

# Michael Sander

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87  
papers

5,408  
citations

40  
h-index

73  
g-index

90  
ext. papers

6,701  
ext. citations

9.3  
avg, IF

6.2  
L-index

#	Paper	IF	Citations
87	Site-Specific Mineralization of a Polyester Hydrolysis Product in Natural Soil. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2022</b> , 10, 1373-1378	8.3	0
86	Thermodynamic controls on rates of iron oxide reduction by extracellular electron shuttles.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119,	11.5	1
85	The Multiple States of Environmental DNA and What Is Known about Their Persistence in Aquatic Environments.. <i>Environmental Science &amp; Technology</i> , <b>2022</b> ,	10.3	1
84	Effect of Solution pH on the Dual Role of Dissolved Organic Matter in Sensitized Pollutant Photooxidation. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 15110-15122	10.3	5
83	Effects of Macrofaunal Recolonization on Biogeochemical Processes and Microbiota in a Mesocosm Study. <i>Water (Switzerland)</i> , <b>2021</b> , 13, 1599	3	0
82	Redox Properties of Pyrogenic Dissolved Organic Matter (pyDOM) from Biomass-Derived Chars. <i>Environmental Science &amp; Technology</i> , <b>2021</b> ,	10.3	7
81	Long-Term Warming Decreases Redox Capacity of Soil Organic Matter. <i>Environmental Science and Technology Letters</i> , <b>2021</b> , 8, 92-97	11	4
80	Organic Matter from Redoximorphic Soils Accelerates and Sustains Microbial Fe(III) Reduction. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 10821-10831	10.3	3
79	Redox Properties of Peat Particulate Organic Matter: Quantification of Electron Accepting Capacities and Assessment of Electron Transfer Reversibility. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2021</b> , 126, e2021JG006329	3.7	0
78	Adsorption of double-stranded ribonucleic acids (dsRNA) to iron (oxyhydr-)oxide surfaces: comparative analysis of model dsRNA molecules and deoxyribonucleic acids (DNA). <i>Environmental Sciences: Processes and Impacts</i> , <b>2021</b> , 23, 605-620	4.3	1
77	Competitive co-adsorption of bacteriophage MS2 and natural organic matter onto multiwalled carbon nanotubes. <i>Water Research X</i> , <b>2020</b> , 9, 100058	8.1	5
76	Analysis of RNA Interference (RNAi) Biopesticides: Double-Stranded RNA (dsRNA) Extraction from Agricultural Soils and Quantification by RT-qPCR. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 4893-4902	10.3	7
75	What does mediated electrochemistry reveal about regional differences in the redox properties of Boom Clay?. <i>Applied Geochemistry</i> , <b>2020</b> , 120, 104681	3.5	1
74	Quantification of the electron donating capacity and UV absorbance of dissolved organic matter during ozonation of secondary wastewater effluent by an assay and an automated analyzer. <i>Water Research</i> , <b>2020</b> , 185, 116235	12.5	15
73	Quantification of Synthetic Polyesters from Biodegradable Mulch Films in Soils. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 266-275	10.3	21
72	Biodegradation of Polymeric Mulch Films in Agricultural Soils: Concepts, Knowledge Gaps, and Future Research Directions. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 2304-2315	10.3	76
71	Environmental Fate of RNA Interference Pesticides: Adsorption and Degradation of Double-Stranded RNA Molecules in Agricultural Soils. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 3027-3036	10.3	42

