

Liguo Shen

List of Publications by Year in descending order

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papers

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44042

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96
times ranked

3218
citing authors

#	ARTICLE	IF	CITATIONS
1	Membrane fouling in a submerged membrane bioreactor: Impacts of floc size. <i>Chemical Engineering Journal</i> , 2015, 269, 328-334.	6.6	190
2	Membrane fouling caused by biological foams in a submerged membrane bioreactor: Mechanism insights. <i>Water Research</i> , 2020, 181, 115932.	5.3	189
3	Preparation and characterization of ZnO/polyethersulfone (PES) hybrid membranes. <i>Desalination</i> , 2012, 293, 21-29.	4.0	179
4	Fabrication of high-performance composite nanofiltration membranes for dye wastewater treatment: mussel-inspired layer-by-layer self-assembly. <i>Journal of Colloid and Interface Science</i> , 2020, 560, 273-283.	5.0	170
5	Mechanistic insights into alginate fouling caused by calcium ions based on terahertz time-domain spectra analyses and DFT calculations. <i>Water Research</i> , 2018, 129, 337-346.	5.3	168
6	Facile synthesis of 2D TiO ₂ @MXene composite membrane with enhanced separation and antifouling performance. <i>Journal of Membrane Science</i> , 2021, 640, 119854.	4.1	154
7	Inkjet printing of dopamine followed by UV light irradiation to modify mussel-inspired PVDF membrane for efficient oil-water separation. <i>Journal of Membrane Science</i> , 2021, 619, 118790.	4.1	149
8	Effect of calcium ions on fouling properties of alginate solution and its mechanisms. <i>Journal of Membrane Science</i> , 2017, 525, 320-329.	4.1	131
9	Enhanced permeability and antifouling performance of polyether sulfone (PES) membrane via elevating magnetic Ni@MXene nanoparticles to upper layer in phase inversion process. <i>Journal of Membrane Science</i> , 2021, 623, 119080.	4.1	130
10	Preparation of Ni@UiO-66 incorporated polyethersulfone (PES) membrane by magnetic field assisted strategy to improve permeability and photocatalytic self-cleaning ability. <i>Journal of Colloid and Interface Science</i> , 2022, 618, 483-495.	5.0	109
11	A conductive PVDF-Ni membrane with superior rejection, permeance and antifouling ability via electric assisted in-situ aeration for dye separation. <i>Journal of Membrane Science</i> , 2019, 581, 401-412.	4.1	107
12	Magnetic field assisted arrangement of photocatalytic TiO ₂ particles on membrane surface to enhance membrane antifouling performance for water treatment. <i>Journal of Colloid and Interface Science</i> , 2020, 570, 273-285.	5.0	105
13	A novel in-situ micro-aeration functional membrane with excellent decoloration efficiency and antifouling performance. <i>Journal of Membrane Science</i> , 2022, 641, 119925.	4.1	101
14	Novel insights into membrane fouling in a membrane bioreactor: Elucidating interfacial interactions with real membrane surface. <i>Chemosphere</i> , 2018, 210, 769-778.	4.2	97
15	Effects of molecular weight distribution of soluble microbial products (SMPs) on membrane fouling in a membrane bioreactor (MBR): Novel mechanistic insights. <i>Chemosphere</i> , 2020, 248, 126013.	4.2	97
16	Plant polyphenol intermediated metal-organic framework (MOF) membranes for efficient desalination. <i>Journal of Membrane Science</i> , 2021, 618, 118726.	4.1	94
17	A novel strategy based on magnetic field assisted preparation of magnetic and photocatalytic membranes with improved performance. <i>Journal of Membrane Science</i> , 2020, 612, 118378.	4.1	90
18	Novel membranes with extremely high permeability fabricated by 3D printing and nickel coating for oil/water separation. <i>Journal of Materials Chemistry A</i> , 2022, 10, 12055-12061.	5.2	89

