Jake O'Brien

List of Publications by Year
in descending order

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112 papers	6,405 citations	81900 39 h-index	76900 74 g-index
114 all docs	114 docs citations	114 times ranked	5525 citing authors

#	Article	IF	Citations
1	First confirmed detection of SARS-CoV-2 in untreated wastewater in Australia: A proof of concept for the wastewater surveillance of COVID-19 in the community. Science of the Total Environment, 2020, 728, 138764.	8.0	1,393
2	Wastewater-based epidemiology biomarkers: Past, present and future. TrAC - Trends in Analytical Chemistry, 2018, 105, 453-469.	11.4	327
3	SARS-CoV-2 RNA monitoring in wastewater as a potential early warning system for COVID-19 transmission in the community: A temporal case study. Science of the Total Environment, 2021, 761, 144216.	8.0	218
4	Measuring biomarkers in wastewater as a new source of epidemiological information: Current state and future perspectives. Environment International, 2017, 99, 131-150.	10.0	209
5	Accumulation and fate of nano- and micro-plastics and associated contaminants in organisms. TrAC - Trends in Analytical Chemistry, 2019, 111, 139-147.	11.4	187
6	Spatioâ€temporal assessment of illicit drug use at large scale: evidence from 7 years of international wastewater monitoring. Addiction, 2020, 115, 109-120.	3.3	154
7	Identification and quantification of selected plastics in biosolids by pressurized liquid extraction combined with double-shot pyrolysis gas chromatographyâ€“mass spectrometry. Science of the Total Environment, 2020, 715, 136924.	8.0	145
8	Quantitative Analysis of Selected Plastics in High-Commercial-Value Australian Seafood by Pyrolysis Gas Chromatography Mass Spectrometry. Environmental Science & Technology, 2020, 54, 9408-9417.	10.0	143
9	A Model to Estimate the Population Contributing to the Wastewater Using Samples Collected on Census Day. Environmental Science & Technology, 2014, 48, 517-525.	10.0	131
10	Wastewater treatment plants as a source of plastics in the environment: a review of occurrence, methods for identification, quantification and fate. Environmental Science: Water Research and Technology, 2019, 5, 1908-1931.	2.4	112
11	Social, demographic, and economic correlates of food and chemical consumption measured by wastewater-based epidemiology. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21864-21873.	7.1	104
12	Using quantitative wastewater analysis to measure daily usage of conventional and emerging illicit drugs at an annual music festival. Drug and Alcohol Review, 2013, 32, 594-602.	2.1	103
13	Airborne emissions of microplastic fibres from domestic laundry dryers. Science of the Total Environment, 2020, 747, 141175.	8.0	99
14	Impact of in-Sewer Degradation of Pharmaceutical and Personal Care Products (PPCPs) Population Markers on a Population Model. Environmental Science & Technology, 2017, 51, 3816-3823.	10.0	96
15	Wastewater analysis of Census day samples to investigate per capita input of organophosphorus flame retardants and plasticizers into wastewater. Chemosphere, 2015, 138, 328-334.	8.2	85
16	Comparative measurement and quantitative risk assessment of alcohol consumption through wastewater-based epidemiology: An international study in 20 cities. Science of the Total Environment, 2016, 565, 977-983.	8.0	85
17	Multi-year inter-laboratory exercises for the analysis of illicit drugs and metabolites in wastewater: Development of a quality control system. TrAC - Trends in Analytical Chemistry, 2018, 103, 34-43.	11.4	85
18	Spatial variations in the consumption of illicit stimulant drugs across Australia: A nationwide application of wastewater-based epidemiology. Science of the Total Environment, 2016, 568, 810-818.	8.0	84

