Thomas Borch

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/4431259/publications.pdf Version: 2024-02-01



THOMAS RODCH

#	Article	IF	CITATIONS
1	High Spatial Resolution Fluorescence Imagery for Optimized Pest Management in a Huanglongbing-Infected Citrus Grove. Phytopathology, 2022, 112, 173-179.	2.2	3
2	Humidity induces the formation of radicals and enhances photodegradation of chlorinated-PAHs on Fe(III)-montmorillonite. Journal of Hazardous Materials, 2022, 423, 127210.	12.4	13
3	Opportunities for Treatment and Reuse of Agricultural Drainage in the United States. ACS ES&T Engineering, 2022, 2, 292-305.	7.6	7
4	Mitigating membrane wetting in the treatment of unconventional oil and gas wastewater by membrane distillation: A comparison of pretreatment with omniphobic membrane. Journal of Membrane Science, 2022, 645, 120198.	8.2	19
5	Oil and Gas Produced Water Reuse: Opportunities, Treatment Needs, and Challenges. ACS ES&T Engineering, 2022, 2, 347-366.	7.6	31
6	PFAS Analysis with Ultrahigh Resolution 21T FT-ICR MS: Suspect and Nontargeted Screening with Unrivaled Mass Resolving Power and Accuracy. Environmental Science & Technology, 2022, 56, 2455-2465.	10.0	34
7	Enhanced Speciation of Pyrogenic Organic Matter from Wildfires Enabled by 21 T FT-ICR Mass Spectrometry. Analytical Chemistry, 2022, 94, 2973-2980.	6.5	22
8	Nitrogen Enrichment during Soil Organic Matter Burning and Molecular Evidence of Maillard Reactions. Environmental Science & Technology, 2022, 56, 4597-4609.	10.0	20
9	Colorimetric Paper-Based Analytical Device for Perfluorooctanesulfonate Detection. ACS ES&T Water, 2022, 2, 565-572.	4.6	11
10	Microbial iron cycling during palsa hillslope collapse promotes greenhouse gas emissions before complete permafrost thaw. Communications Earth & Environment, 2022, 3, .	6.8	11
11	Quantification of insecticide spatial distribution within individual citrus trees and efficacy through Asian citrus psyllid reductions under different application methods. Pest Management Science, 2021, 77, 1748-1756.	3.4	6
12	Oil & gas produced water retention ponds as potential passive treatment for radium removal and beneficial reuse. Environmental Sciences: Processes and Impacts, 2021, 23, 501-518.	3.5	5
13	Irrigation of wheat with select hydraulic fracturing chemicals: Evaluating plant uptake and growth impacts. Environmental Pollution, 2021, 273, 116402.	7.5	10
14	Nano-MoO2 activates peroxymonosulfate for the degradation of PAH derivatives. Water Research, 2021, 192, 116834.	11.3	56
15	Soil Organic Matter Characterization by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry (FTICR MS): A Critical Review of Sample Preparation, Analysis, and Data Interpretation. Environmental Science & Technology, 2021, 55, 9637-9656.	10.0	88
16	Sensors for detecting per- and polyfluoroalkyl substances (PFAS): A critical review of development challenges, current sensors, and commercialization obstacles. Chemical Engineering Journal, 2021, 417, 129133.	12.7	50
17	Constructed wetlands for polishing oil and gas produced water releases. Environmental Sciences: Processes and Impacts, 2021, 23, 1961-1976.	3.5	1
18	Discovery of Oxygenated Hydrocarbon Biodegradation Products at a Late-Stage Petroleum Release Site. Energy & amp; Fuels, 2021, 35, 16713-16723.	5.1	3

#	Article	IF	CITATIONS
19	Expanding the Analytical Window for Biochar Speciation: Molecular Comparison of Solvent Extraction and Water-Soluble Fractions of Biochar by FT-ICR Mass Spectrometry. Analytical Chemistry, 2021, 93, 15365-15372.	6.5	13
