Daniel R Strongin

List of Publications by Year
in descending order

93 papers	5,301 citations	76196 40 h-index	85405 71 g-index
95 all docs	95 docs citations	95 times ranked	6835 citing authors

#	Article	IF	Citations
1	The Structure of Ferrihydrite, a Nanocrystalline Material. Science, 2007, 316, 1726-1729.	6.0	754
2	Effect of Intercalated Metals on the Electrocatalytic Activity of 1T-MoS₂ for the Hydrogen Evolution Reaction. ACS Energy Letters, 2018, 3, 7-13.	8.8	211
3	Surface Charge Development on Transition Metal Sulfides: An Electrokinetic Study. Geochimica Et Cosmochimica Acta, 1998, 62, 633-642.	1.6	201
4	A mechanism for the production of hydroxyl radical at surface defect sites on pyrite. Geochimica Et Cosmochimica Acta, 2003, 67, 935-939.	1.6	201
5	Role of hydrogen peroxide and hydroxyl radical in pyrite oxidation by molecular oxygen. Geochimica Et Cosmochimica Acta, 2010, 74, 4971-4987.	1.6	173
6	Vertically aligned MoS₂ on Ti₃C₂ (MXene) as an improved HER catalyst. Journal of Materials Chemistry A, 2018, 6, 16882-16889.	5.2	146
7	Effect of Interlayer Spacing on the Activity of Layered Manganese Oxide Bilayer Catalysts for the Oxygen Evolution Reaction. Journal of the American Chemical Society, 2017, 139, 1863-1870.	6.6	144
8	Pyrite-Induced Hydrogen Peroxide Formation as a Driving Force in the Evolution of Photosynthetic Organisms on an Early Earth. Astrobiology, 2001, 1, 283-288.	1.5	142
9	ATRâ€“FTIR and Density Functional Theory Study of the Structures, Energetics, and Vibrational Spectra of Phosphate Adsorbed onto Goethite. Langmuir, 2012, 28, 14573-14587.	1.6	142
10	Nickel Confined in the Interlayer Region of Birnessite: an Active Electrocatalyst for Water Oxidation. Angewandte Chemie - International Edition, 2016, 55, 10381-10385.	7.2	112
11	Antimicrobial Properties of 2D MnO₂ and MoS₂ Nanomaterials Vertically Aligned on Graphene Materials and Ti₃C₂ MXene. Langmuir, 2018, 34, 7192-7200.	1.6	111
12	An introduction to geocatalysis. Journal of Geochemical Exploration, 1998, 62, 201-215.	1.5	106
13	Photoinduced Oxidation of Arsenite to Arsenate on Ferrihydrite. Environmental Science & Technology, 2011, 45, 2783-2789.	4.6	94
14	Molecular level investigations of phosphate sorption on corundum (Î±-Al2O3) by 31P solid state NMR, ATR-FTIR and quantum chemical calculation. Geochimica Et Cosmochimica Acta, 2013, 107, 252-266.	1.6	94
15	Divalent Cd and Pb uptake on calcite cleavage faces: An XPS and AFM study. Journal of Colloid and Interface Science, 2005, 288, 350-360.	5.0	91
16	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.	1.8	91
17	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.	4.6	90
18	Photoinduced Oxidation of Arsenite to Arsenate in the Presence of Goethite. Environmental Science & Technology, 2012, 46, 8044-8051.	4.6	85

