Ulf Skyllberg

List of Publications by Citations

85 papers	4,133 citations	35 h-index	63 g-index
89 ext. papers	4,774 ext. citations	7.9 avg, IF	5.68 L-index

#	Paper	IF	Citations
85	Complexation of mercury(II) in soil organic matter: EXAFS evidence for linear two-coordination with reduced sulfur groups. *Environmental Science & Technology*, **2006**, 40, 4174-80	10.3	300
84	Binding of Mercury(II) to Reduced Sulfur in Soil Organic Matter along Upland-Peat Soil Transects. *Journal of Environmental Quality*, **2000**, 29, 855-865	3.4	177
83	Mercury deposition and re-emission pathways in boreal forest soils investigated with Hg isotope signatures. *Environmental Science & Technology*, **2015**, 49, 7188-96	10.3	171
82	Importance of dissolved neutral mercury sulfides for methyl mercury production in contaminated sediments. *Environmental Science & Technology*, **2007**, 41, 2270-6	10.3	169
81	Competition among thiols and inorganic sulfides and polysulfides for Hg and MeHg in wetland soils and sediments under suboxic conditions: Illumination of controversies and implications for MeHg net production. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		165
80	Distribution of mercury, methyl mercury and organic sulphur species in soil, soil solution and stream of a boreal forest catchment. *Biogeochemistry*, **2003**, 64, 53-76	3.8	157
79	Complexation of copper(ll) in organic soils and in dissolved organic matter--EXAFS evidence for chelate ring structures. *Environmental Science & Technology*, **2006**, 40, 2623-8	10.3	151
78	Organic acid induced release of nutrients from metal-stabilized soil organic matter The unbutton model. *Soil Biology and Biochemistry*, **2015**, 84, 168-176	7.5	136
77	Do potential methylation rates reflect accumulated methyl mercury in contaminated sediments?. *Environmental Science & Technology*, **2008**, 42, 153-8	10.3	123
76	Bonding of methyl mercury to reduced sulfur groups in soil and stream organic matter as determined by x-ray absorption spectroscopy and binding affinity studies. *Geochimica Et Cosmochimica Acta*, **2002**, 66, 3873-3885	5.5	119
75	Mercury methylation rates for geochemically relevant Hg(II) species in sediments. *Environmental Science & Technology*, **2012**, 46, 11653-9	10.3	117
74	Differentiated availability of geochemical mercury pools controls methylmercury levels in estuarine sediment and biota. *Nature Communications*, **2014**, 5, 4624	17.4	110
73	Competition between disordered iron sulfide and natural organic matter associated thiols for mercury(II)-an EXAFS study. *Environmental Science & Technology*, **2010**, 44, 1254-9	10.3	105
72	Bioavailability of cobalt and nickel during anaerobic digestion of sulfur-rich stillage for biogas formation. *Applied Energy*, **2013**, 112, 473-477	10.7	102
71	Potential Hg methylation and MeHg demethylation rates related to the nutrient status of different boreal wetlands. *Biogeochemistry*, **2012**, 108, 335-350	3.8	78
70	Translocation of metals by trees and fungi regulates pH, soil organic matter turnover and nitrogen availability in acidic forest soils. *Soil Biology and Biochemistry*, **2013**, 63, 142-153	7.5	73
69	Characterization of iron(III) in organic soils using extended X-ray absorption fine structure spectroscopy. *Environmental Science & Technology*, **2008**, 42, 5449-54	10.3	72

