

Krista Rule Wigginton

List of Publications by Citations

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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.

64
papers

2,545
citations

24
h-index

50
g-index

79
ext. papers

3,624
ext. citations

8.6
avg, IF

5.84
L-index

#	Paper	IF	Citations
64	Survivability, Partitioning, and Recovery of Enveloped Viruses in Untreated Municipal Wastewater. <i>Environmental Science & Technology</i> , 2016 , 50, 5077-85	10.3	296
63	Virus inactivation mechanisms: impact of disinfectants on virus function and structural integrity. <i>Environmental Science & Technology</i> , 2012 , 46, 12069-78	10.3	230
62	Nanomaterial enabled biosensors for pathogen monitoring - a review. <i>Environmental Science & Technology</i> , 2010 , 44, 3656-69	10.3	208
61	Toward a Comprehensive Strategy to Mitigate Dissemination of Environmental Sources of Antibiotic Resistance. <i>Environmental Science & Technology</i> , 2017 , 51, 13061-13069	10.3	144
60	Sunlight-mediated inactivation of health-relevant microorganisms in water: a review of mechanisms and modeling approaches. <i>Environmental Sciences: Processes and Impacts</i> , 2018 , 20, 1089-1122	4.3	131
59	SARS-CoV-2 RNA in Wastewater Settled Solids Is Associated with COVID-19 Cases in a Large Urban Sewershed. <i>Environmental Science & Technology</i> , 2021 , 55, 488-498	10.3	120
58	Tracking COVID-19 with wastewater. <i>Nature Biotechnology</i> , 2020 , 38, 1151-1153	44.5	119
57	Virus disinfection mechanisms: the role of virus composition, structure, and function. <i>Current Opinion in Virology</i> , 2012 , 2, 84-9	7.5	108
56	Degradation of Extracellular Antibiotic Resistance Genes with UV Treatment. <i>Environmental Science & Technology</i> , 2017 , 51, 6185-6192	10.3	89
55	Oxidation of virus proteins during UV(254) and singlet oxygen mediated inactivation. <i>Environmental Science & Technology</i> , 2010 , 44, 5437-43	10.3	75
54	Environmental Engineers and Scientists Have Important Roles to Play in Stemming Outbreaks and Pandemics Caused by Enveloped Viruses. <i>Environmental Science & Technology</i> , 2020 , 54, 3736-3739	10.3	73
53	Reactivity of Enveloped Virus Genome, Proteins, and Lipids with Free Chlorine and UV. <i>Environmental Science & Technology</i> , 2018 , 52, 7698-7708	10.3	65
52	Impact of virus aggregation on inactivation by peracetic acid and implications for other disinfectants. <i>Environmental Science & Technology</i> , 2011 , 45, 7710-7	10.3	60
51	Subtle differences in virus composition affect disinfection kinetics and mechanisms. <i>Applied and Environmental Microbiology</i> , 2013 , 79, 3455-67	4.8	57
50	Halogenation of bisphenol-A, triclosan, and phenols in chlorinated waters containing iodide. <i>Environmental Science & Technology</i> , 2013 , 47, 6764-72	10.3	49
49	Gold-coated polycarbonate membrane filter for pathogen concentration and SERS-based detection. <i>Analyst, The</i> , 2010 , 135, 1320-6	5	36
48	Scaling of SARS-CoV-2 RNA in Settled Solids from Multiple Wastewater Treatment Plants to Compare Incidence Rates of Laboratory-Confirmed COVID-19 in Their Sewersheds. <i>Environmental Science and Technology Letters</i> , 2021 , 8, 398-404	11	31