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19	Iron and Cobalt Oxide and Metallic Nanoparticles Prepared from Ferritin. Langmuir, 2004, 20, 10283-10287.	1.6	80
20	Ferrihydrite reactivity toward carbon dioxide. Journal of Colloid and Interface Science, 2009, 337, 492-500.	5.0	79
21	Intercalation of Cobalt into the Interlayer of Birnessite Improves Oxygen Evolution Catalysis. ACS Catalysis, 2016, 6, 7739-7743.	5.5	79
22	Cobalt Intercalated Layered NiFe Double Hydroxides for the Oxygen Evolution Reaction. Journal of Physical Chemistry B, 2018, 122, 847-854.	1.2	78
23	Structure sensitivity of pyrite oxidation; comparison of the (100) and (111) planes. American Mineralogist, 1998, 83, 1353-1356.	0.9	73
24	Copper-Intercalated Birnessite as a Water Oxidation Catalyst. Langmuir, 2015, 31, 12807-12813.	1.6	69
25	Frustrated Solvation Structures Can Enhance Electron Transfer Rates. Journal of Physical Chemistry Letters, 2015, 6, 4804-4808.	2.1	67
26	Photochemical Reactivity of Ferritin for Cr(VI) Reduction. Chemistry of Materials, 2002, 14, 4874-4879.	3.2	59
27	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.	4.6	57
28	Characterization and Surface Reactivity of Ferrihydrite Nanoparticles Assembled in Ferritin. Langmuir, 2006, 22, 9313-9321.	1.6	53
29	Investigation of Surface Structures by Powder Diffraction: A Differential Pair Distribution Function Study on Arsenate Sorption on Ferrihydrite. Inorganic Chemistry, 2010, 49, 325-330.	1.9	53
30	Photodissolution of Ferrihydrite in the Presence of Oxalic Acid: An In Situ ATR-FTIR/DFT Study. Langmuir, 2010, 26, 16246-16253.	1.6	53
31	Oxidation of {100} and {111} surfaces of pyrite: Effects of preparation method. American Mineralogist, 2000, 85, 623-626.	0.9	52
32	Aqueous Geochemical and Surface Science Investigation of the Effect of Phosphate on Pyrite Oxidation. Environmental Science & Technology, 2001, 35, 2252-2257.	4.6	51
33	Structural water in ferrihydrite and constraints this provides on possible structure models. American Mineralogist, 2011, 96, 513-520.	0.9	51
34	Coupled Redox Transformation of Chromate and Arsenite on Ferrihydrite. Environmental Science & Technology, 2015, 49, 2858-2866.	4.6	51
35	Redox properties of birnessite from a defect perspective. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9523-9528.	3.3	50
36	A vibrational spectroscopic study of the oxidation of pyrite by molecular oxygen. Geochimica Et Cosmochimica Acta, 2004, 68, 1807-1813.	1.6	49

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37	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
38	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.	4.6	43
39	Reactivity of ferritin and the structure of ferritin-derived ferrihydrite. Biochimica Et Biophysica Acta - General Subjects, 2010, 1800, 871-885.	1.1	43
40	Systematic Doping of Cobalt into Layered Manganese Oxide Sheets Substantially Enhances Water Oxidation Catalysis. Inorganic Chemistry, 2018, 57, 557-564.	1.9	43
41	Effects of individual promoters on the Direct Synthesis of methylchlorosilanes. Journal of Catalysis, 2009, 266, 291-298.	3.1	41
42	Decoration of the layered manganese oxide birnessite with Mn(<scp>ii</scp>/<scp>iii</scp>) gives a new water oxidation catalyst with fifty-fold turnover number enhancement. Dalton Transactions, 2015, 44, 12981-12984.	1.6	40
43	Electrocatalytic CO₂ reduction on earth abundant 2D Mo₂C and Ti₃C₂ MXenes. Chemical Communications, 2021, 57, 1675-1678.	2.2	40
44	Water Oxidation Catalyzed by Cobalt Oxide Supported on the Mattagamite Phase of CoTe₂. ACS Catalysis, 2016, 6, 7393-7397.	5.5	39
45	Effect of Phospholipid on Pyrite Oxidation and Microbial Communities under Simulated Acid Mine Drainage (AMD) Conditions. Environmental Science & Technology, 2015, 49, 7701-7708.	4.6	38
46	Neutron Pair Distribution Function Study of Two-Line Ferrihydrite. Environmental Science & Technology, 2011, 45, 9883-9890.	4.6	37
47	Ammonia-pretreatment-induced restructuring of iron single-crystal surfaces: Its effects on ammonia synthesis and on coadsorbed aluminum oxide and potassium. Journal of Catalysis, 1989, 118, 99-110.	3.1	36
48	Synergistic In-Layer Cobalt Doping and Interlayer Iron Intercalation into Layered MnO₂ Produces an Efficient Water Oxidation Electrocatalyst. ACS Energy Letters, 2018, 3, 2280-2285.	8.8	36
49	Reduction of Nitrite and Nitrate to Ammonium on Pyrite. Origins of Life and Evolution of Biospheres, 2012, 42, 275-294.	0.8	34
50	Coâ€Moâ€P Based Electrocatalyst for Superior Reactivity in the Alkaline Hydrogen Evolution Reaction. ChemCatChem, 2018, 10, 4832-4837.	1.8	33
51	Pyrite oxidation inhibition by a cross-linked lipid coating. Geochemical Transactions, 2003, 4, 1.	1.8	31
52	Ferrihydrite phase transformation in the presence of aqueous sulfide and supercritical CO2. Chemical Geology, 2010, 271, 26-30.	1.4	31
53	Adsorption of Phospholipids on Pyrite and Their Effect on Surface Oxidation. Langmuir, 2003, 19, 8787-8792.	1.6	29
54	Oxidation of arsenite to arsenate on birnessite in the presence of light. Geochemical Transactions, 2016, 17, 5.	1.8	29

