Pierre Aimar

List of Publications by Year
in descending order

106 papers	5,882 citations	61857 43 h-index	76769 74 g-index
109 all docs	109 docs citations	109 times ranked	4282 citing authors

#	Article	IF	Citations
1	Critical and sustainable fluxes: Theory, experiments and applications. Journal of Membrane Science, 2006, 281, 42-69.	4.1	626
2	Model for colloidal fouling of membranes. AICHE Journal, 1995, 41, 368-376.	1.8	243
3	A contribution to the translation of retention curves into pore size distributions for sieving membranes. Journal of Membrane Science, 1990, 54, 321-338.	4.1	191
4	A unifying model for concentration polarization, gel-layer formation and particle deposition in cross-flow membrane filtration of colloidal suspensions. Chemical Engineering Science, 2002, 57, 77-91.	1.9	188
5	Removal of bisphenol A by a nanofiltration membrane in view of drinking water production. Water Research, 2006, 40, 3793-3799.	5.3	177
6	Use of the log-normal probability density function to analyze membrane pore size distributions: functional forms and discrepancies. Journal of Membrane Science, 1994, 91, 293-298.	4.1	136
7	Albumin denaturation during ultrafiltration: Effects of operating conditions and consequences on membrane fouling. Biotechnology and Bioengineering, 1991, 38, 528-534.	1.7	135
8	On an experimental method to measure critical flux in ultrafiltration. Desalination, 2002, 146, 91-96.	4.0	134
9	Low-biofouling membranes prepared by liquid-induced phase separation of the PVDF/polystyrene-b-poly (ethylene glycol) methacrylate blend. Journal of Membrane Science, 2014, 450, 340-350.	4.1	129
10	Experimental study of the effects of hypochlorite on polysulfone membrane properties. Journal of Membrane Science, 2006, 277, 137-147.	4.1	124
11	Permeability and chemical analysis of aromatic polyamide based membranes exposed to sodium hypochlorite. Journal of Membrane Science, 2011, 375, 220-230.	4.1	121
12	Colloidal surface interactions and membrane fouling: Investigations at pore scale. Advances in Colloid and Interface Science, 2011, 164, 2-11.	7.0	101
13	Limiting flux in membrane separations: A model based on the viscosity dependency of the mass transfer coefficient. Chemical Engineering Science, 1992, 47, 579-586.	1.9	99
14	An appropriate molecular size parameter for porous membranes calibration. Journal of Membrane Science, 1995, 103, 105-115.	4.1	97
15	Analysing flux decline in dead-end filtration. Chemical Engineering Research and Design, 2008, 86, 1281-1293.	2.7	94
16	Influence of surface interaction on transfer during colloid ultrafiltration. Journal of Membrane Science, 1996, 115, 49-63.	4.1	93
17	Role of the cell-wall structure in the retention of bacteria by microfiltration membranes. Journal of Membrane Science, 2009, 326, 178-185.	4.1	92
18	Effects of protein fouling on the apparent pore size distribution of sieving membranes. Journal of Membrane Science, 1991, 56, 13-28.	4.1	89

#	Article	IF	Citations
19	Study of streaming potentials of clean and fouled ultrafiltration membranes. Journal of Membrane Science, 1994, 88, 211-222.	4.1	86
20	A new combination of a membrane and a photocatalytic reactor for the depollution of turbid water. Applied Catalysis B: Environmental, 2007, 72, 197-204.	10.8	86
21	Fractionation of model proteins using their physiochemical properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 138, 185-205.	2.3	85
22	Antifouling pseudo-zwitterionic poly(vinylidene fluoride) membranes with efficient mixed-charge surface grafting via glow dielectric barrier discharge plasma-induced copolymerization. Journal of Membrane Science, 2016, 516, 13-25.	4.1	83
23	Membraneâ€" solute interactions: influence on pure solvent transfer during ultrafiltration. Journal of Membrane Science, 1986, 29, 207-224.	4.1	81
24	Ageing of polysulfone membranes in contact with bleach solution: Role of radical oxidation and of some dissolved metal ions. Chemical Engineering and Processing: Process Intensification, 2008, 47, 48-56.	1.8	76
25	Polyelectrolyte multilayer films as backflushable nanofiltration membranes with tunable hydrophilicity and surface charge. Journal of Membrane Science, 2010, 349, 268-278.	4.1	75
26	Surface Self-Assembled PEGylation of Fluoro-Based PVDF Membranes via Hydrophobic-Driven Copolymer Anchoring for Ultra-Stable Biofouling Resistance. Langmuir, 2013, 29, 10183-10193.	1.6	74
27	Transfer of dextran through ultrafiltration membranes: a study of rejection data analysed by gel permeation chromatography. Journal of Membrane Science, 1989, 45, 17-36.	4.1	73
28	Mass transfer limitations during ultrafiltration of cheese whey with inorganic membranes. Journal of Membrane Science, 1988, 38, 203-221.	4.1	70
29	Production processes of fermented organic acids targeted around membrane operations: design of the concentration step by conventional electrodialysis. Journal of Membrane Science, 2001, 191, 129-142.	4.1	69
30	Whey protein fractionation: Isoelectric precipitation of Î±-lactalbumin under gentle heat treatment. , 1997, 56, 391-397.		68
31	Towards green membranes: preparation of cellulose acetate ultrafiltration membranes using methyl lactate as a biosolvent. International Journal of Sustainable Engineering, 2011, 4, 75-83.	1.9	63
32	Ideal limiting fluxes in ultrafiltration: comparison of various theoretical relationships. Journal of Membrane Science, 1993, 80, 107-115.	4.1	60
33	Structural characterisation of deposits formed during frontal filtration. Journal of Membrane Science, 2000, 174, 189-204.	4.1	58
34	Improvement of a method for the characterization of ultrafiltration membranes by measurements of tracers retention. Journal of Membrane Science, 2004, 238, 177-190.	4.1	58
35	Modelling of filtration: from the polarised layer to deposit formation and compaction. Desalination, 2002, 145, 139-146.	4.0	53
36	Coagulation of colloids retained by porous wall. AICHE Journal, 1996, 42, 3523-3532.	1.8	51

