Krista Rule Wigginton

List of Publications by Year
in descending order

56	4,623	159358	143772
papers	citations	30 h-index	57 g-index

79	79	79	4911
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Survivability, Partitioning, and Recovery of Enveloped Viruses in Untreated Municipal Wastewater. Environmental Science & Technology, 2016, 50, 5077-5085.	4.6	482
2	Wastewater-Based Epidemiology: Global Collaborative to Maximize Contributions in the Fight Against COVID-19. Environmental Science & Technology, 2020, 54, 7754-7757.	4.6	337
3	Virus Inactivation Mechanisms: Impact of Disinfectants on Virus Function and Structural Integrity. Environmental Science & Technology, 2012, 46, 12069-12078.	4.6	311
4	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.	4.6	286
5	Nanomaterial Enabled Biosensors for Pathogen Monitoring - A Review. Environmental Science & Technology, 2010, 44, 3656-3669.	4.6	246
6	Toward a Comprehensive Strategy to Mitigate Dissemination of Environmental Sources of Antibiotic Resistance. Environmental Science & Technology, 2017, 51, 13061-13069.	4.6	236
7	Tracking COVID-19 with wastewater. Nature Biotechnology, 2020, 38, 1151-1153.	9.4	229
8	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.	1.7	180
9	Virus disinfection mechanisms: the role of virus composition, structure, and function. Current Opinion in Virology, 2012, 2, 84-89.	2.6	148
10	Degradation of Extracellular Antibiotic Resistance Genes with UV₂₅₄ Treatment. Environmental Science & Technology, 2017, 51, 6185-6192.	4.6	129
11	Reactivity of Enveloped Virus Genome, Proteins, and Lipids with Free Chlorine and UV₂₅₄. Environmental Science & Technology, 2018, 52, 7698-7708.	4.6	117
12	The Environmental Microbiology Minimum Information (EMMI) Guidelines: qPCR and dPCR Quality and Reporting for Environmental Microbiology. Environmental Science & Technology, 2021, 55, 10210-10223.	4.6	117
13	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.	4.6	94
14	Wastewater-Based Estimation of the Effective Reproductive Number of SARS-CoV-2. Environmental Health Perspectives, 2022, 130, .	2.8	92
15	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.	3.9	89
16	Oxidation of Virus Proteins during UV254 and Singlet Oxygen Mediated Inactivation. Environmental Science & Technology, 2010, 44, 5437-5443.	4.6	84
17	Wastewater-Based Detection of Two Influenza Outbreaks. Environmental Science and Technology Letters, 2022, 9, 687-692.	3.9	80
18	Impact of Virus Aggregation on Inactivation by Peracetic Acid and Implications for Other Disinfectants. Environmental Science & Technology, 2011, 45, 7710-7717.	4.6	77

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19	Subtle Differences in Virus Composition Affect Disinfection Kinetics and Mechanisms. Applied and Environmental Microbiology, 2013, 79, 3455-3467.	1.4	76
20	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.	1.7	70
21	Microbial and Viral Communities and Their Antibiotic Resistance Genes Throughout a Hospital Wastewater Treatment System. Frontiers in Microbiology, 2020, 11, 153.	1.5	65
22	Respiratory Syncytial Virus (RSV) RNA in Wastewater Settled Solids Reflects RSV Clinical Positivity Rates. Environmental Science and Technology Letters, 2022, 9, 173-178.	3.9	65
23	Halogenation of Bisphenol-A, Triclosan, and Phenols in Chlorinated Waters Containing Iodide. Environmental Science & Technology, 2013, 47, 6764-6772.	4.6	59
24	Nucleic Acid Photolysis by UV₂₅₄ and the Impact of Virus Encapsidation. Environmental Science & Technology, 2018, 52, 10408-10415.	4.6	49
25	An Environmental Science and Engineering Framework for Combating Antimicrobial Resistance. Environmental Engineering Science, 2018, 35, 1005-1011.	0.8	47
26	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.	1.2	46
27	UV Disinfection of Human Norovirus: Evaluating Infectivity Using a Genome-Wide PCR-Based Approach. Environmental Science & Technology, 2020, 54, 2851-2858.	4.6	44
28	Urine Bacterial Community Convergence through Fertilizer Production: Storage, Pasteurization, and Struvite Precipitation. Environmental Science & Technology, 2016, 50, 11619-11626.	4.6	42
29	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, 88, e0004522.	1.4	40
30	Effect of storage conditions on SARS-CoV-2 RNA quantification in wastewater solids. PeerJ, 2021, 9, e11933.	0.9	39
31	Gold-coated polycarbonate membrane filter for pathogen concentration and SERS-based detection. Analyst, The, 2010, 135, 1320.	1.7	38
32	UV Radiation Induces Genomeâ€Mediated, Siteâ€Specific Cleavage in Viral Proteins. ChemBioChem, 2012, 13, 837-845.	1.3	37
33	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.	4.6	37
34	Modeling infection from SARS-CoV-2 wastewater concentrations: promise, limitations, and future directions. Journal of Water and Health, 2022, 20, 1197-1211.	1.1	33
35	Direct and Indirect Photochemical Reactions in Viral RNA Measured with RT-qPCR and Mass Spectrometry. Environmental Science & Technology, 2016, 50, 13371-13379.	4.6	30
36	Humidity and Deposition Solution Play a Critical Role in Virus Inactivation by Heat Treatment of N95 Respirators. MSphere, 2020, 5, .	1.3	28

