Stefan Wuertz

List of Publications by Year in descending order

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STEEAN WHEDTZ

#	Article	IF	CITATIONS
1	Bacteria and archaea on Earth and their abundance in biofilms. Nature Reviews Microbiology, 2019, 17, 247-260.	28.6	965
2	Studying plasmid horizontal transfer in situ: a critical review. Nature Reviews Microbiology, 2005, 3, 700-710.	28.6	604
3	High Rates of Conjugation in Bacterial Biofilms as Determined by Quantitative In Situ Analysis. Applied and Environmental Microbiology, 1999, 65, 3710-3713.	3.1	401
4	16S rRNA-based assays for quantitative detection of universal, human-, cow-, and dog-specific fecal Bacteroidales: A Bayesian approach. Water Research, 2007, 41, 3701-3715.	11.3	388
5	Nitrifying and heterotrophic population dynamics in biofilm reactors: effects of hydraulic retention time and the presence of organic carbon. Water Research, 2002, 36, 469-481.	11.3	217
6	SARS-CoV-2 RNA concentrations in wastewater foreshadow dynamics and clinical presentation of new COVID-19 cases. Science of the Total Environment, 2022, 805, 150121.	8.0	192
7	Discrimination of Viable and Dead Fecal <i>Bacteroidales</i> Bacteria by Quantitative PCR with Propidium Monoazide. Applied and Environmental Microbiology, 2009, 75, 2940-2944.	3.1	190
8	Review of highway runoff characteristics: Comparative analysis and universal implications. Water Research, 2012, 46, 6609-6624.	11.3	186
9	Quo vadis source tracking? Towards a strategic framework for environmental monitoring of fecal pollution. Water Research, 2007, 41, 3539-3552.	11.3	174
10	Effect of flow regime on the architecture of aPseudomonas fluorescens biofilm. Biotechnology and Bioengineering, 2002, 78, 164-171.	3.3	156
11	Validation of hollow fiber ultrafiltration and real-time PCR using bacteriophage PP7 as surrogate for the quantification of viruses from water samples. Water Research, 2007, 41, 1411-1422.	11.3	154
12	Minimizing errors in RT-PCR detection and quantification of SARS-CoV-2 RNA for wastewater surveillance. Science of the Total Environment, 2022, 805, 149877.	8.0	153
13	Rapid decay of host-specific fecal Bacteroidales cells in seawater as measured by quantitative PCR with propidium monoazide. Water Research, 2009, 43, 4850-4859.	11.3	140
14	Automated Confocal Laser Scanning Microscopy and Semiautomated Image Processing for Analysis of Biofilms. Applied and Environmental Microbiology, 1998, 64, 4115-4127.	3.1	139
15	Making waves: Wastewater surveillance of SARS-CoV-2 for population-based health management. Water Research, 2020, 184, 116181.	11.3	138
16	Discharge-based QMRA for estimation of public health risks from exposure to stormwater-borneÂpathogens in recreational waters in theÂUnitedÂStates. Water Research, 2013, 47, 5282-5297.	11.3	136
17	Polyphosphate-accumulating organisms in full-scale tropical wastewater treatment plants use diverse carbon sources. Water Research, 2019, 149, 496-510.	11.3	129
18	Wastewater surveillance of SARS-CoV-2 across 40 U.S. states from February to June 2020. Water Research, 2021, 202, 117400.	11.3	119

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19	Performance of human fecal anaerobe-associated PCR-based assays in a multi-laboratory method evaluation study. Water Research, 2013, 47, 6897-6908.	11.3	117
20	Performance Characteristics of qPCR Assays Targeting Human- and Ruminant-Associated <i>Bacteroidetes</i> for Microbial Source Tracking across Sixteen Countries on Six Continents. Environmental Science & Technology, 2013, 47, 8548-8556.	10.0	111
21	Improving charge collection in Escherichia coli–carbon electrode devices with conjugated oligoelectrolytes. Physical Chemistry Chemical Physics, 2013, 15, 5867.	2.8	110