#	Article	IF	Citations
37	Experimental determination of four characteristics used to predict the retention of a ceramic nanofiltration membrane. Journal of Membrane Science, 1997, 129, 147-160.	4.1	51
38	Cake Collapse in Pressure Filtrationâ€. Langmuir, 2001, 17, 7137-7144.	1.6	51
39	Slow colloidal aggregation and membrane fouling. Journal of Membrane Science, 2010, 360, 70-76.	4.1	50
40	Protein fractionation using selective adsorption on clay surface before filtration. Journal of Membrane Science, 2001, 186, 165-181.	4.1	49
41	A simulation study of the adsorptionâ€"concentration polarisation interplay in protein ultrafiltration. Chemical Engineering Science, 1993, 48, 2753-2765.	1.9	48
42	Fabricating hemocompatible bi-continuous PEGylated PVDF membranes via vapor-induced phase inversion. Journal of Membrane Science, 2014, 470, 18-29.	4.1	48
43	Optimisation of a whey protein fractionation process based on the selective precipitation of Î±-lactalbumin. Dairy Science and Technology, 1997, 77, 411-423.	0.9	48
44	Thermal isoelectric precipitation of ?-lactalbumin from a whey protein concentrate: Influence of protein-calcium complexation. Biotechnology and Bioengineering, 1995, 47, 121-130.	1.7	47
45	Dichloroaniline retention by nanofiltration membranes. Water Research, 2005, 39, 1594-1600.	5.3	45
46	Coagulation of colloids in a boundary layer during cross-flow filtration. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 138, 217-230.	2.3	42
47	Effect of module design and flow patterns on performance of membrane distillation process. Chemical Engineering Journal, 2015, 277, 368-377.	6.6	42
48	Hemocompatibility of PVDF/PS-b-PEGMA membranes prepared by LIPS process. Journal of Membrane Science, 2015, 477, 101-114.	4.1	41
49	Design of PVDF/PEGMA-b-PS-b-PEGMA membranes by VIPS for improved biofouling mitigation. Journal of Membrane Science, 2016, 510, 355-369.	4.1	40
50	A novel approach to transfer-limiting phenomena during ultrafiltration of macromolecules. Industrial & Engineering Chemistry Fundamentals, 1986, 25, 789-798.	0.7	39
51	Specific energy requirement of direct contact membrane distillation. Chemical Engineering Research and Design, 2017, 128, 15-26.	2.7	39
52	Concentration polarisation build-up in hollow fibers: a method of measurement and its modelling in ultrafiltration. Journal of Membrane Science, 1991, 59, 81-99.	4.1	38
53	Separation albumin-PEG: Transmission of PEG through ultrafiltration membranes. Biotechnology and Bioengineering, 1993, 41, 1039-1047.	1.7	38
54	Application of a convectionâ€"diffusionâ€"electrophoretic migration model to ultrafiltration of lysozyme at different pH values and ionic strengths. Journal of Membrane Science, 2000, 179, 163-174.	4.1	38

