Martin A A Schoonen

List of Publications by Year
in descending order

123 papers	10,730 citations	41344 49 h-index	30922 102 g-index
124 all docs	124 docs citations	124 times ranked	12698 citing authors

#	Article	IF	Citations
1	Olivine Dissolution in Simulated Lung and Gastric Fluid as an Analog to the Behavior of Lunar Particulate Matter Inside the Human Respiratory and Gastrointestinal Systems. GeoHealth, 2021, 5, e2021GH000491.	4.0	4
2	Measurement of OH* Generation by Pulverized Minerals Using Electron Spin Resonance Spectroscopy and Implications for the Reactivity of Planetary Regolith. GeoHealth, 2019, 3, 28-42.	4.0	15
3	Sulfur Cycle. Encyclopedia of Earth Sciences Series, 2018, , 1399-1401.	0.1	0
4	Non-linear hydroxyl radical formation rate in dispersions containing mixtures of pyrite and chalcopyrite particles. Geochimica Et Cosmochimica Acta, 2017, 206, 364-378.	3.9	17
5	The role of Iraqi dust in inducing lung injury in United States soldiersâ€"An interdisciplinary study. GeoHealth, 2017, 1, 237-246.	4.0	12
6	Staging Life in an Early Warm â€˜Seltzerâ€™ Ocean. Elements, 2016, 12, 395-400.	0.5	17
7	Sulfur Cycle. Encyclopedia of Earth Sciences Series, 2016, , 1-4.	0.1	0
8	Super-oxidation of silicon nanoclusters: magnetism and reactive oxygen species at the surface. Nanoscale, 2016, 8, 18616-18620.	5.6	13
9	Reactive Oxygen Species (ROS) generation by lunar simulants. Acta Astronautica, 2016, 122, 196-208.	3.2	14
10	The effect of pyrite on Escherichia coli in water: proof-of-concept for the elimination of waterborne bacteria by reactive minerals. Journal of Water and Health, 2015, 13, 42-53.	2.6	13
11	Effect of Phospholipid on Pyrite Oxidation and Microbial Communities under Simulated Acid Mine Drainage (AMD) Conditions. Environmental Science & Technology, 2015, 49, 7701-7708.	10.0	38
12	Metal-sulfide mineral ores, Fenton chemistry and disease â€“ Particle induced inflammatory stress response in lung cells. International Journal of Hygiene and Environmental Health, 2015, 218, 19-27.	4.3	17
13	Removal of crystal violet from aqueous solutions using coal. Journal of Colloid and Interface Science, 2014, 422, 1-8.	9.4	27
14	Behavior of bromide, chloride, and phosphate during low-temperature aqueous Fe(II) oxidation processes on Mars. Journal of Geophysical Research E: Planets, 2014, 119, 998-1012.	3.6	7
15	Inflammatory stress response in A549 cells as a result of exposure to coal: Evidence for the role of pyrite in coal workersâ€™ pneumoconiosis pathogenesis. Chemosphere, 2013, 93, 1216-1221.	8.2	20
16	Reactive oxygen species at the oxide/water interface: Formation mechanisms and implications for prebiotic chemistry and the origin of life. Earth and Planetary Science Letters, 2013, 363, 156-167.	4.4	50
17	Reduction of Nitrite and Nitrate on Nano-dimensioned FeS. Origins of Life and Evolution of Biospheres, 2013, 43, 305-322.	1.9	26
18	Titanium and Iron in Lung of a Soldier With Nonspecific Interstitial Pneumonitis and Bronchiolitis After Returning From Iraq. Journal of Occupational and Environmental Medicine, 2012, 54, 1-2.	1.7	22