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19	Manipulating the mussel-inspired co-deposition of tannic acid and amine for fabrication of nanofiltration membranes with an enhanced separation performance. <i>Journal of Colloid and Interface Science</i> , 2020, 565, 23-34.	5.0	87
20	Quantification of interfacial energies associated with membrane fouling in a membrane bioreactor by using BP and GRNN artificial neural networks. <i>Journal of Colloid and Interface Science</i> , 2020, 565, 1-10.	5.0	86
21	Novel conductive membranes breaking through the selectivity-permeability trade-off for Congo red removal. <i>Separation and Purification Technology</i> , 2019, 211, 368-376.	3.9	82
22	Surface modification of polyvinylidene fluoride (PVDF) membrane via radiation grafting: novel mechanisms underlying the interesting enhanced membrane performance. <i>Scientific Reports</i> , 2017, 7, 2721.	1.6	80
23	Realization of quantifying interfacial interactions between a randomly rough membrane surface and a foulant particle. <i>Bioresource Technology</i> , 2017, 226, 220-228.	4.8	77
24	Effects of surface morphology on alginate adhesion: Molecular insights into membrane fouling based on XDLVO and DFT analysis. <i>Chemosphere</i> , 2019, 233, 373-380.	4.2	76
25	Mechanism analyses of high specific filtration resistance of gel and roles of gel elasticity related with membrane fouling in a membrane bioreactor. <i>Bioresource Technology</i> , 2018, 257, 39-46.	4.8	75
26	Radial basis function artificial neural network (RBF ANN) as well as the hybrid method of RBF ANN and grey relational analysis able to well predict trihalomethanes levels in tap water. <i>Journal of Hydrology</i> , 2020, 591, 125574.	2.3	74
27	Polymeric Membranes Incorporated With ZnO Nanoparticles for Membrane Fouling Mitigation: A Brief Review. <i>Frontiers in Chemistry</i> , 2020, 8, 224.	1.8	74
28	New insights into membrane fouling by alginate: Impacts of ionic strength in presence of calcium ions. <i>Chemosphere</i> , 2020, 246, 125801.	4.2	73
29	Facile fabrication of superhydrophilic nanofiltration membranes via tannic acid and irons layer-by-layer self-assembly for dye separation. <i>Applied Surface Science</i> , 2020, 515, 146063.	3.1	73
30	Electric field endowing the conductive polyvinylidene fluoride (PVDF)-graphene oxide (GO)-nickel (Ni) membrane with high-efficient performance for dye wastewater treatment. <i>Applied Surface Science</i> , 2019, 483, 1006-1016.	3.1	72
31	Flame-retardant ethylene vinyl acetate composite materials by combining additions of aluminum hydroxide and melamine cyanurate: Preparation and characteristic evaluations. <i>Journal of Colloid and Interface Science</i> , 2021, 589, 525-531.	5.0	72
32	Thermodynamic mechanisms of membrane fouling during filtration of alginate solution in coagulation-ultrafiltration (UF) process in presence of different ionic strength and iron(III) ion concentration. <i>Journal of Membrane Science</i> , 2021, 635, 119532.	4.1	72
33	Electroless Ni-Sn-P plating to fabricate nickel alloy coated polypropylene membrane with enhanced performance. <i>Journal of Membrane Science</i> , 2021, 640, 119820.	4.1	72
34	Inkjet printing assisted fabrication of polyphenol-based coating membranes for oil/water separation. <i>Chemosphere</i> , 2020, 250, 126236.	4.2	71
35	Quantification of interfacial interactions between a rough sludge floc and membrane surface in a membrane bioreactor. <i>Journal of Colloid and Interface Science</i> , 2017, 490, 710-718.	5.0	69
36	A novel strategy to develop antifouling and antibacterial conductive Cu/polydopamine/polyvinylidene fluoride membranes for water treatment. <i>Journal of Colloid and Interface Science</i> , 2018, 531, 493-501.	5.0	68

