Lai Peng

List of Publications by Year
in descending order

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65 papers	2,360 citations	201674 27 h-index	223800 46 g-index
65 all docs	65 docs citations	65 times ranked	2075 citing authors

#	Article	IF	Citations
1	The roles of free ammonia (FA) in biological wastewater treatment processes: A review. Environment International, 2019, 123, 10-19.	10.0	294
2	The combined effect of dissolved oxygen and nitrite on N2O production by ammonia oxidizing bacteria in an enriched nitrifying sludge. Water Research, 2015, 73, 29-36.	11.3	147
3	The effect of dissolved oxygen on N 2 O production by ammonia-oxidizing bacteria in an enriched nitrifying sludge. Water Research, 2014, 66, 12-21.	11.3	123
4	Modeling of Nitrous Oxide Production by Autotrophic Ammonia-Oxidizing Bacteria with Multiple Production Pathways. Environmental Science & Technology, 2014, 48, 3916-3924.	10.0	110
5	Evaluation of Nitrous Oxide Emission from Sulfide- and Sulfur-Based Autotrophic Denitrification Processes. Environmental Science & Technology, 2016, 50, 9407-9415.	10.0	85
6	Enhanced high-quality biomethane production from anaerobic digestion of primary sludge by corn stover biochar. Bioresource Technology, 2020, 306, 123159.	9.6	83
7	Effect of diclofenac on the production of volatile fatty acids from anaerobic fermentation of waste activated sludge. Bioresource Technology, 2018, 254, 7-15.	9.6	80
8	New perspectives on microbial communities and biological nitrogen removal processes in wastewater treatment systems. Bioresource Technology, 2020, 297, 122491.	9.6	78
9	Approach of describing dynamic production of volatile fatty acids from sludge alkaline fermentation. Bioresource Technology, 2017, 238, 343-351.	9.6	73
10	Degradation of fluoroquinolones in homogeneous and heterogeneous photo-Fenton processes: A review. Chemosphere, 2021, 270, 129481.	8.2	68
11	Evaluating simultaneous chromate and nitrate reduction during microbial denitrification processes. Water Research, 2016, 89, 1-8.	11.3	60
12	The entering of polyethylene terephthalate microplastics into biological wastewater treatment system affects aerobic sludge digestion differently from their direct entering into sludge treatment system. Water Research, 2021, 190, 116731.	11.3	55
13	Resource recovery from pig manure via an integrated approach: A technical and economic assessment for full-scale applications. Bioresource Technology, 2019, 272, 582-593.	9.6	52
14	Sulfide removal and sulfur production in a membrane aerated biofilm reactor: Model evaluation. Chemical Engineering Journal, 2017, 309, 454-462.	12.7	49
15	Determining Multiple Responses of Pseudomonas aeruginosa PAO1 to an Antimicrobial Agent, Free Nitrous Acid. Environmental Science & Technology, 2016, 50, 5305-5312.	10.0	48
16	Mitigating nitrous oxide emissions at a full-scale wastewater treatment plant. Water Research, 2020, 185, 116196.	11.3	48
17	Anaerobic Oxidation of Methane Coupled with Dissimilatory Nitrate Reduction to Ammonium Fuels Anaerobic Ammonium Oxidation. Environmental Science & Technology, 2021, 55, 1197-1208.	10.0	46
18	Simultaneous nitrate and sulfate dependent anaerobic oxidation of methane linking carbon, nitrogen and sulfur cycles. Water Research, 2021, 194, 116928.	11.3	43