20	Fungicide azoxystrobin induced changes on the soil microbiome. Applied Soil Ecology, 2020, 145, 103343.	4.3	22
21	Fluorescent Dye Paper-Based Method for Assessment of Pesticide Coverage on Leaves and Trees: A Citrus Grove Case Study. Journal of Agricultural and Food Chemistry, 2020, 68, 14009-14014.	5.2	9
22	Iron mineral dissolution releases iron and associated organic carbon during permafrost thaw. Nature Communications, 2020, 11, 6329.	12.8	96
23	Reusing oil and gas produced water for agricultural irrigation: Effects on soil health and the soil microbiome. Science of the Total Environment, 2020, 722, 137888.	8.0	41
24	lsotopic and element ratios fingerprint salinization impact from beneficial use of oil and gas produced water in the Western U.S Science of the Total Environment, 2020, 716, 137006.	8.0	16
25	Water quality assessment downstream of oil and gas produced water discharges intended for beneficial reuse in arid regions. Science of the Total Environment, 2020, 713, 136607.	8.0	49
26	Temperature-induced iron (III) reduction results in decreased dissolved organic carbon export in subalpine wetland soils, Colorado, USA. Geochimica Et Cosmochimica Acta, 2020, 280, 148-160.	3.9	13
27	Mutagenicity assessment downstream of oil and gas produced water discharges intended for agricultural beneficial reuse. Science of the Total Environment, 2020, 715, 136944.	8.0	33
28	The generation and redistribution of soil cations in high elevation catenas in the Fraser Experimental Forest, Colorado, U.S Geoderma, 2019, 333, 135-144.	5.1	4
29	Assessing the efficacy of nitrogen isotopes to distinguish Colorado Front Range ammonia sources affecting Rocky Mountain National Park. Atmospheric Environment, 2019, 215, 116881.	4.1	9
30	Food Crop Irrigation with Oilfield-Produced Water Suppresses Plant Immune Response. Environmental Science and Technology Letters, 2019, 6, 656-661.	8.7	24
31	Hydrogeomorphic controls on soil carbon composition in two classes of subalpine wetlands. Biogeochemistry, 2019, 145, 161-175.	3.5	12
32	Emerging investigator series: radium accumulation in carbonate river sediments at oil and gas produced water discharges: implications for beneficial use as disposal management. Environmental Sciences: Processes and Impacts, 2019, 21, 324-338.	3.5	30
33	Potential for Beneficial Reuse of Oil and Gas–Derived Produced Water in Agriculture: Physiological and Morphological Responses in Spring Wheat (<i>Triticum aestivum</i>). Environmental Toxicology and Chemistry, 2019, 38, 1756-1769.	4.3	29
34	Temperature sensitivity of microbial Fe(III) reduction kinetics in subalpine wetland soils. Biogeochemistry, 2019, 142, 19-35.	3.5	15
35	Organic Matter Complexation Promotes Fe(II) Oxidation by the Photoautotrophic Fe(II)-Oxidizer <i>Rhodopseudomonas palustris</i> TIE-1. ACS Earth and Space Chemistry, 2019, 3, 531-536.	2.7	22
36	<i>In situ</i> transformation of hydraulic fracturing surfactants from well injection to produced water. Environmental Sciences: Processes and Impacts, 2019, 21, 1777-1786.	3.5	16

#	Article	IF	CITATIONS
37	Oxidation of Fe(II)–Organic Matter Complexes in the Presence of the Mixotrophic Nitrate-Reducing Fe(II)-Oxidizing Bacterium <i>Acidovorax</i> sp. BoFeN1. Environmental Science & Technology, 2018, 52, 5753-5763.	10.0	45
38	Reductive defluorination of perfluorooctanoic acid by zero-valent iron and zinc: A DFT-based kinetic model. Chemical Engineering Journal, 2018, 335, 248-254.	12.7	26
39	Characterization and spatial distribution of particulate and soluble carbon and nitrogen from wildfire-impacted sediments. Journal of Soils and Sediments, 2018, 18, 1314-1326.	3.0	12
