Biao-Qiang Liao

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/7885584/publications.pdf Version: 2024-02-01



#	Article	IF	CITATIONS
1	A critical review of extracellular polymeric substances (EPSs) in membrane bioreactors: Characteristics, roles in membrane fouling and control strategies. Journal of Membrane Science, 2014, 460, 110-125.	8.2	583
2	Anaerobic Membrane Bioreactors: Applications and Research Directions. Critical Reviews in Environmental Science and Technology, 2006, 36, 489-530.	12.8	367
3	Membrane Bioreactors for Industrial Wastewater Treatment: A Critical Review. Critical Reviews in Environmental Science and Technology, 2012, 42, 677-740.	12.8	256
4	Membrane fouling in a membrane bioreactor: High filtration resistance of gel layer and its underlying mechanism. Water Research, 2016, 102, 82-89.	11.3	209
5	A unified thermodynamic mechanism underlying fouling behaviors of soluble microbial products (SMPs) in a membrane bioreactor. Water Research, 2019, 149, 477-487.	11.3	203
6	Recent advances in membrane technologies for biorefining and bioenergy production. Biotechnology Advances, 2012, 30, 817-858.	11.7	193
7	Synergistic fouling behaviors and mechanisms of calcium ions and polyaluminum chloride associated with alginate solution in coagulation-ultrafiltration (UF) process. Water Research, 2021, 189, 116665.	11.3	191
8	New insights into membrane fouling in a submerged anaerobic membrane bioreactor based on characterization of cake sludge and bulk sludge. Bioresource Technology, 2011, 102, 2373-2379.	9.6	176
9	New methods based on back propagation (BP) and radial basis function (RBF) artificial neural networks (ANNs) for predicting the occurrence of haloketones in tap water. Science of the Total Environment, 2021, 772, 145534.	8.0	176
10	Mechanistic insights into alginate fouling caused by calcium ions based on terahertz time-domain spectra analyses and DFT calculations. Water Research, 2018, 129, 337-346.	11.3	168
11	Morphological visualization, componential characterization and microbiological identification of membrane fouling in membrane bioreactors (MBRs). Journal of Membrane Science, 2010, 361, 1-14.	8.2	149
12	Inkjet printing of dopamine followed by UV light irradiation to modify mussel-inspired PVDF membrane for efficient oil-water separation. Journal of Membrane Science, 2021, 619, 118790.	8.2	149
13	A review of membrane fouling and its control in algal-related membrane processes. Bioresource Technology, 2018, 264, 343-358.	9.6	147
14	Effect of calcium ions on fouling properties of alginate solution and its mechanisms. Journal of Membrane Science, 2017, 525, 320-329.	8.2	131
15	Effects of hydrophilicity/hydrophobicity of membrane on membrane fouling in a submerged membrane bioreactor. Bioresource Technology, 2015, 175, 59-67.	9.6	130
16	Enhanced permeability and antifouling performance of polyether sulfone (PES) membrane via elevating magnetic Ni@MXene nanoparticles to upper layer in phase inversion process. Journal of Membrane Science, 2021, 623, 119080.	8.2	130
17	A conductive PVDF-Ni membrane with superior rejection, permeance and antifouling ability via electric assisted in-situ aeration for dye separation. Journal of Membrane Science, 2019, 581, 401-412.	8.2	107
18	Novel insights into membrane fouling in a membrane bioreactor: Elucidating interfacial interactions with real membrane surface. Chemosphere, 2018, 210, 769-778.	8.2	97