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19	Reduction of Nitrite and Nitrate to Ammonium on Pyrite. Origins of Life and Evolution of Biospheres, 2012, 42, 275-294.	1.9	34
20	Reactivity of sandstones under conditions relevant to geosequestration: 1. Hematite-bearing sandstone exposed to supercritical carbon dioxide commingled with aqueous sulfite or sulfide solutions. Chemical Geology, 2012, 296-297, 96-102.	3.3	15
21	Phenylalanine as a hydroxyl radical-specific probe in pyrite slurries. Geochemical Transactions, 2012, 13, 3.	0.7	15
22	Quantification of particle-induced inflammatory stress response: a novel approach for toxicity testing of earth materials. Geochemical Transactions, 2012, 13, 4.	0.7	11
23	Pyrite-driven reactive oxygen species formation in simulated lung fluid: implications for coal workersâ€™ pneumoconiosis. Environmental Geochemistry and Health, 2012, 34, 527-538.	3.4	34
24	CO2Sequestration through Mineral Carbonation of Iron Oxyhydroxides. Environmental Science & Technology, 2011, 45, 10422-10428.	10.0	26
25	Hematite reactivity with supercritical CO2 and aqueous sulfide. Chemical Geology, 2011, 283, 210-217.	3.3	25
26	Adenine oxidation by pyrite-generated hydroxyl radicals. Geochemical Transactions, 2010, 11, 2.	0.7	35
27	Green Rust Reduction of Chromium Part 2: Comparison of Heterogeneous and Homogeneous Chromate Reduction. Journal of Physical Chemistry C, 2010, 114, 16408-16415.	3.1	4
28	Role of hydrogen peroxide and hydroxyl radical in pyrite oxidation by molecular oxygen. Geochimica Et Cosmochimica Acta, 2010, 74, 4971-4987.	3.9	173
29	Ferrihydrite phase transformation in the presence of aqueous sulfide and supercritical CO2. Chemical Geology, 2010, 271, 26-30.	3.3	31
30	Evaluating the use of 3'-(p-Aminophenyl) fluorescein for determining the formation of highly reactive oxygen species in particle suspensions. Geochemical Transactions, 2009, 10, 8.	0.7	40
31	Effects of phospholipid on pyrite oxidation in the presence of autotrophic and heterotrophic bacteria. Geochimica Et Cosmochimica Acta, 2009, 73, 4111-4123.	3.9	26
32	Ferrous Iron Reduction of Superoxide, A Proton-Coupled Electron-Transfer Four-Point Test. Journal of Physical Chemistry A, 2009, 113, 1020-1025.	2.5	7
33	Reduction of N2 by Fe2+ via Homogeneous and Heterogeneous Reactions. Origins of Life and Evolution of Biospheres, 2008, 38, 127-137.	1.9	6
34	Reduction of N2 by Fe2+ via Homogeneous and Heterogeneous Reactions Part 2: The Role of Metal Binding in Activating N2 for Reduction; a Requirement for Both Pre-biotic and Biological Mechanisms. Origins of Life and Evolution of Biospheres, 2008, 38, 195-209.	1.9	10
35	Comparison of fluorescence-based techniques for the quantification of particle-induced hydroxyl radicals. Particle and Fibre Toxicology, 2008, 5, 2.	6.2	96
36	Abiotic ammonium formation in the presence of Ni-Fe metals and alloys and its implications for the Hadean nitrogen cycle. Geochemical Transactions, 2008, 9, 5.	0.7	91

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37	Production of hydrogen peroxide in Martian and lunar soils. Earth and Planetary Science Letters, 2007, 255, 41-52.	4.4	73
38	Similarities in 2- and 6-Line Ferrihydrite Based on Pair Distribution Function Analysis of X-ray Total Scattering. Chemistry of Materials, 2007, 19, 1489-1496.	6.7	131
39	Structure and Charge Hopping Dynamics in Green Rust. Journal of Physical Chemistry C, 2007, 111, 11414-11423.	3.1	53
40	Photodriven reduction and oxidation reactions on colloidal semiconductor particles: Implications for prebiotic synthesis. Journal of Photochemistry and Photobiology A: Chemistry, 2007, 185, 301-311.	3.9	56
41	The Structure of Ferrihydrite, a Nanocrystalline Material. Science, 2007, 316, 1726-1729.	12.6	754
42	Mineral-Induced Formation of Reactive Oxygen Species. Reviews in Mineralogy and Geochemistry, 2006, 64, 179-221.	4.8	146
43	Peptide- and Long-Chain Polyamine- Induced Synthesis of Micro- and Nanostructured Titanium Phosphate and Protein Encapsulation. Chemistry of Materials, 2006, 18, 4592-4599.	6.7	73
44	Physical Structures of Lipid Layers on Pyrite. Environmental Science & Technology, 2006, 40, 1511-1515.	10.0	16
45	Using Yeast RNA as a Probe for Generation of Hydroxyl Radicals by Earth Materials. Environmental Science & Technology, 2006, 40, 2838-2843.	10.0	38
46	Hydrothermal Synthesis of Pure Î±-Phase Manganese(II) Sulfide without the Use of Organic Reagents. Chemistry of Materials, 2006, 18, 1726-1736.	6.7	33
47	Pyrite-induced hydroxyl radical formation and its effect on nucleic acids. Geochemical Transactions, 2006, 7, 3.	0.7	121
48	The effect of adsorbed lipid on pyrite oxidation under biotic conditions. Geochemical Transactions, 2006, 7, 8.	0.7	11
49	Role of pyrite in formation of hydroxyl radicals in coal: possible implications for human health. Particle and Fibre Toxicology, 2006, 3, 16.	6.2	56
50	The role of structured water in the calibration and interpretation of theoretical IR spectra. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2006, 65, 324-332.	3.9	2
51	Kinetics of Triscarbonato Uranyl Reduction by Aqueous Ferrous Iron:Â A Theoretical Study. Journal of Physical Chemistry A, 2006, 110, 9691-9701.	2.5	34
52	Metal Speciation and Its Role in Bioaccessibility and Bioavailability. Reviews in Mineralogy and Geochemistry, 2006, 64, 59-113.	4.8	158
53	The Emergent Field of Medical Mineralogy and Geochemistry. Reviews in Mineralogy and Geochemistry, 2006, 64, 1-4.	4.8	8
54	7. Mineral-Induced Formation of Reactive Oxygen Species. , 2006, , 179-222.		8