47	An Environmental Science and Engineering Framework for Combating Antimicrobial Resistance. <i>Environmental Engineering Science</i> , 2018 , 35, 1005-1011	2	29
46	Microbial and Viral Communities and Their Antibiotic Resistance Genes Throughout a Hospital Wastewater Treatment System. <i>Frontiers in Microbiology</i> , 2020 , 11, 153	5.7	27
45	Nucleic Acid Photolysis by UV and the Impact of Virus Encapsidation. <i>Environmental Science & Technology</i> , 2018 , 52, 10408-10415	10.3	27
44	Urine Bacterial Community Convergence through Fertilizer Production: Storage, Pasteurization, and Struvite Precipitation. <i>Environmental Science & Technology</i> , 2016 , 50, 11619-11626	10.3	26
43	UV radiation induces genome-mediated, site-specific cleavage in viral proteins. <i>ChemBioChem</i> , 2012 , 13, 837-45	3.8	25
42	Wastewater-based estimation of the effective reproductive number of SARS-CoV-2		25
41	Trends in Antimicrobial Resistance Genes in Manure Blend Pits and Long-Term Storage Across Dairy Farms with Comparisons to Antimicrobial Usage and Residual Concentrations. <i>Environmental Science & Technology</i> , 2019 , 53, 2405-2415	10.3	24
40	UV Disinfection of Human Norovirus: Evaluating Infectivity Using a Genome-Wide PCR-Based Approach. <i>Environmental Science & Technology</i> , 2020 , 54, 2851-2858	10.3	22
39	Direct and Indirect Photochemical Reactions in Viral RNA Measured with RT-qPCR and Mass Spectrometry. <i>Environmental Science & Technology</i> , 2016 , 50, 13371-13379	10.3	21
38	The Environmental Microbiology Minimum Information (EMMI) Guidelines: qPCR and dPCR Quality and Reporting for Environmental Microbiology. <i>Environmental Science & Technology</i> , 2021 , 55, 10210-10223	10.3	21
37	Humidity and Deposition Solution Play a Critical Role in Virus Inactivation by Heat Treatment of N95 Respirators. <i>MSphere</i> , 2020 , 5,	5	16
36	Validation of N95 Filtering Facepiece Respirator Decontamination Methods Available at a Large University Hospital. <i>Open Forum Infectious Diseases</i> , 2021 , 8, ofaa610	1	14
35	Fate of the Urinary Tract Virus BK Human Polyomavirus in Source-Separated Urine. <i>Applied and Environmental Microbiology</i> , 2018 , 84,	4.8	13
34	Research Needs for Wastewater Handling in Virus Outbreak Response. <i>Environmental Science & Technology</i> , 2017 , 51, 2534-2535	10.3	12
33	Optimizing extraction and analysis of pharmaceuticals in human urine, struvite, food crops, soil, and lysimeter water by liquid chromatography-tandem mass spectrometry. <i>Analytical Methods</i> , 2017 , 9, 5952-5962	2.3	11
32	Validation of N95 filtering facepiece respirator decontamination methods available at a large university hospital		10
31	Effect of storage conditions on SARS-CoV-2 RNA quantification in wastewater solids. <i>PeerJ</i> , 2021 , 9, e11933	3.3	9
30	High-Frequency, High-Throughput Quantification of SARS-CoV-2 RNA in Wastewater Settled Solids at Eight Publicly Owned Treatment Works in Northern California Shows Strong Association with COVID-19 Incidence. <i>MSystems</i> , 2021 , 6, e0082921	7.6	9