BIAO-QIANG LIAO

#	Article	IF	CITATIONS
19	Plant polyphenol intermediated metal-organic framework (MOF) membranes for efficient desalination. Journal of Membrane Science, 2021, 618, 118726.	8.2	94
20	Novel conductive membranes breaking through the selectivity-permeability trade-off for Congo red removal. Separation and Purification Technology, 2019, 211, 368-376.	7.9	82
21	Membrane fouling by alginate in polyaluminum chloride (PACl) coagulation/microfiltration process: Molecular insights. Separation and Purification Technology, 2020, 236, 116294.	7.9	79
22	Realization of quantifying interfacial interactions between a randomly rough membrane surface and a foulant particle. Bioresource Technology, 2017, 226, 220-228.	9.6	77
23	Effects of surface morphology on alginate adhesion: Molecular insights into membrane fouling based on XDLVO and DFT analysis. Chemosphere, 2019, 233, 373-380.	8.2	76
24	Application of radial basis function artificial neural network to quantify interfacial energies related to membrane fouling in a membrane bioreactor. Bioresource Technology, 2019, 293, 122103.	9.6	74
25	A new method for modeling rough membrane surface and calculation of interfacial interactions. Bioresource Technology, 2016, 200, 451-457.	9.6	66
26	Novel insights into membrane fouling caused by gel layer in a membrane bioreactor: Effects of hydrogen bonding. Bioresource Technology, 2019, 276, 219-225.	9.6	65
27	Molecular insights into the impacts of iron(III) ions on membrane fouling by alginate. Chemosphere, 2020, 242, 125232.	8.2	64
28	Novel in-situ electroflotation driven by hydrogen evolution reaction (HER) with polypyrrole (PPy)-Ni-modified fabric membrane for efficient oil/water separation. Journal of Membrane Science, 2021, 635, 119502.	8.2	60
29	Physicochemical correlations between membrane surface hydrophilicity and adhesive fouling in membrane bioreactors. Journal of Colloid and Interface Science, 2017, 505, 900-909.	9.4	56
30	Filtration behaviors and fouling mechanisms of ultrafiltration process with polyacrylamide flocculation for water treatment. Science of the Total Environment, 2020, 703, 135540.	8.0	55
31	Membrane fouling in a membrane bioreactor: A novel method for membrane surface morphology construction and its application in interaction energy assessment. Journal of Membrane Science, 2016, 516, 135-143.	8.2	53
32	A facile method for simulating randomly rough membrane surface associated with interface behaviors. Applied Surface Science, 2018, 427, 915-921.	6.1	52
33	Membrane technologies for microalgal cultivation and dewatering: Recent progress and challenges. Algal Research, 2019, 44, 101686.	4.6	49
34	The biological performance of a novel microalgal-bacterial membrane photobioreactor: Effects of HRT and N/P ratio. Chemosphere, 2020, 261, 128199.	8.2	48
35	Novel indicators for thermodynamic prediction of interfacial interactions related with adhesive fouling in a membrane bioreactor. Journal of Colloid and Interface Science, 2017, 487, 320-329.	9.4	43
36	Recent advances in membrane aerated biofilm reactors. Critical Reviews in Environmental Science and Technology, 2021, 51, 649-703.	12.8	43