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55	High Electron Mobility of Amorphous Red Phosphorus Thin Films. Angewandte Chemie - International Edition, 2019, 58, 6766-6771.	7.2	29
56	Nickel Confined in the Interlayer Region of Birnessite: an Active Electrocatalyst for Water Oxidation. Angewandte Chemie, 2016, 128, 10537-10541.	1.6	28
57	Thiosulfate oxidation: Catalysis of synthetic sphalerite doped with transition metals. Geochimica Et Cosmochimica Acta, 1996, 60, 4701-4710.	1.6	27
58	Humidity-induced restructuring of the calcite surface and the effect of divalent heavy metals. Journal of Colloid and Interface Science, 2007, 305, 101-110.	5.0	26
59	Effects of phospholipid on pyrite oxidation in the presence of autotrophic and heterotrophic bacteria. Geochimica Et Cosmochimica Acta, 2009, 73, 4111-4123.	1.6	26
60	CO2Sequestration through Mineral Carbonation of Iron Oxyhydroxides. Environmental Science & Technology, 2011, 45, 10422-10428.	4.6	26
61	Reduction of Nitrite and Nitrate on Nano-dimensioned FeS. Origins of Life and Evolution of Biospheres, 2013, 43, 305-322.	0.8	26
62	Effects of Multiple Promotion of the Direct Synthesis Contact Mass with P, Zn, and Sn on the Synthesis of Methylchlorosilanes. Catalysis Letters, 2009, 133, 14-22.	1.4	25
63	Hematite reactivity with supercritical CO2 and aqueous sulfide. Chemical Geology, 2011, 283, 210-217.	1.4	25
64	Niâ€•and Coâ€Substituted Metallic MoS₂ for the Alkaline Hydrogen Evolution Reaction. ChemElectroChem, 2020, 7, 3606-3615.	1.7	24
65	Reductive dissolution of ferrihydrite by ascorbic acid and the inhibiting effect of phospholipid. Journal of Colloid and Interface Science, 2010, 341, 215-223.	5.0	23
66	A vibrational spectroscopic study of the oxidation of pyrite by ferric iron. American Mineralogist, 2004, 88, 1318-1323.	0.9	22
67	Adsorption of carbon dioxide on Al/Fe oxyhydroxide. Journal of Colloid and Interface Science, 2013, 400, 1-10.	5.0	22
68	Structural evolution and electrical properties of metal ion-containing polydopamine. Journal of Materials Science, 2019, 54, 6393-6400.	1.7	19
69	Physical Structures of Lipid Layers on Pyrite. Environmental Science & Technology, 2006, 40, 1511-1515.	4.6	16
70	Advances in electro-copolymerization of NIR emitting and electronically conducting block copolymers. Journal of Materials Chemistry C, 2019, 7, 3168-3172.	2.7	16
71	Using hyperthermal ions to selectively adsorb surface intermediates: evidence for the adsorption of CH3 on platinum from a 1â€“3 eV CH+3 ion beam. Chemical Physics Letters, 1991, 187, 281-285.	1.2	15
72	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.	1.4	15

