Xiao-mao Wang

List of Publications by Citations

108 papers	3,137 citations	32 h-index	50 g-index
111 ext. papers	4,024 ext. citations	8.9 avg, IF	5.86 L-index

#	Paper	IF	Citations
108	Current state and challenges of full-scale membrane bioreactor applications: A critical review. *Bioresource Technology*, **2019**, 271, 473-481	11	163
107	Combined effect of membrane and foulant hydrophobicity and surface charge on adsorptive fouling during microfiltration. *Journal of Membrane Science*, **2011**, 373, 140-151	9.6	147
106	A thin-film nanocomposite nanofiltration membrane prepared on a support with in situ embedded zeolite nanoparticles. *Separation and Purification Technology*, **2016**, 166, 230-239	8.3	125
105	Role of gelling soluble and colloidal microbial products in membrane fouling. *Environmental Science & Technology*, **2009**, 43, 9341-7	10.3	115
104	Accumulation of biopolymer clusters in a submerged membrane bioreactor and its effect on membrane fouling. *Water Research*, **2008**, 42, 855-62	12.5	112
103	Disinfection byproducts in drinking water and regulatory compliance: A critical review. *Frontiers of Environmental Science and Engineering*, **2015**, 9, 3-15	5.8	85
102	In situ embedment and growth of anhydrous and hydrated aluminum oxide particles on polyvinylidene fluoride (PVDF) membranes. *Journal of Membrane Science*, **2011**, 368, 134-143	9.6	78
101	Impact of gel layer formation on colloid retention in membrane filtration processes. *Journal of Membrane Science*, **2008**, 325, 486-494	9.6	75
100	Fabrication and anti-biofouling properties of alumina and zeolite nanoparticle embedded ultrafiltration membranes. *Desalination*, **2015**, 365, 70-78	10.3	65
99	Performance of nanofiltration membrane in rejecting trace organic compounds: Experiment and model prediction. *Desalination*, **2015**, 370, 7-16	10.3	64
98	Impacts of Metal-Organic Frameworks on Structure and Performance of Polyamide Thin-Film Nanocomposite Membranes. *ACS Applied Materials & Interfaces*, **2019**, 11, 13724-13734	9.5	61
97	Gel layer formation and hollow fiber membrane filterability of polysaccharide dispersions. *Journal of Membrane Science*, **2008**, 322, 204-213	9.6	61
96	Effect of varying piperazine concentration and post-modification on prepared nanofiltration membranes in selectively rejecting organic micropollutants and salts. *Journal of Membrane Science*, **2019**, 582, 274-283	9.6	60
95	Formation of disinfection by-products: effect of temperature and kinetic modeling. *Chemosphere*, **2013**, 90, 634-9	8.4	58
94	Rejection of pharmaceuticals during forward osmosis and prediction by using the solution□diffusion model. *Journal of Membrane Science*, **2015**, 476, 410-420	9.6	57
93	Effects of ozonation on disinfection byproduct formation and speciation during subsequent chlorination. *Chemosphere*, **2014**, 117, 515-20	8.4	56
92	Effects of conventional ozonation and electro-peroxone pretreatment of surface water on disinfection by-product formation during subsequent chlorination. *Water Research*, **2018**, 130, 322-332	12.5	56