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19	Evaluation on the Nanoscale Zero Valent Iron Based Microbial Denitrification for Nitrate Removal from Groundwater. Scientific Reports, 2015, 5, 12331.	3.3	42
20	Persulfate and zero valent iron combined conditioning as a sustainable technique for enhancing dewaterability of aerobically digested sludge. Chemosphere, 2019, 232, 45-53.	8.2	39
21	Operation strategies of n-DAMO and Anammox process based on microbial interactions for high rate nitrogen removal from landfill leachate. Environment International, 2020, 139, 105596.	10.0	39
22	N2O production by ammonia oxidizing bacteria in an enriched nitrifying sludge linearly depends on inorganic carbon concentration. Water Research, 2015, 74, 58-66.	11.3	37
23	Cometabolic biodegradation of antibiotics by ammonia oxidizing microorganisms during wastewater treatment processes. Journal of Environmental Management, 2022, 305, 114336.	7.8	37
24	Biodegradation of pharmaceuticals in membrane aerated biofilm reactor for autotrophic nitrogen removal: A model-based evaluation. Journal of Membrane Science, 2015, 494, 39-47.	8.2	32
25	Mathematical Modeling of Nitrous Oxide Production during Denitrifying Phosphorus Removal Process. Environmental Science & Technology, 2015, 49, 8595-8601.	10.0	32
26	Substrate Diffusion within Biofilms Significantly Influencing the Electron Competition during Denitrification. Environmental Science & Technology, 2019, 53, 261-269.	10.0	31
27	Nitrous oxide production in completely autotrophic nitrogen removal biofilm process: A simulation study. Chemical Engineering Journal, 2016, 287, 217-224.	12.7	30
28	Selection of mathematical models for N2O production by ammonia oxidizing bacteria under varying dissolved oxygen and nitrite concentrations. Chemical Engineering Journal, 2015, 281, 661-668.	12.7	27
29	Nitrous oxide production from wastewater treatment: The potential as energy resource rather than potent greenhouse gas. Journal of Hazardous Materials, 2020, 387, 121694.	12.4	26
30	Assessment of Heterotrophic Growth Supported by Soluble Microbial Products in Anammox Biofilm using Multidimensional Modeling. Scientific Reports, 2016, 6, 27576.	3.3	24
31	Smart operation of nitritation/denitritation virtually abolishes nitrous oxide emission during treatment of co-digested pig slurry centrate. Water Research, 2017, 127, 1-10.	11.3	23
32	Denitrifying Anaerobic Methane Oxidation and Anammox Process in a Membrane Aerated Membrane Bioreactor: Kinetic Evaluation and Optimization. Environmental Science & Technology, 2020, 54, 6968-6977.	10.0	23
33	Insights into the degradation mechanisms and pathways of cephalexin during homogeneous and heterogeneous photo-Fenton processes. Chemosphere, 2021, 285, 131417.	8.2	22
34	The ManureEcoMine pilot installation: advanced integration of technologies for the management of organics and nutrients in livestock waste. Water Science and Technology, 2017, 75, 1281-1293.	2.5	21
35	Modelling cometabolic biotransformation of sulfamethoxazole by an enriched ammonia oxidizing bacteria culture. Chemical Engineering Science, 2017, 173, 465-473.	3.8	21
36	Evaluating the Role of Microbial Internal Storage Turnover on Nitrous Oxide Accumulation During Denitrification. Scientific Reports, 2015, 5, 15138.	3.3	20