68	Extended X-ray absorption fine structure spectroscopy evidence for the complexation of cadmium by reduced sulfur groups in natural organic matter. *Environmental Science & Technology*, **2005**, 39, 3048-55	10.3	68
67	Terrestrial discharges mediate trophic shifts and enhance methylmercury accumulation in estuarine biota. *Science Advances*, **2017**, 3, e1601239	14.3	65
66	Bonding of ppb levels of methyl mercury to reduced sulfur groups in soil organic matter. *Environmental Science & Technology*, **2003**, 37, 4912-8	10.3	63
65	Characteristics of dissolved organic matter (DOM) and relationship with dissolved mercury in Xiaoqing River-Laizhou Bay estuary, Bohai Sea, China. *Environmental Pollution*, **2017**, 223, 19-30	9.3	62
64	Eight boreal wetlands as sources and sinks for methyl mercury in relation to soil acidity, C/N ratio, and small-scale flooding. *Environmental Science & Technology*, **2012**, 46, 8052-60	10.3	61
63	The effects of forestry on Hg bioaccumulation in nemoral/boreal waters and recommendations for good silvicultural practice. *Ambio*, **2009**, 38, 373-80	6.5	57
62	Influence of dissolved organic matter (DOM) characteristics on dissolved mercury (Hg) species composition in sediment porewater of lakes from southwest China. *Water Research*, **2018**, 146, 146-158	12.5	56
61	Binding of 2,4,6-trinitrotoluene, aniline, and nitrobenzene to dissolved and particulate soil organic matter. *Environmental Science & Technology*, **2004**, 38, 3074-80	10.3	55
60	Mercury isotope signatures in contaminated sediments as a tracer for local industrial pollution sources. *Environmental Science & Technology*, **2015**, 49, 177-85	10.3	53
59	Thermodynamic Modeling of the Solubility and Chemical Speciation of Mercury and Methylmercury Driven by Organic Thiols and Micromolar Sulfide Concentrations in Boreal Wetland Soils. *Environmental Science & Technology*, **2017**, 51, 3678-3686	10.3	51
58	Elevated concentrations of methyl mercury in streams after forest clear-cut: a consequence of mobilization from soil or new methylation?. *Environmental Science & Technology*, **2009**, 43, 8535-41	10.3	50
57	Mercury transformations in resuspended contaminated sediment controlled by redox conditions, chemical speciation and sources of organic matter. *Geochimica Et Cosmochimica Acta*, **2018**, 220, 158-179	5.5	47
56	Source tracing of natural organic matter bound mercury in boreal forest runoff with mercury stable isotopes. *Environmental Sciences: Processes and Impacts*, **2017**, 19, 1235-1248	4.3	47
55	Modeling of the structure-specific kinetics of abiotic, dark reduction of Hg(II) complexed by O/N and S functional groups in humic acids while accounting for time-dependent structural rearrangement. *Geochimica Et Cosmochimica Acta*, **2015**, 154, 151-167	5.5	46
54	Towards universal wavelength-specific photodegradation rate constants for methyl mercury in humic waters, exemplified by a Boreal lake-wetland gradient. *Environmental Science & Technology*, **2013**, 47, 6279-87	10.3	45
53	Complexation of cadmium to sulfur and oxygen functional groups in an organic soil. *Geochimica Et Cosmochimica Acta*, **2007**, 71, 604-614	5.5	40
52	Refining thermodynamic constants for mercury(II)-sulfides in equilibrium with metacinnabar at sub-micromolar aqueous sulfide concentrations. *Environmental Science & Technology*, **2013**, 47, 4197-203	10.3	39
51	Complexation of zinc in organic soils--EXAFS evidence for sulfur associations. *Environmental Science & Technology*, **2007**, 41, 119-24	10.3	39