40	Temporal characterization and statistical analysis of flowback and produced waters and their potential for reuse. Science of the Total Environment, 2018, 619-620, 654-664.	8.0	69
41	Ammonia Emissions from Subalpine Forest and Mountain Grassland Soils in Rocky Mountain National Park. Journal of Environmental Quality, 2018, 47, 778-785.	2.0	5
42	Fe(II)-Catalyzed Transformation of Organic Matter–Ferrihydrite Coprecipitates: A Closer Look Using Fe Isotopes. Environmental Science & Technology, 2018, 52, 11142-11150.	10.0	80
43	Composition-Dependent Sorptive Fractionation of Anthropogenic Dissolved Organic Matter by Fe(III)-Montmorillonite. Soil Systems, 2018, 2, 14.	2.6	25
44	Simulation of a hydraulic fracturing wastewater surface spill on agricultural soil. Science of the Total Environment, 2018, 645, 229-234.	8.0	12
45	The Mechanism of C–H Bond Oxidation by Aqueous Permanganate. Environmental Science & Technology, 2018, 52, 9845-9850.	10.0	11
46	Microbial acceleration of aerobic pyrite oxidation at circumneutral <scp>pH</scp> . Geobiology, 2017, 15, 690-703.	2.4	53
47	Biogenic non-crystalline U(IV) revealed as major component in uranium ore deposits. Nature Communications, 2017, 8, 15538.	12.8	57
48	Rainfall-runoff of anthropogenic waste indicators from agricultural fields applied with municipal biosolids. Science of the Total Environment, 2017, 580, 83-89.	8.0	31
49	Synergistic Treatment of Mixed 1,4-Dioxane and Chlorinated Solvent Contaminations by Coupling Electrochemical Oxidation with Aerobic Biodegradation. Environmental Science & Technology, 2017, 51, 12619-12629.	10.0	36
50	Organic coating on biochar explains its nutrient retention and stimulation of soil fertility. Nature Communications, 2017, 8, 1089.	12.8	371
51	Complexation and Redox Buffering of Iron(II) by Dissolved Organic Matter. Environmental Science & Technology, 2017, 51, 11096-11104.	10.0	157
52	Natural Attenuation of Nonionic Surfactants Used in Hydraulic Fracturing Fluids: Degradation Rates, Pathways, and Mechanisms. Environmental Science & Technology, 2017, 51, 13985-13994.	10.0	39
53	Watershed-Scale Impacts from Surface Water Disposal of Oil and Gas Wastewater in Western Pennsylvania. Environmental Science & Technology, 2017, 51, 8851-8860.	10.0	65
54	Adsorptive fractionation of dissolved organic matter (DOM) by mineral soil: Macroscale approach and molecular insight. Organic Geochemistry, 2017, 103, 113-124.	1.8	102

#	Article	IF	CITATIONS
55	Technical note: An improved approach to determining background aerosol concentrations with PILS sampling on aircraft. Atmospheric Environment, 2016, 136, 16-20.	4.1	2
56	An integrated spectroscopic and wet chemical approach to investigate grass litter decomposition chemistry. Biogeochemistry, 2016, 128, 107-123.	3.5	40
57	Spills of Hydraulic Fracturing Chemicals on Agricultural Topsoil: Biodegradation, Sorption, and Co-contaminant Interactions. Environmental Science & Technology, 2016, 50, 6071-6078.	10.0	86
58	Downhole Transformation of the Hydraulic Fracturing Fluid Biocide Glutaraldehyde: Implications for Flowback and Produced Water Quality. Environmental Science & Technology, 2016, 50, 11414-11423.	10.0	91
59	Advanced Electrochemical Oxidation of 1,4-Dioxane via Dark Catalysis by Novel Titanium Dioxide (TiO ₂) Pellets. Environmental Science & Technology, 2016, 50, 8817-8826.	10.0	45
60	Fate of carbamazepine, its metabolites, and lamotrigine in soils irrigated with reclaimed wastewater: Sorption, leaching and plant uptake. Chemosphere, 2016, 160, 22-29.	8.2	95