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55	Quantifying hydrogen peroxide in iron-containing solutions using leuco crystal violet. Geochemical Transactions, 2005, 6, 1.	0.7	62
56	Investigating Sorption on Ironâ"Oxyhydroxide Soil Minerals by Solid-State NMR Spectroscopy:Â A6Li MAS NMR Study of Adsorption and Absorption on Goethite. Journal of Physical Chemistry B, 2005, 109, 18310-18315.	2.6	44
57	Short- to Medium-Range Atomic Order and Crystallite Size of the Initial FeS Precipitate from Pair Distribution Function Analysis. Chemistry of Materials, 2005, 17, 6246-6255.	6.7	83
58	Experimental epithermal alteration of synthetic Los Angeles meteorite: Implications for the origin of Martian soils and identification of hydrothermal sites on Mars. Journal of Geophysical Research, 2005, 110, .	3.3	52
59	Mechanistic Aspects of Pyrite Oxidation in an Oxidizing Gaseous Environment:Â An in Situ HATRâ"IR Isotope Study. Environmental Science & Technology, 2005, 39, 7576-7584.	10.0	43
60	A vibrational spectroscopic study of the oxidation of pyrite by ferric iron. American Mineralogist, 2004, 88, 1318-1323.	1.9	22
61	2H MAS NMR Studies of Deuterated Goethite (Î±-FeOOD). Journal of Physical Chemistry B, 2004, 108, 6938-6940.	2.6	22
62	Acid-sulfate weathering of synthetic Martian basalt: The acid fog model revisited. Journal of Geophysical Research, 2004, 109, .	3.3	199
63	Mineral-Assisted Pathways in Prebiotic Synthesis:Â Photoelectrochemical Reduction of Carbon(+IV) by Manganese Sulfide. Journal of the American Chemical Society, 2004, 126, 11247-11253.	13.7	81
64	Origin of Oxygen in Sulfate during Pyrite Oxidation with Water and Dissolved Oxygen:Â An In Situ Horizontal Attenuated Total Reflectance Infrared Spectroscopy Isotope Study. Environmental Science & Technology, 2004, 38, 5604-5606.	10.0	57
65	A vibrational spectroscopic study of the oxidation of pyrite by molecular oxygen. Geochimica Et Cosmochimica Acta, 2004, 68, 1807-1813.	3.9	49
66	RNA decomposition by pyrite-induced radicals and possible role of lipids during the emergence of life. Earth and Planetary Science Letters, 2004, 225, 271-278.	4.4	64
67	The origin of high sulfate concentrations in a coastal plain aquifer, Long Island, New York. Applied Geochemistry, 2004, 19, 343-358.	3.0	7
68	Mechanisms of sedimentary pyrite formation. , 2004, , .		87
69	Evaluating experimental artifacts in hydrothermal prebiotic synthesis experiments. Origins of Life and Evolution of Biospheres, 2003, 33, 117-127.	1.9	8
70	A novel vertical attenuated total reflectance photochemical flow-through reaction cell for Fourier transform infrared spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2003, 59, 1103-1106.	3.9	15
71	Sulfur geochemistry of hydrothermal waters in Yellowstone National Park, Wyoming, USA. III. An anion-exchange resin technique for sampling and preservation of sulfoxyanions in natural waters. Geochemical Transactions, 2003, 4, 1.	0.7	24
72	Pyrite oxidation inhibition by a cross-linked lipid coating. Geochemical Transactions, 2003, 4, 1.	0.7	31