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19	Plastics in biosolids from 1950 to 2016: A function of global plastic production and consumption. Water Research, 2021, 201, 117367.	11.3	77
20	Assessment of drugs and personal care products biomarkers in the influent and effluent of two wastewater treatment plants in Ho Chi Minh City, Vietnam. Science of the Total Environment, 2018, 631-632, 469-475.	8.0	76
21	Measuring selected PPCPs in wastewater to estimate the population in different cities in China. Science of the Total Environment, 2016, 568, 164-170.	8.0	75
22	An assessment of quality assurance/quality control efforts in high resolution mass spectrometry non-target workflows for analysis of environmental samples. TrAC - Trends in Analytical Chemistry, 2020, 133, 116063.	11.4	73
23	Medium-Chain Chlorinated Paraffins (CPs) Dominate in Australian Sewage Sludge. Environmental Science & Technology, 2017, 51, 3364-3372.	10.0	72
24	Plastics contamination of store-bought rice. Journal of Hazardous Materials, 2021, 416, 125778.	12.4	70
25	Harnessing the Power of the Census: Characterizing Wastewater Treatment Plant Catchment Populations for Wastewater-Based Epidemiology. Environmental Science & Technology, 2019, 53, 10303-10311.	10.0	69
26	Systematic and Day-to-Day Effects of Chemical-Derived Population Estimates on Wastewater-Based Drug Epidemiology. Environmental Science & Technology, 2015, 49, 999-1008.	10.0	65
27	Measuring spatial and temporal trends of nicotine and alcohol consumption in Australia using wastewaterâ€based epidemiology. Addiction, 2018, 113, 1127-1136.	3.3	62
28	Release of Plastics to Australian Land from Biosolids End-Use. Environmental Science & Technology, 2020, 54, 15132-15141.	10.0	62
29	Cocaine, MDMA and methamphetamine residues in wastewater: Consumption trends (2009â€“2015) in South East Queensland, Australia. Science of the Total Environment, 2016, 568, 803-809.	8.0	61
30	A National Wastewater Monitoring Program for a better understanding of public health: A case study using the Australian Census. Environment International, 2019, 122, 400-411.	10.0	59
31	LC-HRMS suspect screening to show spatial patterns of New Psychoactive Substances use in Australia. Science of the Total Environment, 2019, 650, 2181-2187.	8.0	58
32	Refining the excretion factors of methadone and codeine for wastewater analysis â€" Combining data from pharmacokinetic and wastewater studies. Environment International, 2016, 94, 307-314.	10.0	49
33	Degradation of Herbicides in the Tropical Marine Environment: Influence of Light and Sediment. PLoS ONE, 2016, 11, e0165890.	2.5	49
34	Plastic particles in soil: state of the knowledge on sources, occurrence and distribution, analytical methods and ecological impacts. Environmental Sciences: Processes and Impacts, 2021, 23, 240-274.	3.5	44
35	Current and future perspectives for wastewater-based epidemiology as a monitoring tool for pharmaceutical use. Science of the Total Environment, 2021, 789, 148047.	8.0	44
36	Urinary Concentrations of Bisphenols in the Australian Population and Their Association with the Per Capita Mass Loads in Wastewater. Environmental Science & Technology, 2020, 54, 10141-10148.	10.0	43