91	Analysis of polysaccharide, protein and humic acid retention by microfiltration membranes using Thomas□dynamic adsorption model. *Journal of Membrane Science*, **2009**, 342, 22-34	9.6	50
90	Preparation of nanofiltration membranes for high rejection of organic micropollutants and low rejection of divalent cations. *Journal of Membrane Science*, **2019**, 572, 152-160	9.6	50
89	Comparison of polyamide nanofiltration and low-pressure reverse osmosis membranes on As(III) rejection under various operational conditions. *Desalination*, **2014**, 334, 10-16	10.3	48
88	High-performance thin film nanocomposite membranes enabled by nanomaterials with different dimensions for nanofiltration. *Journal of Membrane Science*, **2020**, 596, 117717	9.6	47
87	Effect of dissolved oxygen concentration on iron efficiency: Removal of three chloroacetic acids. *Water Research*, **2015**, 73, 342-52	12.5	45
86	Role of membrane and compound properties in affecting the rejection of pharmaceuticals by different RO/NF membranes. *Frontiers of Environmental Science and Engineering*, **2017**, 11, 1	5.8	44
85	Influences of multi influent matrices on the retention of PPCPs by nanofiltration membranes. *Separation and Purification Technology*, **2019**, 212, 299-306	8.3	42
84	Iron speciation and iron species transformation in activated sludge membrane bioreactors. *Water Research*, **2010**, 44, 3511-21	12.5	40
83	Quantifying the influence of solute-membrane interactions on adsorption and rejection of pharmaceuticals by NF/RO membranes. *Journal of Membrane Science*, **2018**, 551, 37-46	9.6	39
82	A systematic analysis of fouling evolution and irreversibility behaviors of MBR supernatant hydrophilic/hydrophobic fractions during microfiltration. *Journal of Membrane Science*, **2014**, 467, 206-216	9.6	38
81	Effect of the relative degree of foulant □hydrophobicity□on membrane fouling. *Journal of Membrane Science*, **2019**, 570-571, 1-8	9.6	37
80	Adsorption of pharmaceuticals onto isolated polyamide active layer of NF/RO membranes. *Chemosphere*, **2018**, 200, 36-47	8.4	36
79	Fluorescence properties of dissolved organic matter as a function of hydrophobicity and molecular weight: case studies from two membrane bioreactors and an oxidation ditch. *RSC Advances*, **2016**, 6, 24050-24059	3.7	36
78	Differentiating Solutes with Precise Nanofiltration for Next Generation Environmental Separations: A Review. *Environmental Science & Technology*, **2021**, 55, 1359-1376	10.3	36
77	Effect of oxidation on amine-based pharmaceutical degradation and N-Nitrosodimethylamine formation. *Water Research*, **2015**, 87, 403-11	12.5	33
76	Role of coexistence of negative and positive membrane surface charges in electrostatic effect for salt rejection by nanofiltration. *Desalination*, **2018**, 444, 75-83	10.3	32
75	Effects of organic fouling and cleaning on the retention of pharmaceutically active compounds by ceramic nanofiltration membranes. *Journal of Membrane Science*, **2018**, 563, 734-742	9.6	31
74	Simultaneous determination of surface energy and roughness of dense membranes by a modified contact angle method. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2019**, 562, 370-376	5.1	30