BIAO-QIANG LIAO

#	Article	IF	CITATIONS
37	Thermophilic membrane bioreactors: A review. Bioresource Technology, 2017, 243, 1180-1193.	9.6	42
38	Enhanced electrochemical treatment of phenolic pollutants by an effective adsorption and release process. Electrochimica Acta, 2010, 55, 5367-5374.	5.2	31
39	A novel insight into membrane fouling mechanism regarding gel layer filtration: Flory-Huggins based filtration mechanism. Scientific Reports, 2016, 6, 33343.	3.3	31
40	Effects of fractal roughness of membrane surfaces on interfacial interactions associated with membrane fouling in a membrane bioreactor. Bioresource Technology, 2017, 244, 560-568.	9.6	31
41	Thermodynamic analysis of effects of contact angle on interfacial interactions and its implications for membrane fouling control. Bioresource Technology, 2016, 201, 245-252.	9.6	30
42	Determination of Chemical Oxygen Demand Based on Novel Photoelectroâ€bifunctional Electrodes. Electroanalysis, 2011, 23, 1267-1275.	2.9	25
43	Modeling three-dimensional surface morphology of biocake layer in a membrane bioreactor based on fractal geometry. Bioresource Technology, 2016, 222, 478-484.	9.6	24
44	Effects of sludge concentration and biogas sparging rate on critical flux in a submerged anaerobic membrane bioreactor. Journal of Water Process Engineering, 2017, 20, 51-60.	5.6	24
45	Persistence of Escherichia coli in freshwater periphyton: biofilm-forming capacity as a selective advantage. FEMS Microbiology Ecology, 2012, 79, 608-618.	2.7	23
46	Influences of acid–base property of membrane on interfacial interactions related with membrane fouling in a membrane bioreactor based on thermodynamic assessment. Bioresource Technology, 2016, 214, 355-362.	9.6	23
47	A new strategy to produce low-density polyethylene (LDPE)-based composites simultaneously with high flame retardancy and high mechanical properties. Applied Surface Science, 2018, 437, 75-81.	6.1	22
48	Effect of cold water temperature on membrane structure and properties. Journal of Membrane Science, 2017, 540, 19-26.	8.2	20
49	Quantitative evaluation of the interfacial interactions between a randomly rough sludge floc and membrane surface in a membrane bioreactor based on fractal geometry. Bioresource Technology, 2017, 234, 198-207.	9.6	19
50	Tuning anti-adhesion ability of membrane for a membrane bioreactor by thermodynamic analysis. Bioresource Technology, 2016, 216, 691-698.	9.6	18
51	Characterization of foaming and non-foaming sludge relating to aeration and the implications for membrane fouling control in submerged membrane bioreactors. Journal of Water Process Engineering, 2019, 28, 250-259.	5.6	18
52	Long-term performance of a submerged anaerobic membrane bioreactor treating malting wastewater at room temperature (23â€Â±â€1â€Â°C). Journal of Environmental Chemical Engineering, 2019, 7, 103269.	6.7	17
53	Membrane fouling in a microalgal-bacterial membrane photobioreactor: Effects of P-availability controlled by N:P ratio. Chemosphere, 2021, 282, 131015.	8.2	15
54	Effect of organic loading rate on the performance of a submerged anaerobic membrane bioreactor (SAnMBR) for malting wastewater treatment and biogas production. Journal of Chemical Technology and Biotechnology, 2018, 93, 1636-1647.	3.2	13

BIAO-QIANG LIAO

#	Article	IF	CITATIONS
55	Simulation of foulant bioparticle topography based on Gaussian process and its implications for interface behavior research. Applied Surface Science, 2018, 434, 975-981.	6.1	13
56	Anaerobic membrane bioreactors for wastewater treatment: Challenges and opportunities. Water Environment Research, 2021, 93, 993-1004.	2.7	11
57	Effects of solids retention time on the biological performance of a novel microalgal-bacterial membrane photobioreactor for industrial wastewater treatment. Journal of Environmental Chemical Engineering, 2021, 9, 105500.	6.7	11
58	Reversibility of membrane performance and structure changes caused by extreme cold water temperature and elevated conditioning water temperature. Water Research, 2019, 151, 260-270.	11.3	8
59	Biofouling of an Aerated Membrane Reactor: Four Distinct Microbial Communities. Environmental Engineering Science, 2020, 37, 3-12.	1.6	8
60	Membrane Photobioreactor Applied for Municipal Wastewater Treatment at a High Solids Retention Time: Effects of Microalgae Decay on Treatment Performance and Biomass Properties. Membranes, 2022, 12, 564.	3.0	8
61	Thermodynamic insights into membrane fouling in a membrane bioreactor: Evaluating thermodynamic interactions with Gaussian membrane surface. Journal of Colloid and Interface Science, 2018, 527, 280-288.	9.4	5
62	Comparison between Thermophilic and Mesophilic Membrane-Aerated Biofilm Reactors—A Modeling Study. Membranes, 2022, 12, 418.	3.0	4
63	The Biological Performance of a Novel Electrokinetic-Assisted Membrane Photobioreactor (EK-MPBR) for Wastewater Treatment. Membranes, 2022, 12, 587.	3.0	2