Xiao-mao Wang

List of Publications by Year
in descending order

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110 papers	4,878 citations	61977 43 h-index	106340 65 g-index
111 all docs	111 docs citations	111 times ranked	4061 citing authors

#	Article	IF	Citations
1	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.	6.0	21
2	Performance enhancement of spiral-wound reverse osmosis membrane elements with novel diagonal-flow feed channels. Desalination, 2022, 523, 115447.	8.2	17
3	Tailored design of nanofiltration membranes for water treatment based on synthesisâ€"propertyâ€"performance relationships. Chemical Society Reviews, 2022, 51, 672-719.	38.1	182
4	Effect of synthesis conditions on the non-uniformity of nanofiltration membrane pore size distribution. Journal of Membrane Science, 2022, 647, 120304.	8.2	14
5	The critical role of feed spacer channel porosity in membrane biofouling: Insights and implications. Journal of Membrane Science, 2022, 649, 120395.	8.2	18
6	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.	8.2	16
7	Fluorescence-based method for fast quantification of active aluminums in natural and treated water. Journal of Hazardous Materials, 2022, 433, 128815.	12.4	4
8	Exploitation of Amine Groups Cooped up in Polyamide Nanofiltration Membranes to Achieve High Rejection of Micropollutants and High Permeance of Divalent Cations. Environmental Science & Technology, 2022, 56, 10954-10962.	10.0	17
9	Identifying key residual aluminum species responsible for aggravation of nanofiltration membrane fouling in drinking water treatment. Journal of Membrane Science, 2022, 659, 120833.	8.2	13
10	Using loose nanofiltration membrane for lake water treatment: A pilot study. Frontiers of Environmental Science and Engineering, 2021, 15, 1.	6.0	20
11	Polyethylene-supported nanofiltration membrane with in situ formed surface patterns of millimeter size in resisting fouling. Journal of Membrane Science, 2021, 620, 118830.	8.2	32
12	Differentiating Solutes with Precise Nanofiltration for Next Generation Environmental Separations: A Review. Environmental Science & Technology, 2021, 55, 1359-1376.	10.0	156
13	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.	11.3	54
14	Synergistic effects of combining ozonation, ceramic membrane filtration and biologically active carbon filtration for wastewater reclamation. Journal of Hazardous Materials, 2020, 382, 121091.	12.4	40
15	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.	10.0	56
16	High-performance thin film nanocomposite membranes enabled by nanomaterials with different dimensions for nanofiltration. Journal of Membrane Science, 2020, 596, 117717.	8.2	86
17	Porous organic polymer embedded thin-film nanocomposite membranes for enhanced nanofiltration performance. Journal of Membrane Science, 2020, 602, 117982.	8.2	47
18	Enhanced micropollutants removal by nanofiltration and their environmental risks in wastewater reclamation: A pilot-scale study. Science of the Total Environment, 2020, 744, 140954.	8.0	21

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19	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.	11.3	34
20	A Simple Method to Identify the Dominant Fouling Mechanisms during Membrane Filtration Based on Piecewise Multiple Linear Regression. Membranes, 2020, 10, 171.	3.0	20
21	Electrically Tuning Ultrafiltration Behavior for Efficient Water Purification. Environmental Science & Technology, 2020, 54, 11536-11545.	10.0	12
22	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.	3.6	58
23	Study on the removal of aesthetic indicators by ozone during advanced treatment of water reuse. Journal of Water Process Engineering, 2020, 36, 101381.	5.6	12
24	Electric field-based ionic control of selective separation layers. Journal of Materials Chemistry A, 2020, 8, 4244-4251.	10.3	40
25	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.	7.9	19
26	Nanofiltration in pilot scale for wastewater reclamation: Long-term performance and membrane biofouling characteristics. Chemical Engineering Journal, 2020, 395, 125087.	12.7	38
27	Influences of temperature on the retention of PPCPs by nanofiltration membranes: Experiments and modeling assessment. Journal of Membrane Science, 2020, 599, 117817.	8.2	45
28	Key foulants and their interactive effect in organic fouling of nanofiltration membranes. Journal of Membrane Science, 2020, 610, 118252.	8.2	47
29	Determination of Surface Energy Parameters of Hydrophilic Porous Membranes via a Corrected Contact Angle Approach. Langmuir, 2019, 35, 15009-15016.	3.5	16
30	Quantifying the dynamic evolution of organic, inorganic and biological synergistic fouling during nanofiltration using statistical approaches. Environment International, 2019, 133, 105201.	10.0	22
31	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.	8.0	33
32	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.	8.2	105
33	Influence of pore size and membrane surface properties on arsenic removal by nanofiltration membranes. Frontiers of Environmental Science and Engineering, 2019, 13, 1.	6.0	31
34	Impacts of Metalâ€"Organic Frameworks on Structure and Performance of Polyamide Thin-Film Nanocomposite Membranes. ACS Applied Materials & Interfaces, 2019, 11, 13724-13734.	8.0	100
35	Exploring the interactions of organic micropollutants with polyamide nanofiltration membranes: A molecular docking study. Journal of Membrane Science, 2019, 577, 285-293.	8.2	36
36	Hierarchically textured superhydrophilic polyvinylidene fluoride membrane via nanocasting and post-fabrication grafting of surface-tailored silica nanoparticles. Environmental Science: Nano, 2019, 6, 3579-3589.	4.3	11

