Tzyy Haur Chong

List of Publications by Year
in descending order

80 papers	4,079 citations	109264 35 h-index	118793 62 g-index
81 all docs	81 docs citations	81 times ranked	3363 citing authors

#	Article	IF	Citations
1	Colloidal interactions and fouling of NF and RO membranes: A review. Advances in Colloid and Interface Science, 2011, 164, 126-143.	7.0	559
2	The potential to enhance membrane module design with 3D printing technology. Journal of Membrane Science, 2016, 499, 480-490.	4.1	238
3	Thermodynamics and kinetics for mixed calcium carbonate and calcium sulfate precipitation. Chemical Engineering Science, 2001, 56, 5391-5400.	1.9	132
4	Fundamentals of low-pressure nanofiltration: Membrane characterization, modeling, and understanding the multi-ionic interactions in water softening. Journal of Membrane Science, 2017, 521, 18-32.	4.1	128
5	Fouling propensity of forward osmosis: investigation of the slower flux decline phenomenon. Water Science and Technology, 2010, 61, 927-936.	1.2	127
6	The effect of imposed flux on biofouling in reverse osmosis: Role of concentration polarisation and biofilm enhanced osmotic pressure phenomena. Journal of Membrane Science, 2008, 325, 840-850.	4.1	122
7	3D Printing of Multilayered and Multimaterial Electronics: A Review. Advanced Electronic Materials, 2021, 7, 2100445.	2.6	119
8	Implications of critical flux and cake enhanced osmotic pressure (CEOP) on colloidal fouling in reverse osmosis: Experimental observations. Journal of Membrane Science, 2008, 314, 101-111.	4.1	115
9	A review of fouling indices and monitoring techniques for reverse osmosis. Desalination, 2018, 434, 169-188.	4.0	98
10	Quorum quenching in anaerobic membrane bioreactor for fouling control. Water Research, 2019, 156, 159-167.	5.3	91
11	The feasibility of nanofiltration membrane bioreactor (NF-MBR)+reverse osmosis (RO) process for water reclamation: Comparison with ultrafiltration membrane bioreactor (UF-MBR)+RO process. Water Research, 2018, 129, 180-189.	5.3	87
12	Energy-efficient desalination by forward osmosis using responsive ionic liquid draw solutes. Environmental Science: Water Research and Technology, 2015, 1, 341-347.	1.2	84
13	Design and development of layer-by-layer based low-pressure antifouling nanofiltration membrane used for water reclamation. Journal of Membrane Science, 2019, 584, 309-323.	4.1	80
14	Analyzing the Evolution of Membrane Fouling via a Novel Method Based on 3D Optical Coherence Tomography Imaging. Environmental Science & Technology, 2016, 50, 6930-6939.	4.6	79
15	Enhanced concentration polarization by unstirred fouling layers in reverse osmosis: Detection by sodium chloride tracer response technique. Journal of Membrane Science, 2007, 287, 198-210.	4.1	78
16	Energy-efficient reverse osmosis desalination process. Journal of Membrane Science, 2015, 473, 177-188.	4.1	69
17	3D printing by selective laser sintering of polypropylene feed channel spacers for spiral wound membrane modules for the water industry. Virtual and Physical Prototyping, 2016, 11, 151-158.	5.3	68
18	Comparison of solid, liquid and powder forms of 3D printing techniques in membrane spacer fabrication. Journal of Membrane Science, 2017, 537, 283-296.	4.1	66