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73	Adsorption of Phospholipids on Pyrite and Their Effect on Surface Oxidation. Langmuir, 2003, 19, 8787-8792.	3.5	29
74	Characterization of the structure and the surface reactivity of a marcasite thin film. Geochimica Et Cosmochimica Acta, 2003, 67, 807-812.	3.9	7
75	A mechanism for the production of hydroxyl radical at surface defect sites on pyrite. Geochimica Et Cosmochimica Acta, 2003, 67, 935-939.	3.9	201
76	Suppression of pyrite oxidation in acidic aqueous environments using lipids having two hydrophobic tails. Journal of Environmental Management, 2003, 7, 969-974.	1.7	43
77	Sulfur geochemistry of hydrothermal waters in Yellowstone National Park, Wyoming, USA. III. An anion-exchange resin technique for sampling and preservation of sulfoxyanions in natural waters. Geochemical Transactions, 2003, 4, 12.	0.7	2
78	Pyrite-Induced Hydrogen Peroxide Formation as a Driving Force in the Evolution of Photosynthetic Organisms on an Early Earth. Astrobiology, 2001, 1, 283-288.	3.0	142
79	S and O (SO 4) isotopes, simultaneous modeling, and environmental significance of the Nijar messinian gypsum, Spain. Geochimica Et Cosmochimica Acta, 2001, 65, 3081-3092.	3.9	49
80	Aqueous Geochemical and Surface Science Investigation of the Effect of Phosphate on Pyrite Oxidation. Environmental Science & Technology, 2001, 35, 2252-2257.	10.0	51
81	Nitrogen Reduction Under Hydrothermal Vent Conditions: Implications for the Prebiotic Synthesis of C-H-O-N Compounds. Astrobiology, 2001, 1, 133-142.	3.0	86
82	Pyrite surface interaction with selected organic aqueous species under anoxic conditions. Geochemical Transactions, 2000, 1, 1.	0.7	38
83	Magnetic properties of hydrothermally synthesized greigite (Fe3S4)--II. High- and low-temperature characteristics. Geophysical Journal International, 2000, 141, 809-819.	2.4	123
84	Sulfur geochemistry of hydrothermal waters in Yellowstone National Park, Wyoming, USA. II. Formation and decomposition of thiosulfate and polythionate in Cinder Pool. Journal of Volcanology and Geothermal Research, 2000, 97, 407-423.	2.1	69
85	Oxidation of {100} and {111} surfaces of pyrite: Effects of preparation method. American Mineralogist, 2000, 85, 623-626.	1.9	52
86	The absolute energy positions of conduction and valence bands of selected semiconducting minerals. American Mineralogist, 2000, 85, 543-556.	1.9	3,160
87	Geochemical modeling of iron, sulfur, oxygen and carbon in a coastal plain aquifer. Journal of Hydrology, 2000, 237, 147-168.	5.4	24
88	Structural and Sr2+Ion Exchange Studies of Gallosilicate TsG-1. Chemistry of Materials, 2000, 12, 1597-1603.	6.7	19
89	Energetics and kinetics of the prebiotic synthesis of simple organic acids and amino acids with the FeS-H2S/FeS2 redox couple as reductant. Origins of Life and Evolution of Biospheres, 1999, 29, 5-32.	1.9	87
90	Localized Sulfate-Reducing Zones in a Coastal Plain Aquifer. Ground Water, 1999, 37, 505-516.	1.3	29