73	Rejection of nine haloacetic acids and coupled reverse draw solute permeation in forward osmosis. *Desalination*, **2014**, 341, 1-9	10.3	29
72	Impact of membrane pore morphology on multi-cycle fouling and cleaning of hydrophobic and hydrophilic membranes during MBR operation. *Journal of Membrane Science*, **2018**, 556, 312-320	9.6	28
71	Natural organic matter fouling of microfiltration membranes: Prediction of constant flux behavior from constant pressure materials properties determination. *Journal of Membrane Science*, **2011**, 366, 192-202	9.6	28
70	Chlorination of oxybenzone: Kinetics, transformation, disinfection byproducts formation, and genotoxicity changes. *Chemosphere*, **2016**, 154, 521-527	8.4	28
69	Trihalomethane hydrolysis in drinking water at elevated temperatures. *Water Research*, **2015**, 78, 18-27	12.5	27
68	Characteristic Regions of the Fluorescence Excitation-Emission Matrix (EEM) To Identify Hydrophobic/Hydrophilic Contents of Organic Matter in Membrane Bioreactors. *Environmental Science & Technology*, **2018**, 52, 11251-11258	10.3	27
67	Characterization of haloacetaldehyde and trihalomethane formation potentials during drinking water treatment. *Chemosphere*, **2016**, 159, 378-384	8.4	26
66	Exploring the interactions of organic micropollutants with polyamide nanofiltration membranes: A molecular docking study. *Journal of Membrane Science*, **2019**, 577, 285-293	9.6	25
65	Outlining the Roles of Membrane-Foulant and Foulant-Foulant Interactions in Organic Fouling During Microfiltration and Ultrafiltration: A Mini-Review. *Frontiers in Chemistry*, **2020**, 8, 417	5	25
64	Effect of capacitive deionization on disinfection by-product precursors. *Science of the Total Environment*, **2016**, 568, 19-25	10.2	25
63	Effects of metal ions on disinfection byproduct formation during chlorination of natural organic matter and surrogates. *Chemosphere*, **2016**, 144, 1074-82	8.4	25
62	Kinetics of quinoline degradation by O3/UV in aqueous phase. *Chemosphere*, **2004**, 55, 733-41	8.4	24
61	Influences of temperature on the retention of PPCPs by nanofiltration membranes: Experiments and modeling assessment. *Journal of Membrane Science*, **2020**, 599, 117817	9.6	23
60	Membrane fouling in ultrafiltration of natural water after pretreatment to different extents. *Journal of Environmental Sciences*, **2016**, 43, 234-243	6.4	23
59	Electric field-based ionic control of selective separation layers. *Journal of Materials Chemistry A*, **2020**, 8, 4244-4251	13	22
58	Synergistic effects of combining ozonation, ceramic membrane filtration and biologically active carbon filtration for wastewater reclamation. *Journal of Hazardous Materials*, **2020**, 382, 121091	12.8	22
57	Nanofiltration in pilot scale for wastewater reclamation: Long-term performance and membrane biofouling characteristics. *Chemical Engineering Journal*, **2020**, 395, 125087	14.7	21
56	Key foulants and their interactive effect in organic fouling of nanofiltration membranes. *Journal of Membrane Science*, **2020**, 610, 118252	9.6	21

55	A Facile and Scalable Fabrication Procedure for Thin-Film Composite Membranes: Integration of Phase Inversion and Interfacial Polymerization. *Environmental Science & Technology*, **2020**, 54, 1946-1954	10.2	21
54	Relating the rejections of oligomeric ethylene glycols and saccharides by nanofiltration: Implication for membrane pore size determination. *Separation and Purification Technology*, **2018**, 205, 151-158	8.3	21
53	Pathway fraction of bromate formation during O□and O⁄HO□processes in drinking water treatment. *Chemosphere*, **2016**, 144, 2436-42	8.4	20
52	Porous organic polymer embedded thin-film nanocomposite membranes for enhanced nanofiltration performance. *Journal of Membrane Science*, **2020**, 602, 117982	9.6	20
51	Assessment of the hindered transport model in predicting the rejection of trace organic compounds by nanofiltration. *Journal of Membrane Science*, **2016**, 498, 57-66	9.6	19
50	Haloacetic acids in swimming pool and spa water in the United States and China. *Frontiers of Environmental Science and Engineering*, **2014**, 8, 820-824	5.8	19
49	Tailored design of nanofiltration membranes for water treatment based on synthesis-property-performance relationships.. *Chemical Society Reviews*, **2021**,	58.5	19
48	Influence of pore size and membrane surface properties on arsenic removal by nanofiltration membranes. *Frontiers of Environmental Science and Engineering*, **2019**, 13, 1	5.8	17
47	Filterability and structure of the fouling layers of biopolymer coexisting with ferric iron in ultrafiltration membrane. *Journal of Membrane Science*, **2015**, 495, 81-90	9.6	16
46	Role of adsorption in combined membrane fouling by biopolymers coexisting with inorganic particles. *Chemosphere*, **2018**, 191, 226-234	8.4	16
45	Direct photo transformation of tetracycline and sulfanomide group antibiotics in surface water: Kinetics, toxicity and site modeling. *Science of the Total Environment*, **2019**, 686, 1-9	10.2	15
44	Roles and performance enhancement of feed spacer in spiral wound membrane modules for water treatment: A 20-year review on research evolvement. *Water Research*, **2021**, 198, 117146	12.5	15
43	An extended standard blocking filtration law for exploring membrane pore internal fouling due to rate-determining adsorption. *Separation and Purification Technology*, **2019**, 212, 974-979	8.3	15
42	Concentration levels of disinfection by-products in 14 swimming pools of China. *Frontiers of Environmental Science and Engineering*, **2015**, 9, 995-1003	5.8	14
41	Impacts of non-uniform filament feed spacers characteristics on the hydraulic and anti-fouling performances in the spacer-filled membrane channels: Experiment and numerical simulation. *Water Research*, **2020**, 185, 116251	12.5	14
40	Fluorescence quotient of excitation□emission matrices as a potential indicator of organic matter behavior in membrane bioreactors. *Environmental Science: Water Research and Technology*, **2018**, 4, 281-290	4.2	13
39	Quantifying the dynamic evolution of organic, inorganic and biological synergistic fouling during nanofiltration using statistical approaches. *Environment International*, **2019**, 133, 105201	12.9	12
38	Modeling of the initial deposition of individual particles during the cross-flow membrane filtration. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2014**, 440, 91-100	5.1	12

