Krista Rule Wigginton

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.

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	Respiratory Syncytial Virus (RSV) RNA in Wastewater Settled Solids Reflects RSV Clinical Positivity Rates. *Environmental Science and Technology Letters*, **2022**, 9, 173-178	11	7
63	SARS-CoV-2 RNA is enriched by orders of magnitude in primary settled solids relative to liquid wastewater at publicly owned treatment works.. *Environmental Science: Water Research and Technology*, **2022**, 8, 757-770	4.2	5
62	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.. *Applied and Environmental Microbiology*, **2022**, e0004522	4.8	6
61	A snapshot of the global drinking water virome: Diversity and metabolic potential vary with residual disinfectant use.. *Water Research*, **2022**, 218, 118484	12.5	1
60	Validation of N95 Filtering Facepiece Respirator Decontamination Methods Available at a Large University Hospital. *Open Forum Infectious Diseases*, **2021**, 8, ofaa610	1	14
59	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. *Environmental Science and Technology Letters*, **2021**, 8, 398-404	11	31
58	Comparison of ultrafiltration and iron chloride flocculation in the preparation of aquatic viromes from contrasting sample types. *PeerJ*, **2021**, 9, e11111	3.1	7
57	Tetracycline, sulfadimethoxine, and antibiotic resistance gene dynamics during anaerobic digestion of dairy manure. *Journal of Environmental Quality*, **2021**, 50, 694-705	3.4	2
56	Sunlight Inactivation of Human Norovirus and Bacteriophage MS2 Using a Genome-Wide PCR-Based Approach and Enzyme Pretreatment. *Environmental Science & Technology*, **2021**, 55, 8783-8792	10.3	1
55	The Environmental Microbiology Minimum Information (EMMI) Guidelines: qPCR and dPCR Quality and Reporting for Environmental Microbiology. *Environmental Science & Technology*, **2021**, 55, 10210-10223	10.3	31
54	SARS-CoV-2 RNA in Wastewater Settled Solids Is Associated with COVID-19 Cases in a Large Urban Sewershed. *Environmental Science & Technology*, **2021**, 55, 488-498	10.3	120
53	Impact of service line replacement on lead, cadmium, and other drinking water quality parameters in Flint, Michigan. *Environmental Science: Water Research and Technology*, **2021**, 7, 797-808	4.2	
52	Predictive Modeling of Virus Inactivation by UV. *Environmental Science & Technology*, **2021**, 55, 3322-3332	10.3	6
51	Metagenomic Quantification of Genes with Internal Standards. *MBio*, **2021**, 12,	7.8	7
50	Effect of storage conditions on SARS-CoV-2 RNA quantification in wastewater solids. *PeerJ*, **2021**, 9, e11933	3.1	9
49	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. *MSystems*, **2021**, 6, e0082921	7.6	9
48	Reactivity of Viral Nucleic Acids with Chlorine and the Impact of Virus Encapsidation.. *Environmental Science & Technology*, **2021**,	10.3	1

47	Microbial and Viral Communities and Their Antibiotic Resistance Genes Throughout a Hospital Wastewater Treatment System. *Frontiers in Microbiology*, **2020**, 11, 153	5.7	27
46	Environmental Engineers and Scientists Have Important Roles to Play in Stemming Outbreaks and Pandemics Caused by Enveloped Viruses. *Environmental Science & Technology*, **2020**, 54, 3736-3739	10.3	73
45	Fate of Extracellular DNA in the Production of Fertilizers from Source-Separated Urine. *Environmental Science & Technology*, **2020**, 54, 1808-1815	10.3	5
44	UV Disinfection of Human Norovirus: Evaluating Infectivity Using a Genome-Wide PCR-Based Approach. *Environmental Science & Technology*, **2020**, 54, 2851-2858	10.3	22
43	Humidity and Deposition Solution Play a Critical Role in Virus Inactivation by Heat Treatment of N95 Respirators. *MSphere*, **2020**, 5,	5	16
42	Tracking COVID-19 with wastewater. *Nature Biotechnology*, **2020**, 38, 1151-1153	44.5	119
41	The utility of flow cytometry for potable reuse. *Current Opinion in Biotechnology*, **2019**, 57, 42-49	11.4	5
40	Trends in Antimicrobial Resistance Genes in Manure Blend Pits and Long-Term Storage Across Dairy Farms with Comparisons to Antimicrobial Usage and Residual Concentrations. *Environmental Science & Technology*, **2019**, 53, 2405-2415	10.3	24
39	Integrated Cell Culture-Mass Spectrometry Method for Infectious Human Virus Monitoring. *Environmental Science and Technology Letters*, **2019**, 6, 407-412	11	2
38	Fate of the Urinary Tract Virus BK Human Polyomavirus in Source-Separated Urine. *Applied and Environmental Microbiology*, **2018**, 84,	4.8	13
37	Sunlight-mediated inactivation of health-relevant microorganisms in water: a review of mechanisms and modeling approaches. *Environmental Sciences: Processes and Impacts*, **2018**, 20, 1089-1122	4.3	131
36	Nucleic Acid Photolysis by UV and the Impact of Virus Encapsidation. *Environmental Science & Technology*, **2018**, 52, 10408-10415	10.3	27
35	Reactivity of Enveloped Virus Genome, Proteins, and Lipids with Free Chlorine and UV. *Environmental Science & Technology*, **2018**, 52, 7698-7708	10.3	65
34	An Environmental Science and Engineering Framework for Combating Antimicrobial Resistance. *Environmental Engineering Science*, **2018**, 35, 1005-1011	2	29
33	Research Needs for Wastewater Handling in Virus Outbreak Response. *Environmental Science & Technology*, **2017**, 51, 2534-2535	10.3	12
32	Toward a Comprehensive Strategy to Mitigate Dissemination of Environmental Sources of Antibiotic Resistance. *Environmental Science & Technology*, **2017**, 51, 13061-13069	10.3	144
31	Optimizing extraction and analysis of pharmaceuticals in human urine, struvite, food crops, soil, and lysimeter water by liquid chromatography-tandem mass spectrometry. *Analytical Methods*, **2017**, 9, 5952-5962	3.2	11
30	Degradation of Extracellular Antibiotic Resistance Genes with UV Treatment. *Environmental Science & Technology*, **2017**, 51, 6185-6192	10.3	89