22	Twoâ€component regulatory system involved in transcriptional control of heavyâ€metal homoeostasis in <i>Alcaligenes eutrophus</i> . Molecular Microbiology, 1997, 23, 493-503.	2.5	102
23	Human and Animal Fecal Contamination of Community Water Sources, Stored Drinking Water and Hands in Rural India Measured with Validated Microbial Source Tracking Assays. American Journal of Tropical Medicine and Hygiene, 2015, 93, 509-516.	1.4	98
24	Human fecal and pathogen exposure pathways in rural Indian villages and the effect of increased latrine coverage. Water Research, 2016, 100, 232-244.	11.3	91
25	Characterization of activated sludge flocs by confocal laser scanning microscopy and image analysis. Water Research, 2003, 37, 2043-2052.	11.3	88
26	Identifying human and livestock sources of fecal contamination in Kenya with host-specific Bacteroidales assays. Water Research, 2009, 43, 4956-4966.	11.3	85
27	Survival of Host-Associated Bacteroidales Cells and Their Relationship with Enterococcus spp., Campylobacter jejuni, Salmonella enterica Serovar Typhimurium, and Adenovirus in Freshwater Microcosms as Measured by Propidium Monoazide-Quantitative PCR. Applied and Environmental Microbiology, 2012, 78, 922-932.	3.1	84
28	Evaluation of Fluorescently Labeled Lectins for Noninvasive Localization of Extracellular Polymeric Substances in Sphingomonas Biofilms. Applied and Environmental Microbiology, 2000, 66, 3487-3491.	3.1	82
29	Composition and Toxicity of Biogas Produced from Different Feedstocks in California. Environmental Science & Technology, 2019, 53, 11569-11579.	10.0	80
30	Presence of <i>Bacteroidales</i> as a Predictor of Pathogens in Surface Waters of the Central California Coast. Applied and Environmental Microbiology, 2010, 76, 5802-5814.	3.1	79
31	Improving qPCR efficiency in environmental samples by selective removal of humic acids with DAX-8. Journal of Microbiological Methods, 2011, 85, 16-21.	1.6	74
32	Global Distribution of Human-Associated Fecal Genetic Markers in Reference Samples from Six Continents. Environmental Science & Technology, 2018, 52, 5076-5084.	10.0	73
33	Bioaugmentation of microbial communities in laboratory and pilot scale sequencing batch biofilm reactors using the TOL plasmid. Bioresource Technology, 2009, 100, 1746-1753.	9.6	72
34	Validation of Bacteroidales quantitative PCR assays targeting human and animal fecal contamination in the public and domestic domains in India. Science of the Total Environment, 2015, 502, 462-470.	8.0	70
35	Frequency of disturbance alters diversity, function, and underlying assembly mechanisms of complex bacterial communities. Npj Biofilms and Microbiomes, 2019, 5, 8.	6.4	70
36	Microbial community dynamics in replicate membrane bioreactors – Natural reproducible fluctuations. Water Research, 2009, 43, 842-852.	11.3	65

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37	Modern scientific methods and their potential in wastewater science and technology. Water Research, 2002, 36, 370-393.	11.3	64
38	Natural Genetic Transformation in Monoculture Acinetobacter sp. Strain BD413 Biofilms. Applied and Environmental Microbiology, 2003, 69, 1721-1727.	3.1	63
39	Adenovirus-associated health risks for recreational activities in a multi-use coastal watershed based on site-specific quantitative microbial risk assessment. Water Research, 2013, 47, 6309-6325.	11.3	63
40	Who put the film in biofilm? The migration of a term from wastewater engineering to medicine and beyond. Npj Biofilms and Microbiomes, 2021, 7, 10.	6.4	62
41	Integrative microbial community analysis reveals full-scale enhanced biological phosphorus removal under tropical conditions. Scientific Reports, 2016, 6, 25719.	3.3	61