61	Biocides in Hydraulic Fracturing Fluids: A Critical Review of Their Usage, Mobility, Degradation, and Toxicity. Environmental Science & Technology, 2015, 49, 16-32.	10.0	317
62	Effect of biogeochemical redox processes on the fate and transport of As and U at an abandoned uranium mine site: an X-ray absorption spectroscopy study. Environmental Chemistry, 2014, 11, 18.	1.5	11
63	Simultaneous Reduction of Arsenic(V) and Uranium(VI) by Mackinawite: Role of Uranyl Arsenate Precipitate Formation. Environmental Science & Technology, 2014, 48, 14326-14334.	10.0	28
64	Biodegradability of pharmaceutical compounds in agricultural soils irrigated with treated wastewater. Environmental Pollution, 2014, 185, 168-177.	7.5	174
65	Impact of organic carbon and iron bioavailability on the magnetic susceptibility of soils. Geochimica Et Cosmochimica Acta, 2014, 128, 44-57.	3.9	27
66	Analysis of Hydraulic Fracturing Flowback and Produced Waters Using Accurate Mass: Identification of Ethoxylated Surfactants. Analytical Chemistry, 2014, 86, 9653-9661.	6.5	135
67	Direct photodegradation of lamotrigine (an antiepileptic) in simulated sunlight – pH influenced rates and products. Environmental Sciences: Processes and Impacts, 2014, 16, 848-857.	3.5	19
68	Long-term potential of in situ chemical reduction for treatment of polychlorinated biphenyls in soils. Chemosphere, 2014, 114, 144-149.	8.2	17
69	Impact of Hormones in Runoff from the Land Application of Biosolids. Proceedings of the Water Environment Federation, 2014, 2014, 6145-6157.	0.0	0
70	Dissimilatory Reduction and Transformation of Ferrihydrite-Humic Acid Coprecipitates. Environmental Science & Technology, 2013, 47, 13375-13384.	10.0	180
71	Direct Photodegradation of Androstenedione and Testosterone in Natural Sunlight: Inhibition by Dissolved Organic Matter and Reduction of Endocrine Disrupting Potential. Environmental Science & Technology, 2013, 47, 130710075816008.	10.0	12
72	Determination of contaminant levels and remediation efficacy in groundwater at a former in situ recovery uranium mine. Journal of Environmental Monitoring, 2012, 14, 1814.	2.1	25

#	Article	IF	CITATIONS
73	Schwertmannite and Fe oxides formed by biological low-pH Fe(II) oxidation versus abiotic neutralization: Impact on trace metal sequestration. Geochimica Et Cosmochimica Acta, 2012, 76, 29-44.	3.9	100
74	Influence of humic acid imposed changes of ferrihydrite aggregation on microbial Fe(III) reduction. Geochimica Et Cosmochimica Acta, 2012, 85, 326-341.	3.9	167
75	Steroid Hormone Runoff from Agricultural Test Plots Applied with Municipal Biosolids. Environmental Science & Technology, 2012, 46, 2746-2754.	10.0	62
76	Microbial Iron Cycling in Acidic Geothermal Springs of Yellowstone National Park: Integrating Molecular Surveys, Geochemical Processes, and Isolation of Novel Fe-Active Microorganisms. Frontiers in Microbiology, 2012, 3, 109.	3.5	82
77	Testosterone-Mineralizing Culture Enriched from Swine Manure: Characterization of Degradation Pathways and Microbial Community Composition. Environmental Science & Technology, 2011, 45, 6879-6886.	10.0	44
78	Artificial Sweetener Sucralose in U.S. Drinking Water Systems. Environmental Science & Technology, 2011, 45, 8716-8722.	10.0	166
79	Prediction of Contaminant Persistence in Aqueous Phase: A Quantum Chemical Approach. Environmental Science & Technology, 2011, 45, 2236-2242.	10.0	25
80	Arsenic redox transformation by humic substances and Fe minerals. Applied Geochemistry, 2011, 26, S317.	3.0	10