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19	Monitoring membrane biofouling via ultrasonic time-domain reflectometry enhanced by silica dosing. Journal of Membrane Science, 2013, 428, 24-37.	4.1	65
20	Improved performance of gravity-driven membrane filtration for seawater pretreatment: Implications of membrane module configuration. Water Research, 2017, 114, 59-68.	5.3	62
21	Layer-by-layer assembly based low pressure biocatalytic nanofiltration membranes for micropollutants removal. Journal of Membrane Science, 2020, 615, 118514.	4.1	61
22	Fouling behavior of isolated dissolved organic fractions from seawater in reverse osmosis (RO) desalination process. Water Research, 2019, 159, 385-396.	5.3	54
23	Strategic Co-Location in a Hybrid Process Involving Desalination and Pressure Retarded Osmosis (PRO). Membranes, 2013, 3, 98-125.	1.4	53
24	Relating transport modeling to nanofiltration membrane fabrication: Navigating the permeability-selectivity trade-off in desalination pretreatment. Journal of Membrane Science, 2018, 554, 26-38.	4.1	52
25	Prototype aquaporin-based forward osmosis membrane: Filtration properties and fouling resistance. Desalination, 2018, 445, 75-84.	4.0	52
26	Gravity-driven microfiltration pretreatment for reverse osmosis (RO) seawater desalination: Microbial community characterization and RO performance. Desalination, 2017, 418, 1-8.	4.0	50
27	Physiological Responses of Salinity-Stressed <i>Vibrio</i> sp. and the Effect on the Biofilm Formation on a Nanofiltration Membrane. Environmental Science & Technology, 2017, 51, 1249-1258.	4.6	50
28	The fouling potential of colloidal silica and humic acid and their mixtures. Journal of Membrane Science, 2013, 433, 112-120.	4.1	48
29	A review on spacers and membranes: Conventional or hybrid additive manufacturing?. Water Research, 2021, 188, 116497.	5.3	46
30	Biofouling in reverse osmosis processes: The roles of flux, crossflow velocity and concentration polarization in biofilm development. Journal of Membrane Science, 2014, 467, 116-125.	4.1	45
31	Effects of spacer orientations on the cake formation during membrane fouling: Quantitative analysis based on 3D OCT imaging. Water Research, 2017, 110, 1-14.	5.3	45
32	Dynamics of biofilm formation under different nutrient levels and the effect on biofouling of a reverse osmosis membrane system. Biofouling, 2013, 29, 319-330.	0.8	44
33	Enhancing fouling mitigation of submerged flat-sheet membranes by vibrating 3D-spacers. Separation and Purification Technology, 2019, 215, 70-80.	3.9	44
34	Impact of membrane bioreactor operating conditions on fouling behavior of reverse osmosis membranes in MBRâ€"RO processes. Desalination, 2013, 311, 37-45.	4.0	39
35	Modeling of NF/RO membrane fouling and flux decline using real-time observations. Journal of Membrane Science, 2019, 576, 66-77.	4.1	39
36	Energy-efficient reverse osmosis desalination: Effect of retentate recycle and pump and energy recovery device efficiencies. Desalination, 2015, 366, 15-31.	4.0	36

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37	The effect of different surface conditioning layers on bacterial adhesion on reverse osmosis membranes. Desalination, 2016, 387, 1-13.	4.0	36
38	Spacer vibration for fouling control of submerged flat sheet membranes. Separation and Purification Technology, 2019, 210, 719-728.	3.9	36
39	Anti-fouling piezoelectric PVDF membrane: Effect of morphology on dielectric and piezoelectric properties. Journal of Membrane Science, 2021, 620, 118818.	4.1	35
40	Biocarriers facilitated gravity-driven membrane (GDM) reactor for wastewater reclamation: Effect of intermittent aeration cycle. Science of the Total Environment, 2019, 694, 133719.	3.9	34
41	Recycling rainwater by submerged gravity-driven membrane (GDM) reactors: Effect of hydraulic retention time and periodic backwash. Science of the Total Environment, 2019, 654, 10-18.	3.9	34
42	Incorporation of barium titanate nanoparticles in piezoelectric PVDF membrane. Journal of Membrane Science, 2021, 640, 119861.	4.1	32
43	A comparison of gravity-driven membrane (GDM) reactor and biofiltrationÂ+ GDM reactor for seawater reverse osmosis desalination pretreatment. Water Research, 2019, 154, 72-83.	5.3	31
44	Integration of an anaerobic fluidized-bed membrane bioreactor (MBR) with zeolite adsorption and reverse osmosis (RO) for municipal wastewater reclamation: Comparison with an anoxic-aerobic MBR coupled with RO. Chemosphere, 2020, 245, 125569.	4.2	30
45	Layer-by-layer aided Î²-cyclodextrin nanofilm for precise organic solvent nanofiltration. Journal of Membrane Science, 2022, 652, 120466.	4.1	29
46	Role of initially formed cake layers on limiting membrane fouling in membrane bioreactors. Bioresource Technology, 2012, 118, 589-593.	4.8	28
47	Design and modeling of novel low-pressure nanofiltration hollow fiber modules for water softening and desalination pretreatment. Desalination, 2018, 439, 58-72.	4.0	27
48	Enhancing performance of biocarriers facilitated gravity-driven membrane (GDM) reactor for decentralized wastewater treatment: Effect of internal recirculation and membrane packing density. Science of the Total Environment, 2021, 762, 144104.	3.9	26
49	Potential of Printed Electrodes for Electrochemical Impedance Spectroscopy (EIS): Toward Membrane Fouling Detection. Advanced Electronic Materials, 2021, 7, 2100043.	2.6	26
50	Colloidal metastability and membrane fouling â€“ Effects of crossflow velocity, flux, salinity and colloid concentration. Journal of Membrane Science, 2014, 469, 174-187.	4.1	25
51	Gravity-driven membrane (GDM) filtration of algae-polluted surface water. Journal of Water Process Engineering, 2020, 36, 101257.	2.6	25
52	Direct membrane filtration of municipal wastewater: Linking periodical physical cleaning with fouling mechanisms. Separation and Purification Technology, 2021, 259, 118125.	3.9	25
53	Fouling mitigation in reverse osmosis processes with 3D printed sinusoidal spacers. Water Research, 2021, 207, 117818.	5.3	25
54	Implications of critical flux and cake enhanced osmotic pressure (CEOP) on colloidal fouling in reverse osmosis: Modeling approach. Desalination and Water Treatment, 2009, 8, 68-90.	1.0	24