42	Evaluation of the Use of PCR and Reverse Transcriptase PCR for Detection of Pathogenic Bacteria in Biosolids from Anaerobic Digestors and Aerobic Composters. Applied and Environmental Microbiology, 2003, 69, 4618-4627.	3.1	60
43	Dual Labeling of Pseudomonas putida with Fluorescent Proteins for In Situ Monitoring of Conjugal Transfer of the TOL Plasmid. Applied and Environmental Microbiology, 2003, 69, 4846-4852.	3.1	59
44	Fluorene and phenanthrene uptake byPseudomonas putida ATCC 17514: Kinetics and physiological aspects. Biotechnology and Bioengineering, 2005, 90, 281-289.	3.3	59
45	Multi-laboratory evaluations of the performance of Catellicoccus marimammalium PCR assays developed to target gull fecal sources. Water Research, 2013, 47, 6883-6896.	11.3	58
46	UV disinfection in a model distribution system:. Water Research, 2004, 38, 3083-3091.	11.3	57
47	Evaluation of the repeatability and reproducibility of a suite of qPCR-based microbial source tracking methods. Water Research, 2013, 47, 6839-6848.	11.3	56
48	Modeling Cell Membrane Perturbation by Molecules Designed for Transmembrane Electron Transfer. Langmuir, 2014, 30, 2429-2440.	3.5	55
49	Recent advances in understanding the ecophysiology of enhanced biological phosphorus removal. Current Opinion in Biotechnology, 2021, 67, 166-174.	6.6	55
50	Comparable levels of microbial contamination in soil and on tomato crops after drip irrigation with treated wastewater or potable water. Agriculture, Ecosystems and Environment, 2016, 215, 140-150.	5.3	52
51	High Dissolved Oxygen Selection against <i>Nitrospira</i> Sublineage I in Full-Scale Activated Sludge. Environmental Science & Technology, 2019, 53, 8157-8166.	10.0	50
52	Metabolically versatile large-genome prokaryotes. Current Opinion in Biotechnology, 2012, 23, 467-473.	6.6	48
53	Performance evaluation of canine-associated Bacteroidales assays in a multi-laboratory comparison study. Water Research, 2013, 47, 6909-6920.	11.3	48
54	Bacteroidales markers for microbial source tracking in Southeast Asia. Water Research, 2017, 118, 239-248.	11.3	48

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55	Detection of Toxoplasma gondii oocysts and surrogate microspheres in water using ultrafiltration and capsule filtration. Water Research, 2010, 44, 893-903.	11.3	47
56	Comparison of PCR and quantitative real-time PCR methods for the characterization of ruminant and cattle fecal pollution sources. Water Research, 2013, 47, 6921-6928.	11.3	45
57	Extracellular redox activity in activated sludge. Water Science and Technology, 1998, 37, 379-384.	2.5	44
58	Capsid integrity quantitative PCR to determine virus infectivity in environmental and food applications $\hat{a} \in \hat{A}$ systematic review. Water Research X, 2021, 11, 100080.	6.1	42
59	Metabolic Traits of <i>Candidatus</i> Accumulibacter clade IIF Strain SCELSE-1 Using Amino Acids As Carbon Sources for Enhanced Biological Phosphorus Removal. Environmental Science & Technology, 2020, 54, 2448-2458.	10.0	41
60	Microbial community-based protein production from wastewater for animal feed applications. Bioresource Technology, 2021, 341, 125723.	9.6	41
61	In situ analysis of biofilms on historic window glass using confocal laser scanning microscopy. Journal of Cultural Heritage, 2001, 2, 31-42.	3.3	38
62	Estimating true human and animal host source contribution in quantitative microbial source tracking using the Monte Carlo method. Water Research, 2010, 44, 4760-4775.	11.3	37
63	Support vector regression model of wastewater bioreactor performance using microbial community diversity indices: Effect of stress and bioaugmentation. Water Research, 2014, 53, 282-296.	11.3	37