50	Thermodynamic modeling of iron and trace metal solubility and speciation under sulfidic and ferruginous conditions in full scale continuous stirred tank biogas reactors. *Applied Geochemistry*, **2014**, 47, 61-73	3.5	35
49	Methodological approaches for fractionation and speciation to estimate trace element bioavailability in engineered anaerobic digestion ecosystems: An overview. *Critical Reviews in Environmental Science and Technology*, **2016**, 46, 1324-1366	11.1	34
48	Thermodynamics of Hg(II) Bonding to Thiol Groups in Suwannee River Natural Organic Matter Resolved by Competitive Ligand Exchange, Hg L-Edge EXAFS and H NMR Spectroscopy. *Environmental Science & Technology*, **2018**, 52, 8292-8301	10.3	33
47	High energy resolution X-ray absorption spectroscopy of environmentally relevant lead(II) compounds. *Inorganic Chemistry*, **2009**, 48, 10748-56	5.1	33
46	Formation of mercury methylation hotspots as a consequence of forestry operations. *Science of the Total Environment*, **2018**, 613-614, 1069-1078	10.2	32
45	Importance of reduced sulfur for the equilibrium chemistry and kinetics of Fe(II), Co(II) and Ni(II) supplemented to semi-continuous stirred tank biogas reactors fed with stillage. *Journal of Hazardous Materials*, **2014**, 269, 83-8	12.8	32
44	Mercury methylating microbial communities of boreal forest soils. *Scientific Reports*, **2019**, 9, 518	4.9	30
43	Methyl Mercury Formation in Hillslope Soils of Boreal Forests: The Role of Forest Harvest and Anaerobic Microbes. *Environmental Science & Technology*, **2016**, 50, 9177-86	10.3	30
42	Recent advances in mercury speciation analysis with focus on spectrometric methods and enriched stable isotope applications. *Ambio*, **2007**, 36, 443-51	6.5	30
41	Net methylmercury production as a basis for improved risk assessment of mercury-contaminated sediments. *Ambio*, **2007**, 36, 437-42	6.5	30
40	Effects of Nutrient Loading and Mercury Chemical Speciation on the Formation and Degradation of Methylmercury in Estuarine Sediment. *Environmental Science & Technology*, **2016**, 50, 6983-90	10.3	29
39	Sulfur K-edge XANES and acid volatile sulfide analyses of changes in chemical speciation of S and Fe during sequential extraction of trace metals in anoxic sludge from biogas reactors. *Talanta*, **2012**, 89, 470-7	6.2	29
38	Forest harvest contribution to Boreal freshwater methyl mercury load. *Global Biogeochemical Cycles*, **2016**, 30, 825-843	5.9	29
37	Thermodynamic stability of mercury(II) complexes formed with environmentally relevant low-molecular-mass thiols studied by competing ligand exchange and density functional theory. *Environmental Chemistry*, **2017**, 14, 243	3.2	28
36	Partitioning of CPs, PCDEs, and PCDD/Fs between particulate and experimentally enhanced dissolved natural organic matter in a contaminated soil. *Environmental Science & Technology*, **2006**, 40, 6668-73	10.3	28
35	Potential bioavailability and chemical forms of Co and Ni in the biogas process-An evaluation based on sequential and acid volatile sulfide extractions. *Engineering in Life Sciences*, **2013**, 13, 572-579	3.4	27
34	Distribution, chemical speciation, and mobility of lead and antimony originating from small arms ammunition in a coarse-grained unsaturated surface sand. *Journal of Environmental Quality*, **2010**, 39, 863-70	3.4	25
33	Mechanisms of Methyl Mercury Net Degradation in Alder Swamps: The Role of Methanogens and Abiotic Processes. *Environmental Science and Technology Letters*, **2018**, 5, 220-225	11	22

32	Microbial Biosynthesis of Thiol Compounds: Implications for Speciation, Cellular Uptake, and Methylation of Hg(II). *Environmental Science & Technology*, **2019**, 53, 8187-8196	10.3	19
31	Potential demethylation rate determinations in relation to concentrations of MeHg, Hg and pore water speciation of MeHg in contaminated sediments. *Marine Chemistry*, **2008**, 112, 93-101	3.7	19
30	Shifts in mercury methylation across a peatland chronosequence: From sulfate reduction to methanogenesis and syntrophy. *Journal of Hazardous Materials*, **2020**, 387, 121967	12.8	19
29	Net degradation of methyl mercury in alder swamps. *Environmental Science & Technology*, **2012**, 46, 13144-51	10.3	18
28	Chemical speciation of sulfur and metals in biogas reactors - Implications for cobalt and nickel bio-uptake processes. *Journal of Hazardous Materials*, **2017**, 324, 110-116	12.8	17
27	Importance of sulfide interaction with iron as regulator of the microbial community in biogas reactors and its effect on methanogenesis, volatile fatty acids turnover, and syntrophic long-chain fatty acids degradation. *Journal of Bioscience and Bioengineering*, **2017**, 123, 597-605	3.3	17
26	The spatial variation of pH in the mor layer of some coniferous forest stands in Northern Sweden. *Scandinavian Journal of Forest Research*, **1989**, 4, 3-11	1.7	17
25	Chemical Speciation of Mercury in Soil and Sediment **2011**, 219-258		16
24	Proton surface charge determination in Spodosol horizons with organically bound aluminum. *Geochimica Et Cosmochimica Acta*, **1998**, 62, 1677-1689	5.5	16
23	Seasonal variation of pHH2O and pHCaCl2 in centimeter-layers of mor humus in a Picea abies (L.) Karst. stand. *Scandinavian Journal of Forest Research*, **1991**, 6, 3-18	1.7	16
22	Substantial emission of gaseous monomethylmercury from contaminated water-sediment microcosms. *Environmental Science & Technology*, **2010**, 44, 278-83	10.3	15
21	Solution/Soil Ratio and Release of Cations and Acidity from Spodosol Horizons. *Soil Science Society of America Journal*, **1995**, 59, 786-795	2.5	15
20	Molecular Effects, Speciation, and Competition of Inorganic and Methyl Mercury in the Aquatic Plant Elodea nuttallii. *Environmental Science & Technology*, **2018**, 52, 8876-8884	10.3	14
19	Does ectomycorrhiza have a universal key role in the formation of soil organic matter in boreal forests?. *Soil Biology and Biochemistry*, **2020**, 140, 107635	7.5	14
18	Effects of oxic and anoxic filtration on determined methyl mercury concentrations in sediment pore waters. *Marine Chemistry*, **2007**, 103, 76-83	3.7	11
17	Anaerobic guilds responsible for mercury methylation in boreal wetlands of varied trophic status serving as either a methylmercury source or sink. *Environmental Microbiology*, **2020**, 22, 3685-3699	5.2	10
16	Nanomapping and speciation of C and Ca in thermally treated lignocellulosic cell walls using scanning transmission X-ray microscopy and K-edge XANES. *Fuel*, **2016**, 167, 149-157	7.1	10
15	Partitioning of chloroaromatic compounds between the aqueous phase and dissolved and particulate soil organic matter at chlorophenol contaminated sites. *Environmental Pollution*, **2007**, 148, 182-90	9.3	10