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55	Fouling in reverse osmosis: Detection by non-invasive techniques. Desalination, 2007, 204, 148-154.	4.0	23
56	Process economics and operating strategy for the energy-efficient reverse osmosis (EERO) process. Desalination, 2018, 443, 70-84.	4.0	22
57	Development of a new technique to predict reverse osmosis fouling. Journal of Membrane Science, 2013, 448, 12-22.	4.1	21
58	Online monitor for the reverse osmosis spiral wound module â€" Development of the canary cell. Desalination, 2015, 368, 48-59.	4.0	21
59	Prediction of reverse osmosis fouling using the feed fouling monitor and salt tracer response technique. Journal of Membrane Science, 2015, 475, 433-444.	4.1	21
60	Mitigation of membrane fouling in a seawater-driven forward osmosis system for waste activated sludge thickening. Journal of Cleaner Production, 2019, 241, 118373.	4.6	21
61	Impact of salt accumulation in the bioreactor on the performance of nanofiltration membrane bioreactor (NF-MBR)+Reverse osmosis (RO) process for water reclamation. Water Research, 2020, 170, 115352.	5.3	19
62	Numerical model-based analysis of energy-efficient reverse osmosis (EERO) process: Performance simulation and optimization. Desalination, 2019, 453, 10-21.	4.0	17
63	Implications of enhancing critical flux of particulates by AC fields in RO desalination and reclamation. Desalination, 2008, 220, 371-379.	4.0	15
64	Characterization of colloidal fouling in forward osmosis via ultrasonic time- (UTDR) and frequency-domain reflectometry (UFDR). Journal of Membrane Science, 2020, 602, 117969.	4.1	15
65	Biofouling control potential of tannic acid, ellagic acid, and epigallocatechin against Pseudomonas aeruginosa and reverse osmosis membrane multispecies community. Journal of Industrial and Engineering Chemistry, 2015, 30, 204-211.	2.9	14
66	The efficacy of tannic acid in controlling biofouling by Pseudomonas aeruginosa is dependent on nutrient conditions and bacterial density. International Biodeterioration and Biodegradation, 2015, 104, 74-82.	1.9	13
67	Fouling and mitigation mechanisms during direct microfiltration and ultrafiltration of primary wastewater. Journal of Water Process Engineering, 2021, 44, 102331.	2.6	13
68	The involvement of lectins and lectin-like humic substances in biofilm formation on RO membranes - is TEP important?. Desalination, 2016, 399, 61-68.	4.0	12
69	Impact of isolated dissolved organic fractions from seawater on biofouling in reverse osmosis (RO) desalination process. Water Research, 2020, 168, 115198.	5.3	12
70	Ethanol recovery from dilute aqueous solution by perstraction using supported ionic liquid membrane (SILM). Journal of Cleaner Production, 2021, 298, 126811.	4.6	12
71	Flux-Dependent Fouling Phenomena in Membrane Bioreactors under Different Food to Microorganisms (F/M) Ratios. Separation Science and Technology, 2013, 48, 840-848.	1.3	9
72	Characterizing spatial distribution of fouling on flat-sheet membranes in a pilot-scale gravity-driven membrane reactor for seawater pretreatment. Journal of Water Process Engineering, 2021, 44, 102436.	2.6	7

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73	Biocarriers facilitated gravity-driven membrane filtration of domestic wastewater in cold climate: Combined effect of temperature and periodic cleaning. Science of the Total Environment, 2022, 833, 155248.	3.9	7
74	Development of a quorum quenching-column to control biofouling in reverse osmosis water treatment processes. Journal of Industrial and Engineering Chemistry, 2021, 94, 188-194.	2.9	6
75	Centrifugal reverse osmosis (CRO) â˘ a novel energy-efficient membrane process for desalination near local thermodynamic equilibrium. Journal of Membrane Science, 2021, 637, 119630.	4.1	6
76	Fouling reduction in MBR-RO processes: the effect of MBR F/M ratio. Desalination and Water Treatment, 2013, 51, 4829-4838.	1.0	5
77	Membrane filtration of manganese (II) remediated-microalgae: Manganese (II) removal, extracellular organic matter, and membrane fouling. Algal Research, 2021, 55, 102279.	2.4	5
78	Characterization of membrane wetting phenomenon by ionic liquid via ultrasonic time-domain reflectometry (UTDR). Journal of Membrane Science, 2022, 641, 119949.	4.1	4
79	Online monitoring of transparent exopolymer particles (TEP) by a novel membrane-based spectrophotometric method. Chemosphere, 2019, 220, 107-115.	4.2	3
80	Critical flux of gum arabic: Implications for fouling and fractionation performance of membranes. Food and Bioproducts Processing, 2016, 97, 41-47.	1.8	2