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37	Degradability of creatinine under sewer conditions affects its potential to be used as biomarker in sewage epidemiology. Water Research, 2014, 55, 272-279.	11.3	42
38	Considerations for assessing stability of wastewater-based epidemiology biomarkers using biofilm-free and sewer reactor tests. Science of the Total Environment, 2020, 709, 136228.	8.0	42
39	Assessment of drugs of abuse in a wastewater treatment plant with parallel secondary wastewater treatment train. Science of the Total Environment, 2019, 658, 947-957.	8.0	41
40	Quantification of selected microplastics in Australian urban road dust. Journal of Hazardous Materials, 2021, 416, 125811.	12.4	40
41	Trends in nicotine consumption between 2010 and 2017 in an Australian city using the wastewater-based epidemiology approach. Environment International, 2019, 125, 184-190.	10.0	39
42	Population histamine burden assessed using wastewater-based epidemiology: The association of 1,4â€˜methylimidazole acetic acid and fexofenadine. Environment International, 2018, 120, 172-180.	10.0	38
43	Towards an efficient method for the extraction and analysis of cannabinoids in wastewater. Talanta, 2020, 217, 121034.	5.5	37
44	Enantiomeric profiling of amphetamine and methamphetamine in wastewater: A 7-year study in regional and urban Queensland, Australia. Science of the Total Environment, 2018, 643, 827-834.	8.0	36
45	Per capita loads of organic UV filters in Australian wastewater influent. Science of the Total Environment, 2019, 662, 134-140.	8.0	36
46	Evaluating the stability of three oxidative stress biomarkers under sewer conditions and potential impact for use in wastewater-based epidemiology. Water Research, 2019, 166, 115068.	11.3	35
47	Monitoring temporal changes in use of two cathinones in a large urban catchment in Queensland, Australia. Science of the Total Environment, 2016, 545-546, 250-255.	8.0	34
48	New approach for the measurement of long-term alcohol consumption trends: Application of wastewater-based epidemiology in an Australian regional city. Drug and Alcohol Dependence, 2020, 207, 107795.	3.2	34
49	SARS-CoV-2 shedding sources in wastewater and implications for wastewater-based epidemiology. Journal of Hazardous Materials, 2022, 432, 128667.	12.4	34
50	Can wastewater-based epidemiology be used to evaluate the health impact of temperature? â€“ An exploratory study in an Australian population. Environmental Research, 2017, 156, 113-119.	7.5	33
51	Determining changes in new psychoactive substance use in Australia by wastewater analysis. Science of the Total Environment, 2020, 731, 139209.	8.0	33
52	Evaluating the in-sewer stability of three potential population biomarkers for application in wastewater-based epidemiology. Science of the Total Environment, 2019, 671, 248-253.	8.0	32
53	Wastewater treatment efficacy evaluated with inÂvitro bioassays. Water Research X, 2020, 9, 100072.	6.1	31
54	The presence of selected UV filters in a freshwater recreational reservoir and fate in controlled experiments. Science of the Total Environment, 2021, 754, 142373.	8.0	30

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55	Trends in artificial sweetener consumption: A 7-year wastewater-based epidemiology study in Queensland, Australia. Science of the Total Environment, 2021, 754, 142438.	8.0	29
56	Systematic Evaluation of the In-Sample Stability of Selected Pharmaceuticals, Illicit Drugs, and Their Metabolites in Wastewater. Environmental Science & Technology, 2021, 55, 7418-7429.	10.0	29
57	Concentrations of phthalate metabolites in Australian urine samples and their contribution to the per capita loads in wastewater. Environment International, 2020, 137, 105534.	10.0	29
58	Uncertainties in estimating alcohol and tobacco consumption by wastewater-based epidemiology. Current Opinion in Environmental Science and Health, 2019, 9, 13-18.	4.1	27
59	Chlorinated paraffins in indoor dust from Australia: Levels, congener patterns and preliminary assessment of human exposure. Science of the Total Environment, 2019, 682, 318-323.	8.0	26
60	Wastewater-based estimation of the prevalence of gout in Australia. Science of the Total Environment, 2020, 715, 136925.	8.0	26
61	Calibration and validation of a microporous polyethylene passive sampler for quantitative estimation of illicit drug and pharmaceutical and personal care product (PPCP) concentrations in wastewater influent. Science of the Total Environment, 2020, 704, 135891.	8.0	25
62	National wastewater reconnaissance of artificial sweetener consumption and emission in Australia. Environment International, 2020, 143, 105963.	10.0	25
63	Annual release of selected UV filters via effluent from wastewater treatment plants in Australia. Chemosphere, 2020, 247, 125887.	8.2	25
64	Back-estimation of norovirus infections through wastewater-based epidemiology: A systematic review and parameter sensitivity. Water Research, 2022, 219, 118610.	11.3	25
65	Self Adjusting Algorithm for the Nontargeted Feature Detection of High Resolution Mass Spectrometry Coupled with Liquid Chromatography Profile Data. Analytical Chemistry, 2019, 91, 10800-10807.	6.5	24
66	Do food and stress biomarkers work for wastewater-based epidemiology? A critical evaluation. Science of the Total Environment, 2020, 736, 139654.	8.0	24
67	Analysis of sugarcane herbicides in marine turtle nesting areas and assessment of risk using inÂvitro toxicity assays. Chemosphere, 2017, 185, 656-664.	8.2	23
68	Population Socioeconomics Predicted Using Wastewater. Environmental Science and Technology Letters, 2020, 7, 567-572.	8.7	23
69	Impact of COVID-19 Controls on the Use of Illicit Drugs and Alcohol in Australia. Environmental Science and Technology Letters, 2021, 8, 799-804.	8.7	22
70	Association between purity of drug seizures and illicit drug loads measured in wastewater in a South East Queensland catchment over a six year period. Science of the Total Environment, 2018, 635, 779-783.	8.0	20
71	A Miniature Bioassay for Testing the Acute Phytotoxicity of Photosystem II Herbicides on Seagrass. PLoS ONE, 2015, 10, e0117541.	2.5	20
72	Analyzing Wastewater Samples Collected during Census To Determine the Correction Factors of Drugs for Wastewater-Based Epidemiology: The Case of Codeine and Methadone. Environmental Science and Technology Letters, 2019, 6, 265-269.	8.7	19