14	Correlation between pH and depth in the Mor Layer of a picea abies (L.) Karst. stand on till soils in Northern Sweden. *Scandinavian Journal of Forest Research*, **1990**, 5, 143-153	1.7	9
13	Modeling Copper(II) Complexation in a Peat Soil Based on Spectroscopic Structural Information. *Soil Science Society of America Journal*, **2008**, 72, 1286-1291	2.5	8
12	Chemical speciation of mercury, sulfur and iron in a dystrophic boreal lake sediment, as controlled by the formation of mackinawite and framboidal pyrite. *Geochimica Et Cosmochimica Acta*, **2021**, 294, 106-125	5.5	8
11	Formation and mobilization of methylmercury across natural and experimental sulfur deposition gradients. *Environmental Pollution*, **2020**, 263, 114398	9.3	6
10	Aniline and 2,4,6-trinitrotoluene associate preferentially to low molecular weight fractions of dissolved soil organic matter. *Environmental Pollution*, **2009**, 157, 3010-5	9.3	5
9	Toward an Internally Consistent Model for Hg(II) Chemical Speciation Calculations in Bacterium-Natural Organic Matter-Low Molecular Mass Thiol Systems. *Environmental Science & Technology*, **2020**, 54, 8094-8103	10.3	3
8	Molecular characterization of brominated persistent pollutants using extended X-ray absorption fine structure (EXAFS) spectroscopy. *Analytical and Bioanalytical Chemistry*, **2008**, 390, 921-8	4.4	3
7	Methylmercury formation in boreal wetlands in relation to chemical speciation of mercury(II) and concentration of low molecular mass thiols. *Science of the Total Environment*, **2021**, 755, 142666	10.2	3
6	Phase transitions involving Ca The most abundant ash forming element In thermal treatment of lignocellulosic biomass. *Fuel*, **2021**, 285, 119054	7.1	3
5	Opposing spatial trends in methylmercury and total mercury along a peatland chronosequence trophic gradient. *Science of the Total Environment*, **2020**, 718, 137306	10.2	2
4	Mercury methylating microbial communities of boreal forest soils		2
3	Biogeochemical influences on net methylmercury formation proxies along a peatland chronosequence. *Geochimica Et Cosmochimica Acta*, **2021**, 308, 188-203	5.5	2
2	Mobility of chloroaromatic compounds in soil: case studies of Swedish chlorophenol-contaminated sawmill sites. *Ambio*, **2007**, 36, 452-7	6.5	1
1	Corrections to Methyl Mercury Formation in Hillslope Soils of Boreal Forests: The Role of Forest Harvest and Anaerobic Microbes. *Environmental Science & Technology*, **2018**, 52, 367	10.3	