29	Direct and Indirect Photochemical Reactions in Viral RNA Measured with RT-qPCR and Mass Spectrometry. *Environmental Science & Technology*, **2016**, 50, 13371-13379	10.3	21
28	Survivability, Partitioning, and Recovery of Enveloped Viruses in Untreated Municipal Wastewater. *Environmental Science & Technology*, **2016**, 50, 5077-85	10.3	296
27	Urine Bacterial Community Convergence through Fertilizer Production: Storage, Pasteurization, and Struvite Precipitation. *Environmental Science & Technology*, **2016**, 50, 11619-11626	10.3	26
26	Fate of pharmaceutical and biological contaminants through the preparation and application of urine derived fertilizers. *Proceedings of the Water Environment Federation*, **2015**, 2015, 1994-2006		
25	Halogenation of bisphenol-A, triclosan, and phenols in chlorinated waters containing iodide. *Environmental Science & Technology*, **2013**, 47, 6764-72	10.3	49
24	Subtle differences in virus composition affect disinfection kinetics and mechanisms. *Applied and Environmental Microbiology*, **2013**, 79, 3455-67	4.8	57
23	Virus disinfection mechanisms: the role of virus composition, structure, and function. *Current Opinion in Virology*, **2012**, 2, 84-9	7.5	108
22	Virus inactivation mechanisms: impact of disinfectants on virus function and structural integrity. *Environmental Science & Technology*, **2012**, 46, 12069-78	10.3	230
21	UV radiation induces genome-mediated, site-specific cleavage in viral proteins. *ChemBioChem*, **2012** , 13, 837-45	3.8	25
20	Impact of virus aggregation on inactivation by peracetic acid and implications for other disinfectants. *Environmental Science & Technology*, **2011**, 45, 7710-7	10.3	60
19	Nanomaterial enabled biosensors for pathogen monitoring - a review. *Environmental Science & Technology*, **2010**, 44, 3656-69	10.3	208
18	Oxidation of virus proteins during UV(254) and singlet oxygen mediated inactivation. *Environmental Science & Technology*, **2010**, 44, 5437-43	10.3	75
17	Gold-coated polycarbonate membrane filter for pathogen concentration and SERS-based detection. *Analyst, The*, **2010**, 135, 1320-6	5	36
16	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
15	High Throughput pre-analytical processing of wastewater settled solids for SARS-CoV-2 RNA analyses v2		4
14	High Throughput RNA Extraction and PCR Inhibitor Removal of Settled Solids for Wastewater Surveillance of SARS-CoV-2 RNA v2		4
13	Extraction of RNA from Wastewater Primary Solids Using a Direct Extraction Method for Downstream SARS-CoV-2 RNA Quantification v1		3
12	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

List of Publications

11	Estimating relative abundance of two SARS-CoV-2 variants through wastewater surveillance at two large metropolitan sites	3
10	SARS-CoV-2 RNA is enriched by orders of magnitude in solid relative to liquid wastewater at publicly owned treatment works	3
9	Validation of N95 filtering facepiece respirator decontamination methods available at a large university hospital	10
8	Humidity and deposition solution play a critical role in virus inactivation by heat treatment on N95 respirators	3
7	Comparison of ultrafiltration and iron chloride flocculation in the preparation of aquatic viromes from contrasting sample types	1
6	High Throughput RNA Extraction and PCR Inhibitor Removal of Settled Solids for Wastewater Surveillance of SARS-CoV-2 RNA v1	5
5	High Throughput pre-analytical processing of wastewater settled solids for SARS-CoV-2 RNA analyses v1	4
4	Wastewater-based estimation of the effective reproductive number of SARS-CoV-2	25
3	High Throughput SARS-COV-2, PMMOV, and BCoV quantification in settled solids using digital RT-PCR v1	3
2	Effect of storage conditions on SARS-CoV-2 RNA quantification in wastewater solids	5
1	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