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37	Predictive Modeling of Virus Inactivation by UV. Environmental Science & Technology, 2021, 55, 3322-3332.	4.6	27
38	Validation of N95 Filtering Facepiece Respirator Decontamination Methods Available at a Large University Hospital. Open Forum Infectious Diseases, 2021, 8, ofaa610.	0.4	26
39	Estimating Relative Abundance of 2 SARS-CoV-2 Variants through Wastewater Surveillance at 2 Large Metropolitan Sites, United States. Emerging Infectious Diseases, 2022, 28, 940-947.	2.0	25
40	Reactivity of Viral Nucleic Acids with Chlorine and the Impact of Virus Encapsidation. Environmental Science & Technology, 2022, 56, 218-227.	4.6	19
41	Fate of the Urinary Tract Virus BK Human Polyomavirus in Source-Separated Urine. Applied and Environmental Microbiology, 2018, 84, .	1.4	18
42	Metagenomic Quantification of Genes with Internal Standards. MBio, 2021, 12, .	1.8	18
43	Comparison of ultrafiltration and iron chloride flocculation in the preparation of aquatic viromes from contrasting sample types. PeerJ, 2021, 9, e11111.	0.9	18
44	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.	1.3	14
45	A snapshot of the global drinking water virome: Diversity and metabolic potential vary with residual disinfectant use. Water Research, 2022, 218, 118484.	5.3	14
46	Research Needs for Wastewater Handling in Virus Outbreak Response. Environmental Science & Technology, 2017, 51, 2534-2535.	4.6	12
47	Wireless Sensors for Measuring Drinking Water Quality in Building Plumbing: Deployments and Insights from Continuous and Intermittent Water Supply Systems. ACS ES&T Engineering, 2022, 2, 423-433.	3.7	11
48	Fate of Extracellular DNA in the Production of Fertilizers from Source-Separated Urine. Environmental Science & Technology, 2020, 54, 1808-1815.	4.6	10
49	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.	4.6	10
50	The utility of flow cytometry for potable reuse. Current Opinion in Biotechnology, 2019, 57, 42-49.	3.3	9
51	Tetracycline, sulfadimethoxine, and antibiotic resistance gene dynamics during anaerobic digestion of dairy manure. Journal of Environmental Quality, 2021, 50, 694-705.	1.0	9
52	Integrated Cell Culture-Mass Spectrometry Method for Infectious Human Virus Monitoring. Environmental Science and Technology Letters, 2019, 6, 407-412.	3.9	5
53	Application of plasma for the removal of pharmaceuticals in synthetic urine. Environmental Science: Water Research and Technology, 2022, 8, 523-533.	1.2	5
54	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.	1.2	1

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55	Impact of Disaster Research on the Development of Early Career Researchers: Lessons Learned from the Wastewater Monitoring Pandemic Response Efforts. Environmental Science & Technology, 2022, 56, 4724-4727.	4.6	1
56	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.	0.0	0