Roland D Cusick

List of Publications by Year
in descending order

36 papers	1,895 citations	361296 20 h-index	360920 35 g-index
36 all docs	36 docs citations	36 times ranked	2279 citing authors

#	Article	IF	Citations
1	Performance of a pilot-scale continuous flow microbial electrolysis cell fed winery wastewater. Applied Microbiology and Biotechnology, 2011, 89, 2053-2063.	1.7	378
2	Energy Capture from Thermolytic Solutions in Microbial Reverse-Electrodialysis Cells. Science, 2012, 335, 1474-1477.	6.0	232
3	Phosphate recovery as struvite within a single chamber microbial electrolysis cell. Bioresource Technology, 2012, 107, 110-115.	4.8	192
4	Electrochemical struvite precipitation from digestate with a fluidized bed cathode microbial electrolysis cell. Water Research, 2014, 54, 297-306.	5.3	129
5	Extracellular Palladium Nanoparticle Production using Geobacter sulfurreducens. ACS Sustainable Chemistry and Engineering, 2013, 1, 1165-1171.	3.2	109
6	A review and metaâ€analysis of the agricultural potential of struvite as a phosphorus fertilizer. Soil Science Society of America Journal, 2020, 84, 653-671.	1.2	80
7	Characterizing the Impacts of Deposition Techniques on the Performance of MnO₂ Cathodes for Sodium Electrosorption in Hybrid Capacitive Deionization. Environmental Science & Technology, 2017, 51, 12027-12034.	4.6	72
8	Amplifying Progress toward Multiple Development Goals through Resource Recovery from Sanitation. Environmental Science & Technology, 2017, 51, 10765-10776.	4.6	70
9	Capacitive mixing power production from salinity gradient energy enhanced through exoelectrogen-generated ionic currents. Energy and Environmental Science, 2014, 7, 1159-1165.	15.6	69
10	Electrochemical Disinfection in Water and Wastewater Treatment: Identifying Impacts of Water Quality and Operating Conditions on Performance. Environmental Science & Technology, 2021, 55, 3470-3482.	4.6	67
11	Technoeconomic Analysis of Brackish Water Capacitive Deionization: Navigating Tradeoffs between Performance, Lifetime, and Material Costs. Environmental Science & Technology, 2019, 53, 13353-13363.	4.6	59
12	Elucidating the impacts of initial supersaturation and seed crystal loading on struvite precipitation kinetics, fines production, and crystal growth. Water Research, 2018, 132, 252-259.	5.3	51
13	Global Sensitivity Analysis To Characterize Operational Limits and Prioritize Performance Goals of Capacitive Deionization Technologies. Environmental Science & Technology, 2019, 53, 3748-3756.	4.6	41
14	Molecular Tuning of Redoxâ€Copolymers for Selective Electrochemical Remediation. Advanced Functional Materials, 2020, 30, 2004635.	7.8	34
15	Minimal RED Cell Pairs Markedly Improve Electrode Kinetics and Power Production in Microbial Reverse Electrodialysis Cells. Environmental Science & Technology, 2013, 47, 14518-14524.	4.6	33
16	A Combined Modeling and Experimental Study Assessing the Impact of Fluid Pulsation on Charge and Energy Efficiency in Capacitive Deionization. Journal of the Electrochemical Society, 2017, 164, E536-E547.	1.3	31
17	Aligning Product Chemistry and Soil Context for Agronomic Reuse of Human-Derived Resources. Environmental Science & Technology, 2019, 53, 6501-6510.	4.6	28
18	Enhancing capacitive deionization performance with charged structural polysaccharide electrode binders. Water Research, 2019, 148, 388-397.	5.3	28

#	Article	IF	Citations
19	Toward a Regional Phosphorus (Re)cycle in the US Midwest. Journal of Environmental Quality, 2019, 48, 1397-1413.	1.0	22
20	Re-Envisioning Sanitation As a Human-Derived Resource System. Environmental Science & Technology, 2020, 54, 10446-10459.	4.6	20
21	Emerging investigator series: capacitive deionization for selective removal of nitrate and perchlorate: impacts of ion selectivity and operating constraints on treatment costs. Environmental Science: Water Research and Technology, 2020, 6, 925-934.	1.2	18
22	Advancing Sustainable Sanitation and Agriculture through Investments in Human-Derived Nutrient Systems. Environmental Science & Technology, 2020, 54, 9217-9227.	4.6	18
23	Reducing impedance to ionic flux in capacitive deionization with Bi-tortuous activated carbon electrodes coated with asymmetrically charged polyelectrolytes. Water Research X, 2019, 3, 100027.	2.8	17
24	Developing an integrated technology-environment-economics model to simulate food-energy-water systems in Corn Belt watersheds. Environmental Modelling and Software, 2021, 143, 105083.	1.9	16
25	Technoâ€economic feasibility of phosphorus recovery as a coproduct from corn wet milling plants. Cereal Chemistry, 2019, 96, 380-390.	1.1	14
26	Maize and soybean response to phosphorus fertilization with blends of struvite and monoammonium phosphate. Plant and Soil, 2021, 461, 547-563.	1.8	14
27	Recovering phosphorus as a coproduct from corn dry grind plants: A technoâ€economic evaluation. Cereal Chemistry, 2020, 97, 449-458.	1.1	10
28	Evaluating Long-Term Treatment Performance and Cost of Nutrient Removal at Water Resource Recovery Facilities under Stochastic Influent Characteristics Using Artificial Neural Networks as Surrogates for Plantwide Modeling. ACS ES&T Engineering, 2021, 1, 1517-1529.	3.7	9
29	Evaluating agronomic soil phosphorus tests for soils amended with struvite. Geoderma, 2021, 399, 115093.	2.3	9
30	Defining Nutrient Colocation Typologies for Human-Derived Supply and Crop Demand To Advance Resource Recovery. Environmental Science & Technology, 2021, 55, 10704-10713.	4.6	6
31	Statistical and microbial analysis of bio-electrochemical sensors used for carbon monitoring at water resource recovery facilities. Environmental Science: Water Research and Technology, 2022, 8, 2052-2064.	1.2	6
32	Mapping the National Phosphorus Recovery Potential from Centralized Wastewater and Corn Ethanol Infrastructure. Environmental Science & Technology, 2022, 56, 8691-8701.	4.6	5
33	Phosphorus fractionation and protein content control chemical phosphorus removal from corn biorefinery streams. Journal of Environmental Quality, 2020, 49, 220-227.	1.0	3
34	Electrochemical Remediation: Molecular Tuning of Redoxâ€Copolymers for Selective Electrochemical Remediation (Adv. Funct. Mater. 52/2020). Advanced Functional Materials, 2020, 30, 2070346.	7.8	3
35	Modeling the Plantwide Implications of Struvite Loss from Sidestream Precipitation Reactors. ACS ES&T Engineering, 2022, 2, 874-885.	3.7	1
36	Membrane-based electrochemical technologies: III. Selective ion removal and recovery. , 2022, , 403-444.		1