70	Decreases in Iron Oxide Reducibility during Microbial Reductive Dissolution and Transformation of Ferrihydrite. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 8736-8746	10.3	22
69	Assessing the environmental transformation of nanoplastic through C-labelled polymers. <i>Nature Nanotechnology</i> , <b>2019</b> , 14, 301-303	28.7	19
68	Photochemical Transformation of Poly(butylene adipate- co-terephthalate) and Its Effects on Enzymatic Hydrolyzability. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 2472-2481	10.3	25
67	Electrochemical Analysis of Changes in Iron Oxide Reducibility during Abiotic Ferrihydrite Transformation into Goethite and Magnetite. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 3568-3578	10.3	24
66	Dos and Do Nots When Assessing the Biodegradation of Plastics. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 9967-9969	10.3	47
65	Effects of eutrophication on sedimentary organic carbon cycling in five temperate lakes. <i>Biogeosciences</i> , <b>2019</b> , 16, 3725-3746	4.6	15
64	Electron accepting capacity of dissolved and particulate organic matter control CO <sub>2</sub> and CH <sub>4</sub> formation in peat soils. <i>Geochimica Et Cosmochimica Acta</i> , <b>2019</b> , 245, 266-277	5.5	33
63	Sustainable Polyester Elastomers from Lactones: Synthesis, Properties, and Enzymatic Hydrolyzability. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 963-973	16.4	64
62	Electron-Donating Phenolic and Electron-Accepting Quinone Moieties in Peat Dissolved Organic Matter: Quantities and Redox Transformations in the Context of Peat Biogeochemistry. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 5236-5245	10.3	57
61	Biodegradation of synthetic polymers in soils: Tracking carbon into CO and microbial biomass. <i>Science Advances</i> , <b>2018</b> , 4, eaas9024	14.3	130
60	Plant rhizosphere oxidation reduces methane production and emission in rewetted peatlands. <i>Soil Biology and Biochemistry</i> , <b>2018</b> , 125, 125-135	7.5	22
59	Mediated Electrochemical Reduction of Iron (Oxyhydr-)Oxides under Defined Thermodynamic Boundary Conditions. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 560-570	10.3	19
58	Oxidation of Reduced Peat Particulate Organic Matter by Dissolved Oxygen: Quantification of Apparent Rate Constants in the Field. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 11151-11160	10.3	7
57	Two analytical approaches quantifying the electron donating capacities of dissolved organic matter to monitor its oxidation during chlorination and ozonation. <i>Water Research</i> , <b>2018</b> , 144, 677-689	12.5	29
56	High-Throughput Analysis of Enzymatic Hydrolysis of Biodegradable Polyesters by Monitoring Cohydrolysis of a Polyester-Embedded Fluorogenic Probe. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 4358-4367	10.3	19
55	Quantifying the electron donating capacities of sulfide and dissolved organic matter in sediment pore waters of wetlands. <i>Environmental Sciences: Processes and Impacts</i> , <b>2017</b> , 19, 758-767	4.3	11
54	Enzymatic Hydrolysis of Polyester Thin Films at the Nanoscale: Effects of Polyester Structure and Enzyme Active-Site Accessibility. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 7476-7485	10.3	41
53	Redox properties of clay-rich sediments as assessed by mediated electrochemical analysis: Separating pyrite, siderite and structural Fe in clay minerals. <i>Chemical Geology</i> , <b>2017</b> , 457, 149-161	4.2	16