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73	Using Prescription and Wastewater Data to Estimate the Correction Factors of Atenolol, Carbamazepine, and Naproxen for Wastewater-Based Epidemiology Applications. Environmental Science & Technology, 2021, 55, 7551-7560.	10.0	19
74	Trends in methamphetamine residues in wastewater in metropolitan and regional cities in southâ€east Queensland, 2009â€“2015. Medical Journal of Australia, 2016, 204, 151-152.	1.7	18
75	Evaluation of Monitoring Schemes for Wastewater-Based Epidemiology to Identify Drug Use Trends Using Cocaine, Methamphetamine, MDMA and Methadone. Environmental Science & Technology, 2016, 50, 4760-4768.	10.0	18
76	The underlying challenges that arise when analysing short-chain chlorinated paraffins in environmental matrices. Journal of Chromatography A, 2020, 1610, 460550.	3.7	18
77	Long-term trends in tobacco use assessed by wastewater-based epidemiology and its relationship with consumption of nicotine containing products. Environment International, 2020, 145, 106088.	10.0	18
78	Estimating Alcohol Consumption by Wastewater-Based Epidemiology: An Assessment of the Correction Factor for Ethyl Sulfate Using Large-Scale National Monitoring Data. Environmental Science and Technology Letters, 2021, 8, 333-338.	8.7	18
79	A pilot wastewaterâ€based epidemiology assessment of anabolic steroid use in Queensland, Australia. Drug Testing and Analysis, 2019, 11, 937-949.	2.6	17
80	Determination of anabasine, anatabine, and nicotine biomarkers in wastewater by enhanced direct injection LC-MS/MS and evaluation of their in-sewer stability. Science of the Total Environment, 2020, 743, 140551.	8.0	17
81	A sensitive analytical method for the measurement of neurotransmitter metabolites as potential population biomarkers in wastewater. Journal of Chromatography A, 2020, 1612, 460623.	3.7	16
82	The message on the bottle: Rethinking plastic labelling to better encourage sustainable use. Environmental Science and Policy, 2022, 132, 109-118.	4.9	16
83	Temporal trends of perfluoroalkyl substances in an Australian wastewater treatment plant: A ten-year retrospective investigation. Science of the Total Environment, 2022, 804, 150211.	8.0	15
84	Commentary on <scp>O</scp>rt etâ€‰al. (2014): What next to deliver on the promise of large scale sewageâ€based drug epidemiology?. Addiction, 2014, 109, 1353-1354.	3.3	14
85	Could wastewater analysis be a useful tool for China? â€” A review. Journal of Environmental Sciences, 2015, 27, 70-79.	6.1	14
86	A wastewaterâ€based assessment of the impact of a minimum unit price (MUP) on population alcohol consumption in the Northern Territory, Australia. Addiction, 2022, 117, 243-249.	3.3	14
87	Out of sight but not out of mind: Size fractionation of plastics bioaccumulated by field deployed oysters. Journal of Hazardous Materials Letters, 2021, 2, 100021.	3.6	14
88	A comparison of trends in wastewaterâ€based data and traditional epidemiological indicators of stimulant consumption in three locations. Addiction, 2020, 115, 462-472.	3.3	13
89	Can wastewater analysis be used as a tool to assess the burden of pain treatment within a population?. Environmental Research, 2020, 188, 109769.	7.5	13
90	Wastewater-based prevalence trends of gout in an Australian community over a period of 8 years. Science of the Total Environment, 2021, 759, 143460.	8.0	13