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37	Current state and challenges of full-scale membrane bioreactor applications: A critical review. Bioresource Technology, 2019, 271, 473-481.	9.6	266
38	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.	7.9	18
39	Preparation of nanofiltration membranes for high rejection of organic micropollutants and low rejection of divalent cations. Journal of Membrane Science, 2019, 572, 152-160.	8.2	88
40	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.	4.7	49
41	Effect of the relative degree of foulant â€œhydrophobicityâ€•on membrane fouling. Journal of Membrane Science, 2019, 570-571, 1-8.	8.2	57
42	Influences of multi influent matrices on the retention of PPCPs by nanofiltration membranes. Separation and Purification Technology, 2019, 212, 299-306.	7.9	66
43	Adsorption of pharmaceuticals onto isolated polyamide active layer of NF/RO membranes. Chemosphere, 2018, 200, 36-47.	8.2	50
44	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.	8.2	44
45	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.	8.2	58
46	Core-shell structured mZVI/Ca(OH)2 particle: Morphology, aggregation and corrosion. Journal of Colloid and Interface Science, 2018, 510, 199-206.	9.4	6
47	Role of adsorption in combined membrane fouling by biopolymers coexisting with inorganic particles. Chemosphere, 2018, 191, 226-234.	8.2	22
48	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.	11.3	77
49	Fluorescence quotient of excitationâ€“emission matrices as a potential indicator of organic matter behavior in membrane bioreactors. Environmental Science: Water Research and Technology, 2018, 4, 281-290.	2.4	21
50	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.	2.4	22
51	Characteristic Regions of the Fluorescence Excitationâ€“Emission Matrix (EEM) To Identify Hydrophobic/Hydrophilic Contents of Organic Matter in Membrane Bioreactors. Environmental Science & Technology, 2018, 52, 11251-11258.	10.0	64
52	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.	7.9	31
53	Non-uniform distribution of adsorptive fouling along hollow fiber membrane: Characterization and quantification. Separation and Purification Technology, 2018, 205, 159-168.	7.9	7
54	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.	8.2	48

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55	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.	6.0	7
56	Role of coexistence of negative and positive membrane surface charges in electrostatic effect for salt rejection by nanofiltration. Desalination, 2018, 444, 75-83.	8.2	52
57	Calcium hydroxide coating on highly reactive nanoscale zero-valent iron for in situ remediation application. Chemosphere, 2018, 207, 715-724.	8.2	5
58	Effect of bromide on the transformation and genotoxicity of octyl-dimethyl-p-aminobenzoic acid during chlorination. Journal of Hazardous Materials, 2017, 324, 626-633.	12.4	10
59	Azo compound degradation kinetics and halonitromethane formation kinetics during chlorination. Chemosphere, 2017, 174, 110-116.	8.2	13
60	Mechanism and kinetics of halogenated compound removal by metallic iron: Transport in solution, diffusion and reduction within corrosion films. Chemosphere, 2017, 178, 119-128.	8.2	12
61	Evaluating Dissolved Ozone in a Bubble Column Using a Discrete-Bubble Model. Ozone: Science and Engineering, 2017, 39, 44-53.	2.5	6
62	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.	6.0	56
63	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.	5.3	7
64	Silver Nanoparticles-Loaded Exfoliated Graphite and Its Anti-Bacterial Performance. Applied Sciences (Switzerland), 2017, 7, 852.	2.5	19
65	Membrane fouling in ultrafiltration of natural water after pretreatment to different extents. Journal of Environmental Sciences, 2016, 43, 234-243.	6.1	26
66	Chlorination of oxybenzone: Kinetics, transformation, disinfection byproducts formation, and genotoxicity changes. Chemosphere, 2016, 154, 521-527.	8.2	35
67	A thin-film nanocomposite nanofiltration membrane prepared on a support with in situ embedded zeolite nanoparticles. Separation and Purification Technology, 2016, 166, 230-239.	7.9	162
68	Characterization of haloacetaldehyde and trihalomethane formation potentials during drinking water treatment. Chemosphere, 2016, 159, 378-384.	8.2	35
69	Effect of capacitive deionization on disinfection by-product precursors. Science of the Total Environment, 2016, 568, 19-25.	8.0	32
70	Pathway fraction of bromate formation during O3 and O3/H2O2 processes in drinking water treatment. Chemosphere, 2016, 144, 2436-2442.	8.2	22
71	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.	3.6	55
72	Effects of metal ions on disinfection byproduct formation during chlorination of natural organic matter and surrogates. Chemosphere, 2016, 144, 1074-1082.	8.2	40