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91	Pyrite and phosphate in anoxia and an origin-of-life hypothesis. Earth and Planetary Science Letters, 1999, 171, 1-5.	4.4	34
92	An introduction to geocatalysis. Journal of Geochemical Exploration, 1998, 62, 201-215.	3.2	106
93	Sorption of iodine on minerals investigated by X-ray absorption near edge structure (XANES) and 125I tracer sorption experiments. Applied Geochemistry, 1998, 13, 127-141.	3.0	73
94	Surface Charge Development on Transition Metal Sulfides: An Electrokinetic Study. Geochimica Et Cosmochimica Acta, 1998, 62, 633-642.	3.9	201
95	Sulfur geochemistry of hydrothermal waters in Yellowstone National Park: I. the origin of thiosulfate in hot spring waters. Geochimica Et Cosmochimica Acta, 1998, 62, 3729-3743.	3.9	116
96	Photoemission of Adsorbed Xenon, X-ray Photoelectron Spectroscopy, and Temperature-Programmed Desorption Studies of H2O on FeS2(100). Langmuir, 1998, 14, 1361-1366.	3.5	44
97	Reactivity of the (100) Plane of Pyrite in Oxidizing Gaseous and Aqueous Environments:Â Effects of Surface Imperfections. Environmental Science & Technology, 1998, 32, 3743-3748.	10.0	90
98	Thermal chemistry of H₂S and H₂O on the (100) plane of pyrite; unique reactivity of defect sites. American Mineralogist, 1998, 83, 1246-1255.	1.9	73
99	Structure sensitivity of pyrite oxidation; comparison of the (100) and (111) planes. American Mineralogist, 1998, 83, 1353-1356.	1.9	73
100	Sorption/desorption of radioactive contaminants by sediment from the Kara Sea. Science of the Total Environment, 1997, 202, 5-24.	8.0	18
101	Minor and trace element analyses on gypsum: an experimental study. Chemical Geology, 1997, 142, 1-10.	3.3	28
102	Effects of surface imperfections on the binding of CH3OH and H2O on FeS2(100): using adsorbed Xe as a probe of mineral surface structure. Surface Science, 1997, 391, 109-124.	1.9	67
103	Thiosulfate oxidation: Catalysis of synthetic sphalerite doped with transition metals. Geochimica Et Cosmochimica Acta, 1996, 60, 4701-4710.	3.9	27
104	XPS and LEED study of a single-crystal surface of pyrite. American Mineralogist, 1996, 81, 261-264.	1.9	62
105	Magnetic properties of hydrothermally synthesized greigite (Fe3S4)-I. Rock magnetic parameters at room temperature. Geophysical Journal International, 1996, 126, 360-368.	2.4	64
106	Epitaxial overgrowths of marcasite on pyrite from the Tunnel and Reservoir Project, Chicago, Illinois, USA: Implications for marcasite growth. Geochimica Et Cosmochimica Acta, 1995, 59, 343-346.	3.9	9
107	The stability of thiosulfate in the presence of pyrite in low-temperature aqueous solutions. Geochimica Et Cosmochimica Acta, 1995, 59, 4605-4622.	3.9	146
108	Sulfate Incorporation into Sedimentary Carbonates. ACS Symposium Series, 1995, , 332-345.	0.5	46

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109	Chemistry of Iron Sulfides in Sedimentary Environments. ACS Symposium Series, 1995, , 168-193.	0.5	74
110	Calculation of the point of zero charge of metal oxides between 0 and 350Â°C. Geochimica Et Cosmochimica Acta, 1994, 58, 2845-2851.	3.9	53
111	An electrokinetic study of synthetic greigite and pyrrhotite. Geochimica Et Cosmochimica Acta, 1994, 58, 4147-4153.	3.9	50
112	Surface structural controls on compositional zoning of SO2â˜'4 and SeO2â˜'4 in synthetic calcite single crystals. Geochimica Et Cosmochimica Acta, 1994, 58, 2087-2098.	3.9	133
113	Variations of the oxygen isotope fractionation between NaCOâ˜'3 and water due to the presence of NaCl at 100â€“300Â°C. Chemical Geology, 1994, 116, 305-315.	3.3	9
114	Removal of dissolved oxygen from water: A comparison of four common techniques. Talanta, 1994, 41, 211-215.	5.5	250
115	Determination of sodium, chloride and sulfate in dolomites: a new technique to constrain the composition of dolomitizing fluids. Chemical Geology, 1993, 107, 97-109.	3.3	47
116	Gold sorption onto pyrite and goethite: A radiotracer study. Geochimica Et Cosmochimica Acta, 1992, 56, 1801-1814.	3.9	74
117	Mechanisms of pyrite and marcasite formation from solution: III. Hydrothermal processes. Geochimica Et Cosmochimica Acta, 1991, 55, 3491-3504.	3.9	141
118	Reactions forming pyrite and marcasite from solution: I. Nucleation of FeS2 below 100Â°C. Geochimica Et Cosmochimica Acta, 1991, 55, 1495-1504.	3.9	242
119	Reactions forming pyrite and marcasite from solution: II. Via FeS precursors below 100Â°C. Geochimica Et Cosmochimica Acta, 1991, 55, 1505-1514.	3.9	323
120	Comment on â€œAluminum hydroxide solubility in aqueous solutions containing fluoride ions at 50Â°Câ€• by Bernard Sanjuan and Gil Michard. Geochimica Et Cosmochimica Acta, 1990, 54, 2883-2886.	3.9	6
121	An approximation of the second dissociation constant for H2S. Geochimica Et Cosmochimica Acta, 1988, 52, 649-654.	3.9	91
122	Precipitation from supersaturated aluminate solutions. IV. Influence of citrate ions. Journal of Colloid and Interface Science, 1985, 106, 175-185.	9.4	13
123	Precipitation from supersaturated aluminate solutions. III. Influence of alkali ions with special reference to Li+. Journal of Colloid and Interface Science, 1985, 103, 493-507.	9.4	24