64	Making waves: Wastewater surveillance of SARS-CoV-2 in an endemic future. Water Research, 2022, 219, 118535.	11.3	37
65	TOL plasmid carriage enhances biofilm formation and increases extracellular DNA content in Pseudomonas putida KT2440. FEMS Microbiology Letters, 2010, 312, 84-92.	1.8	36
66	Non-denitrifying polyphosphate accumulating organisms obviate requirement for anaerobic condition. Water Research, 2017, 111, 393-403.	11.3	35
67	Denitrification kinetics indicates nitrous oxide uptake is unaffected by electron competition in Accumulibacter. Water Research, 2021, 189, 116557.	11.3	34
68	Survival and persistence of host-associated Bacteroidales cells and DNA in comparison with Escherichia coli and Enterococcus in freshwater sediments as quantified by PMA-qPCR and qPCR. Water Research, 2015, 87, 182-192.	11.3	33
69	Extracellular Polymeric Substance Architecture Influences Natural Genetic Transformation of Acinetobacter baylyi in Biofilms. Applied and Environmental Microbiology, 2014, 80, 7752-7757.	3.1	32
70	Effect of bioaugmentation and supplementary carbon sources on degradation of polycyclic aromatic hydrocarbons by a soil-derived culture. FEMS Microbiology Ecology, 2006, 55, 122-135.	2.7	31
71	Decay of host-associated Bacteroidales cells and DNA in continuous-flow freshwater and seawater microcosms of identical experimental design and temperature as measured by PMA-qPCR and qPCR. Water Research, 2015, 70, 205-213.	11.3	31
72	Oligopolyphenylenevinylene-Conjugated Oligoelectrolyte Membrane Insertion Molecules Selectively Disrupt Cell Envelopes of Gram-Positive Bacteria. Applied and Environmental Microbiology, 2015, 81, 1949-1958.	3.1	29

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73	Recovery of complete genomes and non-chromosomal replicons from activated sludge enrichment microbial communities with long read metagenome sequencing. Npj Biofilms and Microbiomes, 2021, 7, 23.	6.4	29
74	Toward Automated Analysis of Biofilm Architecture: Bias Caused by Extraneous Confocal Laser Scanning Microscopy Images. Applied and Environmental Microbiology, 2007, 73, 4922-4930.	3.1	28
75	Nextâ€generation studies of microbial biofilm communities. Microbial Biotechnology, 2016, 9, 677-680.	4.2	28
76	Biogenic surface layers on historical window glass and the effect of excimer laser cleaning. Journal of Cultural Heritage, 2000, 1, S161-S171.	3.3	26
77	Population changes in a biofilm reactor for phosphorus removal as evidenced by the use of FISH. Water Research, 2002, 36, 491-500.	11.3	26
78	Electrochemical and genomic analysis of novel electroactive isolates obtained via potentiostatic enrichment from tropical sediment. Journal of Power Sources, 2017, 356, 539-548.	7.8	26
79	Nitrifying niche differentiation in biofilms from full-scale chloraminated drinking water distribution system. Water Research, 2020, 176, 115738.	11.3	26
80	[13] In situ quantification of gene transfer in biofilms. Methods in Enzymology, 2001, 336, 129-IN6.	1.0	25
81	Traitâ€based lifeâ€history strategies explain succession scenario for complex bacterial communities under varying disturbance. Environmental Microbiology, 2019, 21, 3751-3764.	3.8	25
82	Library-Independent Bacterial Source Tracking Methods. , 2011, , 61-112.		25
83	Global warming readiness: Feasibility of enhanced biological phosphorus removal at 35°C. Water Research, 2022, 216, 118301.	11.3	25
84	Simultaneous detection of four protozoan parasites on leafy greens using a novel multiplex PCR assay. Food Microbiology, 2019, 84, 103252.	4.2	24
85	Detection of <i>Salmonella</i> spp. and <i>Listeria monocytogenes</i> in Suspended Organic Waste by Nucleic Acid Extraction and PCR. Applied and Environmental Microbiology, 1999, 65, 2235-2237.	3.1	24