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91	Performance- and image-enhancing drug use in the community: use prevalence, user demographics and the potential role of wastewater-based epidemiology. Journal of Hazardous Materials, 2021, 419, 126340.	12.4	13
92	Background release and potential point sources of per- and polyfluoroalkyl substances to municipal wastewater treatment plants across Australia. Chemosphere, 2022, 293, 133657.	8.2	12
93	A cleaner river: Long term use of semipermeable membrane devices demonstrate that concentrations of selected organochlorines and PAHs in the Brisbane River estuary, Queensland have reduced substantially over the past decade. Marine Pollution Bulletin, 2011, 63, 73-76.	5.0	11
94	Application of catecholamine metabolites as endogenous population biomarkers for wastewater-based epidemiology. Science of the Total Environment, 2021, 763, 142992.	8.0	11
95	Does size matter? Quantification of plastics associated with size fractionated biosolids. Science of the Total Environment, 2022, 811, 152382.	8.0	11
96	Quantification of selected analgesics and their metabolites in influent wastewater by liquid chromatography tandem mass spectrometry. Talanta, 2021, 234, 122627.	5.5	10
97	Analytical performance comparison of four SARS-CoV-2 RT-qPCR primer-probe sets for wastewater samples. Science of the Total Environment, 2022, 806, 150572.	8.0	10
98	In-Sewer Stability Assessment of Anabolic Steroids and Selective Androgen Receptor Modulators. Environmental Science & Technology, 2022, 56, 1627-1638.	10.0	10
99	A nationwide wastewater-based assessment of metformin consumption across Australia. Environment International, 2022, 165, 107282.	10.0	10
100	In-sewer stability of selected analgesics and their metabolites. Water Research, 2021, 204, 117647.	11.3	9
101	From Centroided to Profile Mode: Machine Learning for Prediction of Peak Width in HRMS Data. Analytical Chemistry, 2021, 93, 16562-16570.	6.5	9
102	Naive Bayes classification model for isotopologue detection in LC-HRMS data. Chemometrics and Intelligent Laboratory Systems, 2022, 223, 104515.	3.5	9
103	Artificial sweeteners in end-use biosolids in Australia. Water Research, 2021, 200, 117237.	11.3	8
104	A method and its application to determine the amount of cannabinoids in sewage sludge and biosolids. Environmental Science and Pollution Research, 2021, 28, 59652-59664.	5.3	7
105	Removal of 293 organic compounds in 15 WWTPs studied with non-targeted suspect screening. Environmental Science: Water Research and Technology, 2022, 8, 1423-1433.	2.4	5
106	Analysis of N,Nâ€dimethylamphetamine in wastewater â€“ a pyrolysis marker and synthesis impurity of methamphetamine. Drug Testing and Analysis, 2018, 10, 1590-1598.	2.6	3
107	Mining Population Exposure and Community Health via Wastewater-Based Epidemiology. , 2020, , 99-114.		3
108	The impact of COVID-19 on antidepressant sales and prescription dispensing in Australia. Australian and New Zealand Journal of Psychiatry, 2022, 56, 871-872.	2.3	3

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109	â€˜Ice Rushesâ€™, Data Shadows and Methylamphetamine Use in Rural Towns: Wastewater Analysis. Current Issues in Criminal Justice, 2018, 29, 195-208.	1.4	2
110	Response to Comment on â€œQuantitative Analysis of Selected Plastics in High-Commercial-Value Australian Seafood by Pyrolysis Gas Chromatography Mass Spectrometryâ€• Environmental Science & Technology, 2020, 54, 15556-15557.	10.0	2
111	Commentary on Burgard et al . (2019): Wastewater based estimates of the size of illicit markets for psychoactive drugs. Addiction, 2019, 114, 1591-1592.	3.3	1
112	Comparing methamphetamine, MDMA, cocaine, codeine and methadone use between the Auckland region and four Australian states using wastewater-based epidemiology (WBE). New Zealand Medical Journal, 2018, 131, 12-20.	0.5	1