation by Internal Demethylation and Biomineralization Reactions in Seabirds: Implications for Environmental Mercury Science. Environmental Science & Technology, 2021, 55, 13942-13952.	10.0	19
67	The Mode of Incorporation of As(-I) and Se(-I) in Natural Pyrite Revisited. ACS Earth and Space Chemistry, 2020, 4, 379-390.	2.7	18
68	Isotope Fractionation from <i>In Vivo</i> Methylmercury Detoxification in Waterbirds. ACS Earth and Space Chemistry, 2021, 5, 990-997.	2.7	18
69	Critical evaluation of the revised akdalaite model for ferrihydrite--Reply. American Mineralogist, 2012, 97, 255-256.	1.9	17
70	High-level ab initio calculation of the stability of mercuryâ€"thiolate complexes. Theoretical Chemistry Accounts, 2014, 133, 1.	1.4	14
71	Mercury Trithiolate Binding (HgS₃) to a de Novo Designed Cyclic Decapeptide with Three Preoriented Cysteine Side Chains. Inorganic Chemistry, 2018, 57, 2705-2713.	4.0	14
72	Nanometer-sized, divalent-Mn, hydrous silicate domains in geothermal brine precipitates. American Mineralogist, 2005, 90, 371-381.	1.9	13

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73	Nature of High- and Low-Affinity Metal Surface Sites on Birnessite Nanosheets. ACS Earth and Space Chemistry, 2021, 5, 66-76.	2.7	11
74	Comment on â€œMolecular controls on Cu and Zn isotopic fractionation in Feâ€“Mn crustsâ€•by Little et al.. Earth and Planetary Science Letters, 2015, 411, 310-312.	4.4	9
75	Thiols in Natural Organic Matter: Molecular Forms, Acidity, and Reactivity with Mercury(II) from First-Principles Calculations and High Energy-Resolution X-ray Absorption Near-Edge Structure Spectroscopy. ACS Earth and Space Chemistry, 2019, 3, 2795-2807.	2.7	9
76	Acute Toxicity of Divalent Mercury to Bacteria Explained by the Formation of Dicysteinate and Tetracysteinate Complexes Bound to Proteins in <i>Escherichia coli</i> and <i>Bacillus subtilis</i>. Environmental Science & Technology, 2021, 55, 3612-3623.	10.0	9
77	Mercury in the tissues of five cephalopods species: First data on the nervous system. Science of the Total Environment, 2021, 759, 143907.	8.0	9
78	The chemical species of mercury accumulated by Pseudomonas idrijaensis, a bacterium from a rock of the Idrija mercury mine, Slovenia.. Chemosphere, 2020, 248, 126002.	8.2	9
79	Crystal Chemistry of Thallium in Marine Ferromanganese Deposits. ACS Earth and Space Chemistry, 2022, 6, 1269-1285.	2.7	9
80	Comment on â€œRoles of Hydration and Magnetism on the Structure of Ferrihydrite from First Principlesâ€• ACS Earth and Space Chemistry, 2019, 3, 1576-1580.	2.7	8
81	Chemical Forms of Mercury in Pilot Whales Determined from Species-Averaged Mercury Isotope Signatures. ACS Earth and Space Chemistry, 2021, 5, 1591-1599.	2.7	8
82	Fossil Bioapatites with Extremely High Concentrations of Rare Earth Elements and Yttrium from Deep-Sea Pelagic Sediments. ACS Earth and Space Chemistry, 2022, 6, 2093-2103.	2.7	6
83	Evidence for syngenetic micro-inclusions of As3+- and As5+-containing Cu sulfides in hydrothermal pyrite. American Mineralogist, 2019, 104, 300-306.	1.9	4
84	Chemical Information in the L₃ X-ray Absorption Spectra of Molybdenum Compounds by High-Energy-Resolution Detection and Density Functional Theory. Inorganic Chemistry, 2022, 61, 869-881.	4.0	3
85	Comment on â€œCrystal growth and aggregation in suspensions of Î´-MnO2 nanoparticles: implications for surface reactivityâ€•by F. F. Marafatto, B. Lanson and J. PeÃ±a, Environ. Sci.: Nano, 2018, 5, 497. Environmental Science: Nano, 2018, 5, 2198-2200.	4.3	2
86	Comment on â€œNew insights into the biomineralization of mercury selenide nanoparticles through stable isotope analysis in giant petrel tissuesâ€• Journal of Hazardous Materials, 2022, 431, 128583.	12.4	2
87	Response to Comment on â€œMercury Isotope Fractionation by Internal Demethylation and Biomineralization Reactions in Seabirds: Implications for Environmental Mercury Scienceâ€• Principles and Limitations of Source Tracing and Process Tracing with Stable Isotope Signatures. Environmental Science & Technology, 2022, 56, 2065-2068.	10.0	1
88	Frontispiece: Mercury(II) Binding to Metallothionein in Mytilus edulis revealed by High Energy-Resolution XANES Spectroscopy. Chemistry - A European Journal, 2019, 25, .	3.3	0