29	Respiratory Syncytial Virus (RSV) RNA in Wastewater Settled Solids Reflects RSV Clinical Positivity Rates. <i>Environmental Science and Technology Letters</i> , 2022 , 9, 173-178	11	7
28	Comparison of ultrafiltration and iron chloride flocculation in the preparation of aquatic viromes from contrasting sample types. <i>PeerJ</i> , 2021 , 9, e11111	3.1	7
27	Metagenomic Quantification of Genes with Internal Standards. <i>MBio</i> , 2021 , 12,	7.8	7
26	Predictive Modeling of Virus Inactivation by UV. <i>Environmental Science & Technology</i> , 2021 , 55, 3322-3332	11.3	6
25	Detection of SARS-CoV-2 Variants Mu, Beta, Gamma, Lambda, Delta, Alpha, and Omicron in Wastewater Settled Solids Using Mutation-Specific Assays Is Associated with Regional Detection of Variants in Clinical Samples.. <i>Applied and Environmental Microbiology</i> , 2022 , e0004522	4.8	6
24	The utility of flow cytometry for potable reuse. <i>Current Opinion in Biotechnology</i> , 2019 , 57, 42-49	11.4	5
23	Fate of Extracellular DNA in the Production of Fertilizers from Source-Separated Urine. <i>Environmental Science & Technology</i> , 2020 , 54, 1808-1815	10.3	5
22	High Throughput RNA Extraction and PCR Inhibitor Removal of Settled Solids for Wastewater Surveillance of SARS-CoV-2 RNA v1		5
21	Effect of storage conditions on SARS-CoV-2 RNA quantification in wastewater solids		5
20	SARS-CoV-2 RNA is enriched by orders of magnitude in primary settled solids relative to liquid wastewater at publicly owned treatment works.. <i>Environmental Science: Water Research and Technology</i> , 2022 , 8, 757-770	4.2	5
19	High Throughput pre-analytical processing of wastewater settled solids for SARS-CoV-2 RNA analyses v2		4
18	High Throughput RNA Extraction and PCR Inhibitor Removal of Settled Solids for Wastewater Surveillance of SARS-CoV-2 RNA v2		4
17	High Throughput pre-analytical processing of wastewater settled solids for SARS-CoV-2 RNA analyses v1		4
16	Extraction of RNA from Wastewater Primary Solids Using a Direct Extraction Method for Downstream SARS-CoV-2 RNA Quantification v1		3
15	One-Step RT-ddPCR for Detection of SARS-CoV-2, Bovine Coronavirus, and PMMoV RNA in RNA Derived from Wastewater or Primary Settled Solids v1		3
14	Estimating relative abundance of two SARS-CoV-2 variants through wastewater surveillance at two large metropolitan sites		3
13	SARS-CoV-2 RNA is enriched by orders of magnitude in solid relative to liquid wastewater at publicly owned treatment works		3
12	Humidity and deposition solution play a critical role in virus inactivation by heat treatment on N95 respirators		3

11	High Throughput SARS-COV-2, PMMOV, and BCoV quantification in settled solids using digital RT-PCR v1		3
10	Integrated Cell Culture-Mass Spectrometry Method for Infectious Human Virus Monitoring. <i>Environmental Science and Technology Letters</i> , 2019 , 6, 407-412	11	2
9	Tetracycline, sulfadimethoxine, and antibiotic resistance gene dynamics during anaerobic digestion of dairy manure. <i>Journal of Environmental Quality</i> , 2021 , 50, 694-705	3-4	2
8	Detection of SARS-CoV-2 variant Mu, Beta, Gamma, Lambda, Delta, Alpha, and Omicron in wastewater settled solids using mutation-specific assays is associated with regional detection of variants in clinical samples		1
7	Comparison of ultrafiltration and iron chloride flocculation in the preparation of aquatic viromes from contrasting sample types		1
6	Sunlight Inactivation of Human Norovirus and Bacteriophage MS2 Using a Genome-Wide PCR-Based Approach and Enzyme Pretreatment. <i>Environmental Science & Technology</i> , 2021 , 55, 8783-8792 ¹	10,3	1
5	High frequency, high throughput quantification of SARS-CoV-2 RNA in wastewater settled solids at eight publicly owned treatment works in Northern California shows strong association with COVID-19 incidence		1
4	Reactivity of Viral Nucleic Acids with Chlorine and the Impact of Virus Encapsidation.. <i>Environmental Science & Technology</i> , 2021 ,	10,3	1
3	A snapshot of the global drinking water virome: Diversity and metabolic potential vary with residual disinfectant use.. <i>Water Research</i> , 2022 , 218, 118484	12,5	1
2	Fate of pharmaceutical and biological contaminants through the preparation and application of urine derived fertilizers. <i>Proceedings of the Water Environment Federation</i> , 2015 , 2015, 1994-2006		
1	Impact of service line replacement on lead, cadmium, and other drinking water quality parameters in Flint, Michigan. <i>Environmental Science: Water Research and Technology</i> , 2021 , 7, 797-808	4,2	