81	Determination of hexamethylphosphoramide and other highly polar phosphoramides in water samples using reversed-phase liquid chromatography/electrospray ionization time-of-flight mass spectrometry. Journal of Chromatography A, 2011, 1218, 6426-6432.	3.7	4
82	Multiple mechanisms of uranium immobilization by <i>Cellulomonas</i> sp. strain ES6. Biotechnology and Bioengineering, 2011, 108, 264-276.	3.3	88
83	Quantum Chemical Prediction of Redox Reactivity and Degradation Pathways for Aqueous Phase Contaminants: An Example with HMPA. Environmental Science & Technology, 2010, 44, 5868-5874.	10.0	21
84	Degradation Kinetics of Testosterone by Manureâ€Borne Bacteria: Influence of Temperature, pH, Glucose Amendments, and Dissolved Oxygen. Journal of Environmental Quality, 2010, 39, 1153-1160.	2.0	41
85	Biogeochemical Redox Processes and their Impact on Contaminant Dynamics. Environmental Science & Technology, 2010, 44, 15-23.	10.0	1,037
86	How electron flow controls contaminant dynamics. Environmental Science & Technology, 2010, 44, 3-6.	10.0	10
87	Arsenic repartitioning during biogenic sulfidization and transformation of ferrihydrite. Geochimica Et Cosmochimica Acta, 2010, 74, 980-994.	3.9	183
88	Redox Transformation of Arsenic by Fe(II)-Activated Goethite (α-FeOOH). Environmental Science & Technology, 2010, 44, 102-108.	10.0	266
89	Heavy Metal–Mineral Associations in Coeur d'Alene River Sediments: A Synchrotron-Based Analysis. Water, Air, and Soil Pollution, 2009, 201, 195-208.	2.4	23
90	Resolving biogeochemical phenomena at high spatial resolution through electron microscopy. Geobiology, 2008, 6, 263-269.	2.4	12

#	Article	IF	CITATIONS
91	Evaluation of Characterization Techniques for Iron Pipe Corrosion Products and Iron Oxide Thin Films. Journal of Environmental Engineering, ASCE, 2008, 134, 835-844.	1.4	19
92	Production of Eight Different Hydride Complexes and Nitrite Release from 2,4,6-Trinitrotoluene by Yarrowia lipolytica. Applied and Environmental Microbiology, 2007, 73, 7898-7905.	3.1	34
93	Phosphate Imposed Limitations on Biological Reduction and Alteration of Ferrihydrite. Environmental Science & Technology, 2007, 41, 166-172.	10.0	160
94	Chapter 12 Phosphate Interactions with Iron (Hydr)oxides: Mineralization Pathways and Phosphorus Retention upon Bioreduction. Developments in Earth and Environmental Sciences, 2007, , 321-348.	0.1	18
95	Chromate Reduction and Retention Processes within Arid Subsurface Environments. Environmental Science & Technology, 2005, 39, 7833-7839.	10.0	41
96	Impact of Ferrihydrite and Anthraquinone-2,6-Disulfonate on the Reductive Transformation of 2,4,6-Trinitrotoluene by a Gram-Positive Fermenting Bacterium. Environmental Science & Technology, 2005, 39, 7126-7133.	10.0	78
97	Use of reversed-phase high-performance liquid chromatography–diode array detection for complete separation of 2,4,6-trinitrotoluene metabolites and EPA Method 8330 explosives: influence of temperature and an ion-pair reagent. Journal of Chromatography A, 2004, 1022, 83-94.	3.7	56
98	Biodegradation of chlorinated solvents in a water unsaturated topsoil. Chemosphere, 2003, 51, 143-152.	8.2	20
99	Catalysis of PAH Biodegradation by Humic Acid Shown in Synchrotron Infrared Studies. Environmental Science & Technology, 2002, 36, 1276-1280.	10.0	103
100	Terrestrial natural sources of trichloromethane (chloroform, CHCl3) – An overview. Biogeochemistry, 2002, 60, 121-139.	3.5	93
101	Temperature effects on sorption of dissolved organic matter on ferrihydrite under dynamic flow and batch conditions. Soil Science Society of America Journal, 0, , .	2.2	3