86	Persistence of Dengue (Serotypes 2 and 3), Zika, Yellow Fever, and Murine Hepatitis Virus RNA in Untreated Wastewater. Environmental Science and Technology Letters, 2021, 8, 785-791.	8.7	23
87	Quantitative microbial risk assessment to estimate the risk of diarrheal diseases from fresh produce consumption in India. Food Microbiology, 2018, 75, 95-102.	4.2	22
88	Variably improved microbial source tracking with digital droplet PCR. Water Research, 2019, 159, 192-202.	11.3	22
89	Microbial abundance and community composition in biofilms on in-pipe sensors in a drinking water distribution system. Science of the Total Environment, 2021, 766, 142314.	8.0	22
90	Effects of the toxin 3-chloroaniline at low concentrations on microbial community dynamics and membrane bioreactor performance. Water Research, 2010, 44, 5109-5115.	11.3	19

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91	Increased Microbial Butanol Tolerance by Exogenous Membrane Insertion Molecules. ChemSusChem, 2015, 8, 3718-3726.	6.8	19
92	Inhibition factors and kinetic model for anaerobic ammonia oxidation in a granular sludge bioreactor with Candidatus Brocadia. Chemical Engineering Journal, 2020, 389, 123618.	12.7	19
93	Press Disturbance Alters Community Structure and Assembly Mechanisms of Bacterial Taxa and Functional Genes in Mesocosm-Scale Bioreactors. MSystems, 2020, 5, .	3.8	17
94	Drinking Water Safety: Role of Hand Hygiene, Sanitation Facility, and Water System in Semi-Urban Areas of India. American Journal of Tropical Medicine and Hygiene, 2018, 99, 889-898.	1.4	17
95	Development of an efficient wastewater testing protocol for high-throughput country-wide SARS-CoV-2 monitoring. Science of the Total Environment, 2022, 826, 154024.	8.0	17
96	Naphthoquinone glycosides for bioelectroanalytical enumeration of the faecal indicator <i>Escherichia coli</i> . Microbial Biotechnology, 2016, 9, 746-757.	4.2	15
97	Glycine adversely affects enhanced biological phosphorus removal. Water Research, 2022, 209, 117894.	11.3	15
98	Spatial and hydrologic variation of Bacteroidales, adenovirus and enterovirus in a semi-arid, wastewater effluent-impacted watershed. Water Research, 2015, 75, 83-94.	11.3	14
99	Continuum heterogeneous biofilm model—A simple and accurate method for effectiveness factor determination. Biotechnology and Bioengineering, 2012, 109, 1779-1790.	3.3	13
100	Evaluation of detachment methods for the enumeration of <i>Bacteroides fragilis</i> in sediments via propidium monoazide quantitative PCR, in comparison with <i>Enterococcus faecalis</i> and <i>Escherichia coli</i> . Journal of Applied Microbiology, 2014, 117, 1513-1522.	3.1	13
101	Data fitting approach more critical than exposure scenarios and treatment of censored data for quantitative microbial risk assessment. Water Research, 2019, 154, 45-53.	11.3	13
102	The impact of point source pollution on shallow groundwater used for human consumption in a threshold country. Journal of Environmental Monitoring, 2012, 14, 2338.	2.1	11
103	Press Xenobiotic 3-Chloroaniline Disturbance Favors Deterministic Assembly with a Shift in Function and Structure of Bacterial Communities in Sludge Bioreactors. ACS ES&T Water, 2021, 1, 1429-1437.	4.6	11
104	Quantification of viable protozoan parasites on leafy greens using molecular methods. Food Microbiology, 2021, 99, 103816.	4.2	11
105	High phylogenetic diversity of transconjugants carrying plasmid pJP4 in an activated sludge-derived microbial community. FEMS Microbiology Letters, 2004, 235, 215-219.	1.8	11