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37	Facile preparation of polyvinylidene fluoride substrate supported thin film composite polyamide nanofiltration: Effect of substrate pore size. <i>Journal of Membrane Science</i> , 2021, 638, 119699.	4.1	68
38	Novel insights into membrane fouling caused by gel layer in a membrane bioreactor: Effects of hydrogen bonding. <i>Bioresource Technology</i> , 2019, 276, 219-225.	4.8	65
39	Facile preparation of recyclable magnetic Ni@filter paper composite materials for efficient photocatalytic degradation of methyl orange. <i>Journal of Colloid and Interface Science</i> , 2021, 582, 291-300.	5.0	65
40	A novel composite membrane for simultaneous separation and catalytic degradation of oil/water emulsion with high performance. <i>Chemosphere</i> , 2022, 288, 132490.	4.2	65
41	Inkjet printing assisted electroless Ni plating to fabricate nickel coated polypropylene membrane with improved performance. <i>Journal of Colloid and Interface Science</i> , 2020, 565, 546-554.	5.0	64
42	Novel in-situ electroflotation driven by hydrogen evolution reaction (HER) with polypyrrole (PPy)-Ni-modified fabric membrane for efficient oil/water separation. <i>Journal of Membrane Science</i> , 2021, 635, 119502.	4.1	60
43	Physicochemical correlations between membrane surface hydrophilicity and adhesive fouling in membrane bioreactors. <i>Journal of Colloid and Interface Science</i> , 2017, 505, 900-909.	5.0	56
44	Hydrogen bubbles template-directed synthesis of self-supported AuPt nanowire networks for improved ethanol oxidation and oxygen reduction reactions. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 8871-8880.	3.8	55
45	In-situ coating TiO ₂ surface by plant-inspired tannic acid for fabrication of thin film nanocomposite nanofiltration membranes toward enhanced separation and antibacterial performance. <i>Journal of Colloid and Interface Science</i> , 2020, 572, 114-121.	5.0	55
46	Magnetic field assisted preparation of PES-Ni@MWCNTs membrane with enhanced permeability and antifouling performance. <i>Chemosphere</i> , 2020, 243, 125446.	4.2	53
47	Preparation of nickel@polyvinyl alcohol (PVA) conductive membranes to couple a novel electrocoagulation-membrane separation system for efficient oil-water separation. <i>Journal of Membrane Science</i> , 2022, 653, 120541.	4.1	52
48	Novel catalytic self-cleaning membrane with peroxydisulfate activation for dual-function wastewater purification: Performance and mechanism. <i>Journal of Cleaner Production</i> , 2022, 355, 131858.	4.6	49
49	Improved thermal stability and heat-aging resistance of silicone rubber via incorporation of UiO-66-NH ₂ . <i>Materials Chemistry and Physics</i> , 2021, 274, 125182.	2.0	47
50	A glassy carbon electrode modified with porous Cu ₂ O nanospheres on reduced graphene oxide support for simultaneous sensing of uric acid and dopamine with high selectivity over ascorbic acid. <i>Mikrochimica Acta</i> , 2016, 183, 2039-2046.	2.5	46
51	Fabrication of hydrophilic and antibacterial poly(vinylidene fluoride) based separation membranes by a novel strategy combining radiation grafting of poly(acrylic acid) (PAA) and electroless nickel plating. <i>Journal of Colloid and Interface Science</i> , 2019, 543, 64-75.	5.0	45
52	Influence of membrane surface roughness on interfacial interactions with sludge flocs in a submerged membrane bioreactor. <i>Journal of Colloid and Interface Science</i> , 2015, 446, 84-90.	5.0	44
53	<i>In situ</i> conversion of ZnO into zeolitic imidazolate framework-8 in polyamide layers for well-structured high-permeance thin-film nanocomposite nanofiltration membranes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 7684-7691.	5.2	43
54	A new strategy to accelerate co-deposition of plant polyphenol and amine for fabrication of antibacterial nanofiltration membranes by in-situ grown Ag nanoparticles. <i>Separation and Purification Technology</i> , 2022, 280, 119866.	3.9	43