37	Correlating fluorescence spectral properties with DOM molecular weight and size distribution in wastewater treatment systems. *Environmental Science: Water Research and Technology*, **2018**, 4, 1933-1943	4.2	12
36	Azo compound degradation kinetics and halonitromethane formation kinetics during chlorination. *Chemosphere*, **2017**, 174, 110-116	8.4	11
35	Bromate Control by Dosing Hydrogen Peroxide and Ammonia during Ozonation of the Yellow River Water. *Ozone: Science and Engineering*, **2015**, 37, 127-133	2.4	11
34	A unified model for quantification of concentration polarization (CP) of particles during cross-flow membrane filtration. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2012**, 407, 99-107	5.1	11
33	Mechanism and kinetics of halogenated compound removal by metallic iron: Transport in solution, diffusion and reduction within corrosion films. *Chemosphere*, **2017**, 178, 119-128	8.4	10
32	Pilot study for the treatment of sodium and fluoride-contaminated groundwater by using high-pressure membrane systems. *Frontiers of Environmental Science and Engineering*, **2015**, 9, 155-163	5.8	10
31	Investigation of the role of biopolymer clusters in MBR membrane fouling using flash freezing and environmental scanning electron microscopy. *Chemosphere*, **2011**, 85, 1154-9	8.4	10
30	Surface functionalization via synergistic grafting of surface-modified silica nanoparticles and layered double hydroxide nanosheets for fabrication of superhydrophilic but relatively oleophobic antifouling membranes. *Separation and Purification Technology*, **2020**, 247, 116955	8.3	9
29	Determination of ketoacids in drinking water by DNPH derivatization and LC-ESI-MS/MS. *Analytical Methods*, **2015**, 7, 6207-6212	3.2	9
28	Multiphase flow models in quantifying constant pressure dead-end filtration and subsequent cake compression1. Dilute slurry filtration. *Journal of Membrane Science*, **2008**, 308, 35-43	9.6	9
27	Polyethylene-supported nanofiltration membrane with in situ formed surface patterns of millimeter size in resisting fouling. *Journal of Membrane Science*, **2021**, 620, 118830	9.6	9
26	Determination of Surface Energy Parameters of Hydrophilic Porous Membranes via a Corrected Contact Angle Approach. *Langmuir*, **2019**, 35, 15009-15016	4	8
25	Silver Nanoparticles-Loaded Exfoliated Graphite and Its Anti-Bacterial Performance. *Applied Sciences (Switzerland)*, **2017**, 7, 852	2.6	8
24	A Simple Method to Identify the Dominant Fouling Mechanisms during Membrane Filtration Based on Piecewise Multiple Linear Regression. *Membranes*, **2020**, 10,	3.8	8
23	Using loose nanofiltration membrane for lake water treatment: A pilot study. *Frontiers of Environmental Science and Engineering*, **2021**, 15, 1	5.8	8
22	Quantification of solid pressure in the concentration polarization (CP) layer of colloidal particles and its impact on ultrafiltration. *Journal of Colloid and Interface Science*, **2011**, 358, 290-300	9.3	7
21	Performance enhancement of spiral-wound reverse osmosis membrane elements with novel diagonal-flow feed channels. *Desalination*, **2022**, 523, 115447	10.3	7
20	Hierarchically textured superhydrophilic polyvinylidene fluoride membrane via nanocasting and post-fabrication grafting of surface-tailored silica nanoparticles. *Environmental Science: Nano*, **2019**, 6, 3579-3589	7.1	7