106	Simultaneous detection of Giardia lamblia and Cryptosporidium parvum (oo)cysts in soil using immunomagnetic separation and direct fluorescent antibody staining. Journal of Microbiological Methods, 2013, 94, 375-377.	1.6	10
107	Growth of Myxococcus xanthus in Continuous-Flow-Cell Bioreactors as a Method for Studying Development. Applied and Environmental Microbiology, 2014, 80, 2461-2467.	3.1	10
108	Fecal pathogen pollution: sources and patterns in water and sediment samples from the upper Cook Inlet, Alaska ecosystem. Environmental Sciences: Processes and Impacts, 2013, 15, 1041.	3.5	9

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109	The continuum heterogeneous biofilm model with multiple limiting substrate Monod kinetics. Biotechnology and Bioengineering, 2014, 111, 2252-2264.	3.3	9
110	Assessment of biological activity during temperature changes in a bench-scale sequencing batch reactor fed with synthetic medium containing lignin. Water Science and Technology, 1998, 37, 251-254.	2.5	9
111	QUANTIFICATION OF BIOFILMS IN MULTI-SPECTRAL DIGITAL1 VOLUMES FROM CONFOCAL LASER-SCANNING MICROSCOPES. Image Analysis and Stereology, 2000, 19, 151.	0.9	9
112	Microbiome assembly predictably shapes diversity across a range of disturbance frequencies in experimental microcosms. Npj Biofilms and Microbiomes, 2022, 8, 41.	6.4	9
113	Resource recovery from food-processing wastewaters in a circular economy: a methodology for the future. Current Opinion in Biotechnology, 2022, 76, 102735.	6.6	9
114	Emerging microbial and chemical source tracking techniques to identify origins of fecal contamination in waterways. Water Research, 2007, 41, 3515-3516.	11.3	8
115	Partial bioaugmentation to remove 3-chloroaniline slows bacterial species turnover rate in bioreactors. Water Research, 2013, 47, 7109-7119.	11.3	8
116	Recovery of High Quality Metagenome-Assembled Genomes From Full-Scale Activated Sludge Microbial Communities in a Tropical Climate Using Longitudinal Metagenome Sampling. Frontiers in Microbiology, 0, 13, .	3.5	8
117	Draft Genome Sequence of a " <i>Candidatus</i> Brocadia―Bacterium Enriched from Activated Sludge Collected in a Tropical Climate. Genome Announcements, 2018, 6, .	0.8	6
118	Net growth rate of continuum heterogeneous biofilms with inhibition kinetics. Npj Biofilms and Microbiomes, 2018, 4, 5.	6.4	5
119	Influence of Extraction Solvent on Nontargeted Metabolomics Analysis of Enrichment Reactor Cultures Performing Enhanced Biological Phosphorus Removal (EBPR). Metabolites, 2021, 11, 269.	2.9	4
120	Effects of salinity and transparent exopolymer particles on formation of aquatic aggregates and their association with norovirus. Science of the Total Environment, 2018, 643, 1514-1521.	8.0	3
121	Fecal Source Tracking Using Human Toolkits Based on Library-independent Chemical and Microbial Markers. Proceedings of the Water Environment Federation, 2007, 2007, 931-945.	0.0	2
122	Parameter Selection for a Microvolume Electrochemical Escherichia coli Detector for Pairing with a Concentration Device. Sensors, 2019, 19, 2437.	3.8	2
123	Preface. Water Research, 2009, 43, 4779.	11.3	1
124	Investigating in Situ Natural Genetic Transformation of Acinetobacter sp. BD413 in Biofilms with Confocal Laser Scanning Microscopy. , 2004, 26, 159-173.		1
125	Bioelectroanalytical Detection of Lactic Acid Bacteria. Applied Sciences (Switzerland), 2022, 12, 1257.	2.5	1
126	Editorial for special issue on shifting paradigms in assessment of recreational water quality. Water Research, 2010, 44, 4661.	11.3	0

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127	Editorial: Microbial source tracking. Water Research, 2013, 47, 6811.	11.3	0
128	Editorial: Microbial ecology. Water Research, 2013, 47, 6957.	11.3	0
129	Making Waves. Water Research, 2019, 151, iii.	11.3	0