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55	Effects of polysaccharides' molecular structure on membrane fouling and the related mechanisms. <i>Science of the Total Environment</i> , 2022, 836, 155579.	3.9	41
56	Effects of surface charge on interfacial interactions related to membrane fouling in a submerged membrane bioreactor based on thermodynamic analysis. <i>Journal of Colloid and Interface Science</i> , 2016, 465, 33-41.	5.0	39
57	Mechanistic insights into Ca-alginate gel-associated membrane fouling affected by ethylene diamine tetraacetic acid (EDTA). <i>Science of the Total Environment</i> , 2022, 842, 156912.	3.9	38
58	Fractal reconstruction of rough membrane surface related with membrane fouling in a membrane bioreactor. <i>Bioresource Technology</i> , 2016, 216, 817-823.	4.8	37
59	Microfiltration membranes prepared from poly(N-vinyl-2-pyrrolidone) grafted poly(vinylidene fluoride) membranes. <i>Journal of Membrane Science</i> , 2017, 500, 79-87.	4.1	36
60	Membrane fouling in a submerged membrane bioreactor: New method and its applications in interfacial interaction quantification. <i>Bioresource Technology</i> , 2017, 241, 406-414.	4.8	36
61	New strategy of grafting hydroxyethyl acrylate (HEA) via γ ray radiation to modify polyvinylidene fluoride (PVDF) membrane: Thermodynamic mechanisms of the improved antifouling performance. <i>Separation and Purification Technology</i> , 2018, 207, 83-91.	3.9	32
62	A novel insight into membrane fouling mechanism regarding gel layer filtration: Flory-Huggins based filtration mechanism. <i>Scientific Reports</i> , 2016, 6, 33343.	1.6	31
63	Using regression models to evaluate the formation of trihalomethanes and haloacetonitriles via chlorination of source water with low SUVA values in the Yangtze River Delta region, China. <i>Environmental Geochemistry and Health</i> , 2016, 38, 1303-1312.	1.8	30
64	Thermodynamic analysis of effects of contact angle on interfacial interactions and its implications for membrane fouling control. <i>Bioresource Technology</i> , 2016, 201, 245-252.	4.8	30
65	Influences of fractal dimension of membrane surface on interfacial interactions related to membrane fouling in a membrane bioreactor. <i>Journal of Colloid and Interface Science</i> , 2017, 500, 79-87.	5.0	28
66	Ultrathin graphene layer activated dendritic γ -Fe ₂ O ₃ for high performance asymmetric supercapacitors. <i>Journal of Alloys and Compounds</i> , 2019, 780, 212-219.	2.8	26
67	Effect of nitrite on the formation of halonitromethanes during chlorination of organic matter from different origin. <i>Journal of Hydrology</i> , 2015, 531, 802-809.	2.3	24
68	Effects of molecular weight distribution (M _w) on the performances of the polyethersulfone (PES) ultrafiltration membranes. <i>Journal of Membrane Science</i> , 2015, 490, 220-226.	4.1	24
69	A novel integrated method for quantification of interfacial interactions between two rough bioparticles. <i>Journal of Colloid and Interface Science</i> , 2018, 516, 295-303.	5.0	24
70	Facile preparation of polyacrylonitrile-co-methylacrylate based integrally skinned asymmetric nanofiltration membranes for sustainable molecular separation: An one-step method. <i>Journal of Colloid and Interface Science</i> , 2019, 546, 251-261.	5.0	24
71	Preparation and characterization of ethylene vinyl acetate copolymer (EVA)-magnesium hydroxide (MH)-hexaphenoxycyclotriphosphazene (HPCTP) composite flame-retardant materials. <i>Polymer Bulletin</i> , 2019, 76, 2399-2410.	1.7	24
72	A new strategy to produce low-density polyethylene (LDPE)-based composites simultaneously with high flame retardancy and high mechanical properties. <i>Applied Surface Science</i> , 2018, 437, 75-81.	3.1	22