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73	Methanol Chemisorption and Reaction on the (111) Crystallographic Plane of NiAl. Journal of Physical Chemistry B, 1998, 102, 2970-2978.	1.2	14
74	Tunable catalytic activity of cobalt-intercalated layered MnO2 for water oxidation through confinement and local ordering. Journal of Catalysis, 2019, 374, 143-149.	3.1	13
75	Implementing the donorâ€“acceptor approach in electronically conducting copolymersviaelectropolymerization. RSC Advances, 2022, 12, 12089-12115.	1.7	13
76	The effect of adsorbed lipid on pyrite oxidation under biotic conditions. Geochemical Transactions, 2006, 7, 8.	1.8	11
77	Structure and Magnetism Evolution from FeCo Nanoparticles to Hollow Nanostructure Conversion for Magnetic Applications. ACS Applied Nano Materials, 2018, 1, 5837-5842.	2.4	11
78	Effect of Interlayer Co²⁺ on Structure and Charge Transfer in NiFe Layered Double Hydroxides. Journal of Physical Chemistry C, 2019, 123, 13593-13599.	1.5	11
79	Formation of carbon nanospheres via ultrashort pulse laser irradiation of methane. Materials Chemistry and Physics, 2015, 156, 47-53.	2.0	8
80	Adsorption and Decomposition of Methyl Iodide on Low Index Planes of NiAl. Langmuir, 1997, 13, 3162-3171.	1.6	7
81	Characterization of the structure and the surface reactivity of a marcasite thin film. Geochimica Et Cosmochimica Acta, 2003, 67, 807-812.	1.6	7
82	Surface science studies of environmentally relevant iron (oxy)hydroxides ranging from the nano to the macro-regime. Surface Science, 2010, 604, 1065-1071.	0.8	6
83	Highly Dispersed RuOOH Nanoparticles on Silica Spheres: An Efficient Photothermal Catalyst for Selective Aerobic Oxidation of Benzyl Alcohol. Nano-Micro Letters, 2020, 12, 41.	14.4	6
84	Adsorption and thermal decomposition of C2D5I on the (110) and (111) planes of NiAl: A temperature programmed deposition and x-ray photoelectron spectroscopy study. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 810-816.	0.9	5
85	Thermal Chemistry of CH3on Si/Cu(100); the Role of Sn as a Promoter. Journal of Physical Chemistry B, 2004, 108, 16213-16219.	1.2	5
86	High Electron Mobility of Amorphous Red Phosphorus Thin Films. Angewandte Chemie, 2019, 131, 6838-6843.	1.6	4
87	Photochemistry of ferritin decorated with plasmonic gold nanoparticles. Environmental Science: Nano, 2019, 6, 85-93.	2.2	3
88	Biomimetic System for the Application of Nanomaterials in Fluid Purification: Removal of Arsenic with Ferrihydrite. ACS Omega, 2020, 5, 5873-5880.	1.6	3
89	Charge Development on Ferritin: An Electrokinetic Study of a Protein Containing a Ferrihydrite Nanoparticle. ACS Symposium Series, 2004, , 226-229.	0.5	2
90	A NEXAFS study on the adsorption of ammonia on clean and potassium-promoted iron. Surface Science Letters, 1991, 253, L417-L422.	0.1	1

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91	Environmental Applications: Treatment/Remediation Using Nanotechnology: An Overview. ACS Symposium Series, 2004, , 202-204.	0.5	1
92	Layer by Layer Deposition of 1Tâ€²â€MoS₂ for the Hydrogen Evolution Reaction. ChemistrySelect, 2022, 7, .	0.7	1
93	A Bioengineering Approach to the Production of Metal and Metal Oxide Nanoparticles. ACS Symposium Series, 2004, , 230-237.	0.5	0