52	Environmental Fate of Insecticidal Plant-Incorporated Protectants from Genetically Modified Crops: Knowledge Gaps and Research Opportunities. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 12049-12057 <sup>10.3</sup>	22
51	Enzymatic surface hydrolysis of poly(ethylene furanoate) thin films of various crystallinities. <i>Green Chemistry</i> , <b>2017</b> , 19, 5381-5384	10 61
50	Polyol Structure Influences Enzymatic Hydrolysis of Bio-Based 2,5-Furandicarboxylic Acid (FDCA) Polyesters. <i>Biotechnology Journal</i> , <b>2017</b> , 12, 1600741	5.6 22
49	Enzymatic Degradation of Aromatic and Aliphatic Polyesters by Expressed Cutinase 1 from. <i>Frontiers in Microbiology</i> , <b>2017</b> , 8, 938	5.7 40
48	Thermodynamic Characterization of Iron Oxide-Aqueous Fe(2+) Redox Couples. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 8538-47	10.3 74
47	Spatiotemporal redox dynamics in a freshwater lake sediment under alternating oxygen availabilities: combined analyses of dissolved and particulate electron acceptors. <i>Environmental Chemistry</i> , <b>2016</b> , 13, 826	3.2 13
46	Quantification of Phenolic Antioxidant Moieties in Dissolved Organic Matter by Flow-Injection Analysis with Electrochemical Detection. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 6423-32	10.3 49
45	Viruses at Solid-Water Interfaces: A Systematic Assessment of Interactions Driving Adsorption. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 732-43	10.3 130
44	Competitive Coadsorption Dynamics of Viruses and Dissolved Organic Matter to Positively Charged Sorbent Surfaces. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 3597-606	10.3 23
43	Enzymatic Hydrolysis of Polyester Thin Films: Real-Time Analysis of Film Mass Changes and Dissipation Dynamics. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 197-206	10.3 24
42	Photooxidation of the Antimicrobial, Nonribosomal Peptide Bacitracin A by Singlet Oxygen under Environmentally Relevant Conditions. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 8586-95	10.3 21
41	Microbial reduction of ferrihydrite-organic matter coprecipitates by <i>Shewanella putrefaciens</i> and <i>Geobacter metallireducens</i> in comparison to mediated electrochemical reduction. <i>Chemical Geology</i> , <b>2016</b> , 447, 133-147	4.2 28
40	Photosensitizing and Inhibitory Effects of Ozonated Dissolved Organic Matter on Triplet-Induced Contaminant Transformation. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 8541-9	10.3 59
39	Solid phases as important electron acceptors in freshwater organic sediments. <i>Biogeochemistry</i> , <b>2015</b> , 123, 49-61	3.8 46
38	Electrochemical analyses of redox-active iron minerals: a review of nonmediated and mediated approaches. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 5862-78	10.3 80
37	Assessing the Indirect Photochemical Transformation of Dissolved Combined Amino Acids through the Use of Systematically Designed Histidine-Containing Oligopeptides. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 12798-807	10.3 12
36	Enhanced Indirect Photochemical Transformation of Histidine and Histamine through Association with Chromophoric Dissolved Organic Matter. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 5511-9 <sup>10.3</sup>	31
35	Biomimetic Approach to Enhance Enzymatic Hydrolysis of the Synthetic Polyester Poly(1,4-butylene adipate): Fusing Binding Modules to Esterases. <i>Biomacromolecules</i> , <b>2015</b> , 16, 3889-96 <sup>6.9</sup>	16

34	Triplet photochemistry of effluent and natural organic matter in whole water and isolates from effluent-receiving rivers. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 3453-63	10.3	95
33	Humic substances as fully regenerable electron acceptors in recurrently anoxic environments. <i>Nature Geoscience</i> , <b>2014</b> , 7, 195-200	18.3	291
32	Redox properties of plant biomass-derived black carbon (biochar). <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 5601-11	10.3	534
31	Dissolved organic matter adsorption to model surfaces: adlayer formation, properties, and dynamics at the nanoscale. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 9420-9	10.3	40
30	Photooxidation-induced changes in optical, electrochemical, and photochemical properties of humic substances. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 2688-96	10.3	147
29	Chemical oxidation of dissolved organic matter by chlorine dioxide, chlorine, and ozone: effects on its optical and antioxidant properties. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 11147-56	10.3	179
28	Redox properties of structural Fe in clay minerals: 3. Relationships between smectite redox and structural properties. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 13477-85	10.3	93
27	Dark formation of hydroxyl radical in Arctic soil and surface waters. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 12860-7	10.3	125
26	Covalent binding of sulfamethazine to natural and synthetic humic acids: assessing laccase catalysis and covalent bond stability. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 6916-24	10.3	49
25	Assessing the effect of humic acid redox state on organic pollutant sorption by combined electrochemical reduction and sorption experiments. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 3882-90	10.3	38
24	Antioxidant properties of humic substances. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 4916-25	10.3	344
23	Adsorption of insecticidal Cry1Ab protein to humic substances. 1. Experimental approach and mechanistic aspects. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 9923-31	10.3	40
22	Redox properties of structural Fe in clay minerals. 1. Electrochemical quantification of electron-donating and -accepting capacities of smectites. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 9360-8	10.3	96
21	Adsorption of insecticidal Cry1Ab protein to humic substances. 2. Influence of humic and fulvic acid charge and polarity characteristics. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 9932-40	10.3	35
20	Hydroxyl radical formation upon oxidation of reduced humic acids by oxygen in the dark. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 1590-7	10.3	137
19	Redox properties of structural Fe in clay minerals. 2. Electrochemical and spectroscopic characterization of electron transfer irreversibility in ferruginous smectite, SWa-1. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 9369-77	10.3	90
18	Low molecular weight components in an aquatic humic substance as characterized by membrane dialysis and orbitrap mass spectrometry. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 9350-9	10.3	72
17	Redox Properties of Structural Fe in Smectite Clay Minerals. <i>ACS Symposium Series</i> , <b>2011</b> , 361-379	0.4	15