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73	Thermodynamic assessment of adsorptive fouling with the membranes modified via layer-by-layer self-assembly technique. <i>Journal of Colloid and Interface Science</i> , 2017, 494, 194-203.	5.0	21
74	Estimation of maize straw production and appropriate straw return rate in China. <i>Agriculture, Ecosystems and Environment</i> , 2022, 328, 107865.	2.5	21
75	A facile strategy to prepare superhydrophilic polyvinylidene fluoride (PVDF) based membranes and the thermodynamic mechanisms underlying the improved performance. <i>Separation and Purification Technology</i> , 2018, 197, 271-280.	3.9	20
76	Quantitative evaluation of the interfacial interactions between a randomly rough sludge floc and membrane surface in a membrane bioreactor based on fractal geometry. <i>Bioresource Technology</i> , 2017, 234, 198-207.	4.8	19
77	Quantitative assessment of interfacial interactions with rough membrane surface and its implications for membrane selection and fabrication in a MBR. <i>Bioresource Technology</i> , 2015, 179, 367-372.	4.8	18
78	Tuning anti-adhesion ability of membrane for a membrane bioreactor by thermodynamic analysis. <i>Bioresource Technology</i> , 2016, 216, 691-698.	4.8	18
79	Pesticides in human milk collected from Jinhua, China: Levels, influencing factors and health risk assessment. <i>Ecotoxicology and Environmental Safety</i> , 2020, 205, 111331.	2.9	18
80	Simultaneously improving mechanical strength, hydrophobic property and flame retardancy of ethylene vinyl acetate copolymer/intumescent flame retardant/FeOOH by introducing modified fumed silica. <i>Materials Today Communications</i> , 2021, 26, 102114.	0.9	18
81	A biobased flame retardant towards improvement of flame retardancy and mechanical property of ethylene vinyl acetate. <i>Chinese Chemical Letters</i> , 2023, 34, 107202.	4.8	17
82	In-situ growth of UiO-66-NH ₂ in porous polymeric substrates at room temperature for fabrication of mixed matrix membranes with fast molecular separation performance. <i>Chemical Engineering Journal</i> , 2022, 435, 134804.	6.6	13
83	Remarkable effects of silicone rubber on flame retardant property of high-density polyethylene/magnesium hydroxide composites. <i>Polymer Degradation and Stability</i> , 2022, 203, 110061.	2.7	13
84	Antifouling microfiltration membranes prepared from poly(vinylidene fluoride) grafted polymerization. <i>Journal of Applied Polymer Science</i> , 2013, 128, 3949-3956.	1.3	11
85	Membrane fouling in a submerged membrane bioreactor: An unified approach to construct topography and to evaluate interaction energy between two randomly rough surfaces. <i>Bioresource Technology</i> , 2017, 243, 1121-1132.	4.8	11
86	Editorial: Advanced Membrane Science and Technology for Sustainable Environmental Applications. <i>Frontiers in Chemistry</i> , 2020, 8, 609774.	1.8	11
87	The enhanced compatibility and flame retarding ability of UHMWPE-MH composites by adding phenoxycyclophosphazene (HPCTP). <i>Polymer Bulletin</i> , 2017, 74, 3639-3655.	1.7	10
88	Impacts of morphology on fouling propensity in a membrane bioreactor based on thermodynamic analyses. <i>Journal of Colloid and Interface Science</i> , 2018, 531, 282-290.	5.0	9
89	Investigation of hindered phenol antioxidant effects on the aging performance of cross-linked LDPE in the presence of copper. <i>Scientific Reports</i> , 2020, 10, 10189.	1.6	9
90	Electron beam irradiation influencing the mechanical properties and water absorption of polycaprolactam (PA6) and polyhexamethylene adipamide (PA66). <i>RSC Advances</i> , 2020, 10, 21481-21486.	1.7	7

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91	Hot-pressed membrane assemblies enhancing the biofilm formation and nitrogen removal in a membrane-aerated biofilm reactor. <i>Science of the Total Environment</i> , 2022, 833, 155003.	3.9	6
92	The observation of <sc>PP</sc>/<sc>EVA</sc> blends in which isotactic <sc>PP</sc> was preradiated with different radiation absorbed doses. <i>Journal of Applied Polymer Science</i> , 2017, 134, 45057.	1.3	3
93	Advanced membrane bioreactor fouling control and prevention strategies. , 2020, , 209-224.		1
94	Effects of Van Der Waals Surface Energy on Membrane Fouling in a Submerged Membrane Bioreactor (MBR). <i>Current Environmental Engineering</i> , 2015, 2, 50-55.	0.6	1
95	In-Situ Growth of UiO-66-Nh2 in Porous Polymeric Substrates at Room Temperature for Fabrication of Mixed Matrix Membranes with Fast Molecular Separation Performance. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
96	Effects of Polysaccharidesâ€™™ Molecular Structure on Membrane Fouling and the Related Mechanisms. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0