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73	Assessment of the hindered transport model in predicting the rejection of trace organic compounds by nanofiltration. Journal of Membrane Science, 2016, 498, 57-66.	8.2	25
74	Effect of oxidation on amine-based pharmaceutical degradation and N-Nitrosodimethylamine formation. Water Research, 2015, 87, 403-411.	11.3	44
75	Performance of nanofiltration membrane in rejecting trace organic compounds: Experiment and model prediction. Desalination, 2015, 370, 7-16.	8.2	85
76	Determination of ketoacids in drinking water by DNPH derivatization and LC-ESI-MS/MS. Analytical Methods, 2015, 7, 6207-6212.	2.7	9
77	Fabrication and anti-biofouling properties of alumina and zeolite nanoparticle embedded ultrafiltration membranes. Desalination, 2015, 365, 70-78.	8.2	81
78	Effect of dissolved oxygen concentration on iron efficiency: Removal of three chloroacetic acids. Water Research, 2015, 73, 342-352.	11.3	48
79	Disinfection byproducts in drinking water and regulatory compliance: A critical review. Frontiers of Environmental Science and Engineering, 2015, 9, 3-15.	6.0	98
80	Concentration levels of disinfection by-products in 14 swimming pools of China. Frontiers of Environmental Science and Engineering, 2015, 9, 995-1003.	6.0	21
81	Bromate Control by Dosing Hydrogen Peroxide and Ammonia during Ozonation of the Yellow River Water. Ozone: Science and Engineering, 2015, 37, 127-133.	2.5	12
82	Trihalomethane hydrolysis in drinking water at elevated temperatures. Water Research, 2015, 78, 18-27.	11.3	40
83	Filterability and structure of the fouling layers of biopolymer coexisting with ferric iron in ultrafiltration membrane. Journal of Membrane Science, 2015, 495, 81-90.	8.2	19
84	Rejection of pharmaceuticals during forward osmosis and prediction by using the solutionâ€“diffusion model. Journal of Membrane Science, 2015, 476, 410-420.	8.2	69
85	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.	6.0	11
86	Comparison of polyamide nanofiltration and low-pressure reverse osmosis membranes on As(III) rejection under various operational conditions. Desalination, 2014, 334, 10-16.	8.2	64
87	Effects of ozonation on disinfection byproduct formation and speciation during subsequent chlorination. Chemosphere, 2014, 117, 515-520.	8.2	63
88	Haloacetic acids in swimming pool and spa water in the United States and China. Frontiers of Environmental Science and Engineering, 2014, 8, 820-824.	6.0	26
89	Rejection of nine haloacetic acids and coupled reverse draw solute permeation in forward osmosis. Desalination, 2014, 341, 1-9.	8.2	34
90	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.	4.7	16

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91	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.	8.2	51
92	Formation of disinfection by-products: Effect of temperature and kinetic modeling. Chemosphere, 2013, 90, 634-639.	8.2	73
93	Anti-Fouling Property of Alumina-Doped Polyvinylidene Fluoride (PVDF) Membranes. Journal of Water and Environment Technology, 2012, 10, 241-252.	0.7	1
94	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.	4.7	13
95	Spontaneous Formation of Nanoâ€fibrillar Boehmite and the Enhancement Effect of Polyethylene Glycol. Journal of the American Ceramic Society, 2011, 94, 4435-4443.	3.8	6
96	Investigation of the role of biopolymer clusters in MBR membrane fouling using flash freezing and environmental scanning electron microscopy. Chemosphere, 2011, 85, 1154-1159.	8.2	10
97	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.	8.2	90
98	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.	8.2	32
99	Combined effect of membrane and foulant hydrophobicity and surface charge on adsorptive fouling during microfiltration. Journal of Membrane Science, 2011, 373, 140-151.	8.2	175
100	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.	9.4	9
101	Iron speciation and iron species transformation in activated sludge membrane bioreactors. Water Research, 2010, 44, 3511-3521.	11.3	51
102	Analysis of polysaccharide, protein and humic acid retention by microfiltration membranes using Thomasâ€™ dynamic adsorption model. Journal of Membrane Science, 2009, 342, 22-34.	8.2	55
103	Role of Gelling Soluble and Colloidal Microbial Products in Membrane Fouling. Environmental Science & Technology, 2009, 43, 9341-9347.	10.0	134
104	Retention of soluble microbial products in submerged membrane bioreactors. Desalination and Water Treatment, 2009, 6, 131-137.	1.0	2
105	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.	8.2	11
106	Gel layer formation and hollow fiber membrane filterability of polysaccharide dispersions. Journal of Membrane Science, 2008, 322, 204-213.	8.2	71
107	Impact of gel layer formation on colloid retention in membrane filtration processes. Journal of Membrane Science, 2008, 325, 486-494.	8.2	84
108	Accumulation of biopolymer clusters in a submerged membrane bioreactor and its effect on membrane fouling. Water Research, 2008, 42, 855-862.	11.3	127

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109	Kinetics of quinoline degradation by O3/UV in aqueous phase. Chemosphere, 2004, 55, 733-741.	8.2	31
110	Thin-film composite forward osmosis membrane in rejecting trace organic compounds: Impact of molecular charge. , 0, 66, 23-35.		6