19	Effect of bromide on the transformation and genotoxicity of octyl-dimethyl-p-aminobenzoic acid during chlorination. *Journal of Hazardous Materials*, **2017**, 324, 626-633	12.8	6
18	Evaluating Dissolved Ozone in a Bubble Column Using a Discrete-Bubble Model. *Ozone: Science and Engineering*, **2017**, 39, 44-53	2.4	6
17	Enhanced micropollutants removal by nanofiltration and their environmental risks in wastewater reclamation: A pilot-scale study. *Science of the Total Environment*, **2020**, 744, 140954	10.2	6
16	Comparison of membrane fouling in ultrafiltration of down-flow and up-flow biological activated carbon effluents. *Frontiers of Environmental Science and Engineering*, **2018**, 12, 1	5.8	6
15	Techno-economic characteristics of wastewater treatment plants retrofitted from the conventional activated sludge process to the membrane bioreactor process. *Frontiers of Environmental Science and Engineering*, **2022**, 16, 1	5.8	6
14	Study on the removal of aesthetic indicators by ozone during advanced treatment of water reuse. *Journal of Water Process Engineering*, **2020**, 36, 101381	6.7	5
13	Core-shell structured mZVI/Ca(OH) particle: Morphology, aggregation and corrosion. *Journal of Colloid and Interface Science*, **2018**, 510, 199-206	9.3	5
12	Thin-film composite forward osmosis membrane in rejecting trace organic compounds: Impact of molecular charge66, 23-35		5
11	Non-uniform distribution of adsorptive fouling along hollow fiber membrane: Characterization and quantification. *Separation and Purification Technology*, **2018**, 205, 159-168	8.3	5
10	Spontaneous Formation of Nano-fibrillar Boehmite and the Enhancement Effect of Polyethylene Glycol. *Journal of the American Ceramic Society*, **2011**, 94, 4435-4443	3.8	4
9	Calcium hydroxide coating on highly reactive nanoscale zero-valent iron for in situ remediation application. *Chemosphere*, **2018**, 207, 715-724	8.4	3
8	The role of solubility on the rejection of trace organics by nanofiltration membrane: exemplified with disinfection by-products. *Environmental Science and Pollution Research*, **2017**, 24, 18400-18409	5.1	3
7	Electrically Tuning Ultrafiltration Behavior for Efficient Water Purification. *Environmental Science & Technology*, **2020**, 54, 11536-11545	10.3	3
6	The critical role of feed spacer channel porosity in membrane biofouling: Insights and implications. *Journal of Membrane Science*, **2022**, 649, 120395	9.6	3
5	Retention of soluble microbial products in submerged membrane bioreactors. *Desalination and Water Treatment*, **2009**, 6, 131-137		2
4	Effect of synthesis conditions on the non-uniformity of nanofiltration membrane pore size distribution. *Journal of Membrane Science*, **2022**, 647, 120304	9.6	2
3	Anti-Fouling Property of Alumina-Doped Polyvinylidene Fluoride (PVDF) Membranes. *Journal of Water and Environment Technology*, **2012**, 10, 241-252	1.1	1
2	Incorporating catalytic ceramic membrane into the integrated process of in situ ozonation, membrane filtration and biological degradation: Enhanced performance and underlying mechanisms. *Journal of Membrane Science*, **2022**, 652, 120509	9.6	1

1	Fluorescence-based method for fast quantification of active aluminums in natural and treated water.. *Journal of Hazardous Materials*, **2022**, 433, 128815	12.8	0