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37	A modeling approach to direct interspecies electron transfer process in anaerobic transformation of ethanol to methane. Environmental Science and Pollution Research, 2017, 24, 855-863.	5.3	19
38	A two-stage degradation coupling photocatalysis to microalgae enhances the mineralization of enrofloxacin. Chemosphere, 2022, 293, 133523.	8.2	18
39	Model-based assessment of estrogen removal by nitrifying activated sludge. Chemosphere, 2018, 197, 430-437.	8.2	17
40	Return-Sludge Treatment with Endogenous Free Nitrous Acid Limits Nitrate Production and N₂O Emission for Mainstream Partial Nitritation/Anammox. Environmental Science & Technology, 2020, 54, 5822-5831.	10.0	17
41	Insight into integration of photocatalytic and microbial wastewater treatment technologies for recalcitrant organic pollutants: From sequential to simultaneous reactions. Chemosphere, 2022, 295, 133952.	8.2	16
42	Enhancing post aerobic digestion of full-scale anaerobically digested sludge using free nitrous acid pretreatment. Chemosphere, 2016, 150, 152-158.	8.2	14
43	Heterotrophic denitrifiers growing on soluble microbial products contribute to nitrous oxide production in anammox biofilm: Model evaluation. Journal of Environmental Management, 2019, 242, 309-314.	7.8	14
44	Impact of coexistence of sludge flocs on nitrous oxide production in a granule-based nitrification system: A model-based evaluation. Water Research, 2020, 170, 115312.	11.3	14
45	Assessing chromate reduction by dissimilatory iron reducing bacteria using mathematical modeling. Chemosphere, 2015, 139, 334-339.	8.2	13
46	A novel mechanistic model for nitrogen removal in algal-bacterial photo sequencing batch reactors. Bioresource Technology, 2018, 267, 502-509.	9.6	13
47	Storage without nitrite or nitrate enables the long-term preservation of full-scale partial nitritation/anammox sludge. Science of the Total Environment, 2022, 806, 151330.	8.0	13
48	Modeling electron competition among nitrogen oxides reduction and N₂O accumulation in hydrogenotrophic denitrification. Biotechnology and Bioengineering, 2018, 115, 978-988.	3.3	12
49	Modeling nitrate/nitrite dependent anaerobic methane oxidation and Anammox process in a membrane granular sludge reactor. Chemical Engineering Journal, 2021, 403, 125822.	12.7	12
50	Denitrifying biofilm processes for wastewater treatment: developments and perspectives. Environmental Science: Water Research and Technology, 2021, 7, 40-67.	2.4	12
51	Model-Based Feasibility Assessment of Membrane Biofilm Reactor to Achieve Simultaneous Ammonium, Dissolved Methane, and Sulfide Removal from Anaerobic Digestion Liquor. Scientific Reports, 2016, 6, 25114.	3.3	10
52	Enhanced biodegradation of ciprofloxacin by enriched nitrifying sludge: assessment of removal pathways and microbial responses. Water Science and Technology, 2022, 85, 409-419.	2.5	10
53	Modeling N2O production by ammonia oxidizing bacteria at varying inorganic carbon concentrations by coupling the catabolic and anabolic processes. Chemical Engineering Science, 2016, 144, 386-394.	3.8	9
54	How does synthetic musks affect methane production from the anaerobic digestion of waste activated sludge?. Science of the Total Environment, 2020, 713, 136594.	8.0	8

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55	Enhancing immobilization of arsenic in groundwater: A model-based evaluation. Journal of Cleaner Production, 2017, 166, 449-457.	9.3	7
56	Kinetic assessment of simultaneous removal of arsenite, chlorate and nitrate under autotrophic and mixotrophic conditions. Science of the Total Environment, 2018, 628-629, 85-93.	8.0	7
57	Nitrous Oxide Production in a Granule-based Partial Nitritation Reactor: A Model-based Evaluation. Scientific Reports, 2017, 7, 45609.	3.3	6
58	Contribution of nitrification and denitrification to nitrous oxide turnovers in membrane-aerated biofilm reactors (MABR): A model-based evaluation. Science of the Total Environment, 2022, 806, 151321.	8.0	6
59	Regulating light, oxygen and volatile fatty acids to boost the productivity of purple bacteria biomass, protein and co-enzyme Q10. Science of the Total Environment, 2022, 822, 153489.	8.0	6
60	A mechanistic model for denitrifying anaerobic methane oxidation coupled to dissimilatory nitrate reduction to ammonium. Chemosphere, 2022, 287, 132148.	8.2	5
61	Nitrous Oxide Production in Co- Versus Counter-Diffusion Nitrifying Biofilms. Scientific Reports, 2016, 6, 28880.	3.3	4
62	Biosorption of Cr (VI) Using Bacillus licheniformis and Bacillus mucilaginosus Krassilnikov: Contrastive Investigation on Removal Performance, Kinetics, and Mechanisms. Environmental Engineering Science, 2021, 38, 231-244.	1.6	4
63	Modeling aerobic biotransformation of vinyl chloride by vinyl chloride-assimilating bacteria, methanotrophs and ethenotrophs. Journal of Hazardous Materials, 2017, 332, 97-103.	12.4	3
64	Spectral bands of incandescent lamp leading to variable productivity of purple bacteria biomass and microbial protein: Full is better than segmented. Science of the Total Environment, 2022, 823, 153736.	8.0	2
65	Mathematical modeling of microbial extracellular electron transfer by electrically active microorganisms. Environmental Science: Water Research and Technology, 2015, 1, 747-752.	2.4	1