16	Assessing the redox properties of iron-bearing clay minerals using homogeneous electrocatalysis. <i>Applied Geochemistry</i> , <b>2011</b> , 26, S191-S193	3.5	6
15	Adsorption of transgenic insecticidal Cry1Ab protein to silica particles. Effects on transport and bioactivity. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 4377-84	10.3	32
14	Electrochemical analysis of proton and electron transfer equilibria of the reducible moieties in humic acids. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 8385-94	10.3	151
13	Protein encapsulation by humic substances. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 6003-10	10.3	88
12	Adsorption of transgenic insecticidal Cry1Ab protein to SiO <sub>2</sub> . 2. Patch-controlled electrostatic attraction. <i>Environmental Science &amp; Technology</i> , <b>2010</b> , 44, 8877-83	10.3	40
11	Novel electrochemical approach to assess the redox properties of humic substances. <i>Environmental Science &amp; Technology</i> , <b>2010</b> , 44, 87-93	10.3	371
10	Adsorption of transgenic insecticidal Cry1Ab protein to SiO <sub>2</sub> . 1. Forces driving adsorption. <i>Environmental Science &amp; Technology</i> , <b>2010</b> , 44, 8870-6	10.3	64
9	Sorption irreversibility of 1,4-dichlorobenzene in two natural organic matter-rich geosorbents. <i>Environmental Toxicology and Chemistry</i> , <b>2009</b> , 28, 447-57	3.8	31
8	Cation binding of antimicrobial sulfathiazole to leonardite humic acid. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 6632-8	10.3	69
7	Analysis and sorption of psychoactive drugs onto sediment. <i>Environmental Science &amp; Technology</i> , <b>2008</b> , 42, 6415-23	10.3	115
6	Variability of nitrogen isotope fractionation during the reduction of nitroaromatic compounds with dissolved reductants. <i>Environmental Science &amp; Technology</i> , <b>2008</b> , 42, 8352-9	10.3	51
5	On the reversibility of sorption to black carbon: distinguishing true hysteresis from artificial hysteresis caused by dilution of a competing adsorbate. <i>Environmental Science &amp; Technology</i> , <b>2007</b> , 41, 843-9	10.3	38
4	Conditioning-annealing studies of natural organic matter solids linking irreversible sorption to irreversible structural expansion. <i>Environmental Science &amp; Technology</i> , <b>2006</b> , 40, 170-8	10.3	57
3	An isotope exchange technique to assess mechanisms of sorption hysteresis applied to naphthalene in kerogenous organic matter. <i>Environmental Science &amp; Technology</i> , <b>2005</b> , 39, 7476-84	10.3	51
2	Characterization of charcoal adsorption sites for aromatic compounds: insights drawn from single-solute and bi-solute competitive experiments. <i>Environmental Science &amp; Technology</i> , <b>2005</b> , 39, 1606-15	10.3	165
1	A thermodynamically based method to quantify true sorption hysteresis. <i>Journal of Environmental Quality</i> , <b>2005</b> , 34, 1063-72	3.4	119