#	Article	IF	Citations
55	Effects of Ionic Strength on Bacteriophage MS2 Behavior and Their Implications for the Assessment of Virus Retention by Ultrafiltration Membranes. Applied and Environmental Microbiology, 2011, 77, 229-236.	1.4	38
56	Role of some whey components on mass transfer in ultrafiltration. Biotechnology and Bioengineering, 1989, 34, 171-179.	1.7	37
57	Ultrafiltration of an olive oil emulsion stabilized by an anionic surfactant. Journal of Membrane Science, 2000, 166, 177-188.	4.1	37
58	The origin of high hydraulic resistance for filter cakes of deformable particles: cell-bed deformation or surface-layer effect?. Chemical Engineering Science, 2004, 59, 5819-5829.	1.9	37
59	Enhanced separation of albumin-poly(ethylene glycol) by combination of ultrafiltration and electrophoresis. Journal of Membrane Science, 1993, 80, 221-232.	4.1	35
60	Modification of clay cake permeability by adsorption of protein. Journal of Membrane Science, 1997, 137, 31-44.	4.1	35
61	Comparative study of micro- and ultrafiltration membranes using STM, AFM and SEM techniques. Ultramicroscopy, 1992, 41, 235-244.	0.8	32
62	An experimental study of caseinomacropeptide hydrolysis by trypsin in a continuous membrane reactor. Biochemical Engineering Journal, 2001, 8, 195-202.	1.8	31
63	Distributions of critical flux: modelling, experimental analysis and consequences for cross-flow membrane filtration. Journal of Membrane Science, 2005, 250, 223-234.	4.1	31
64	Critical fouling conditions induced by colloidal surface interaction: from causes to consequences. Desalination, 2005, 175, 21-27.	4.0	31
65	A zwitterionic interpenetrating network for improving the blood compatibility of polypropylene membranes applied to leukodepletion. Journal of Membrane Science, 2019, 584, 148-160.	4.1	30
66	Filtration method characterizing the reversibility of colloidal fouling layers at a membrane surface: Analysis through critical flux and osmotic pressure. Journal of Colloid and Interface Science, 2008, 320, 483-490.	5.0	29
67	FTIR mapping as a simple and powerful approach to study membrane coating and fouling. Journal of Membrane Science, 2016, 520, 477-489.	4.1	29
68	Pectinases immobilization on magnetic nanoparticles and their anti-fouling performance in a biocatalytic membrane reactor. RSC Advances, 2016, 6, 98737-98747.	1.7	29
69	Study of the effects of defects in ultrafiltration membranes on the water flux and the molecular weight cut-off. Desalination, 2002, 149, 485-491.	4.0	28
70	Numerical simulation of colloidal dispersion filtration: description of critical flux and comparison with experimental results. Desalination, 2006, 192, 74-81.	4.0	28
71	Preparation of multifunctional hollow fiber nanofiltration membranes by dynamic assembly of weak polyelectrolyte multilayers. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 533, 286-295.	2.3	27
72	Ultrafiltration of bentonite suspensions with hollow fiber membranes. Journal of Membrane Science, 1992, 74, 51-69.	4.1	26

#	Article	IF	Citations
73	Self-Cleaning Interfaces of Polydimethylsiloxane Grafted with pH-Responsive Zwitterionic Copolymers. Langmuir, 2019, 35, 1357-1368.	1.6	24
74	New membranes based on polyethersulfone â€“ SlipSkinâ„¢ polymer blends with low fouling and high blood compatibility. Separation and Purification Technology, 2019, 225, 60-73.	3.9	22
75	Yeast cell harvesting from cider using microfiltration. Journal of Chemical Technology and Biotechnology, 1990, 47, 365-376.	1.6	21
76	Modelling of the conversion of weak organic acids by bipolar membrane electrodialysis. Desalination, 2002, 149, 399-404.	4.0	20
77	Degradation of polysulfone membranes due to contact with bleaching solution. Desalination, 2006, 199, 70-72.	4.0	19
78	Effect of operational parameters on the performance of a magnetic responsive biocatalytic membrane reactor. Chemical Engineering Journal, 2017, 308, 853-862.	6.6	19
79	Membrane photoreactor (MPR) for the mineralisation of organic pollutants from turbid effluents. Journal of Membrane Science, 2005, 258, 71-77.	4.1	17
80	Mass transfer in a membrane aerated biofilm. Water Research, 2012, 46, 4761-4769.	5.3	17
81	Pilot scale study of chlorination-induced transport property changes of a seawater reverse osmosis membrane. Desalination, 2013, 311, 24-30.	4.0	17
82	Bioinspired Pseudozwitterionic Hydrogels with Bioactive Enzyme Immobilization via pH-Responsive Regulation. Langmuir, 2019, 35, 1909-1918.	1.6	17
83	Coagulation and flocculation of laterite suspensions with low levels of aluminium chloride and polyacrylamids. Chemical Engineering and Processing: Process Intensification, 2008, 47, 1509-1519.	1.8	16
84	Cake collapse in frontal filtration of colloidal aggregates: mechanisms and consequences. Desalination, 2002, 146, 155-161.	4.0	14
85	Effects of membrane alterations on bacterial retention. Journal of Membrane Science, 2010, 348, 56-65.	4.1	13
86	Adsorption of MS2 bacteriophage on ultrafiltration membrane laboratory equipments. Desalination, 2010, 250, 762-766.	4.0	12
87	Healing kinetics of diabetic wounds controlled with charge-biased hydrogel dressings. Journal of Materials Chemistry B, 2019, 7, 7184-7194.	2.9	12
88	A Nondestructive Surface Zwitterionization of Polydimethylsiloxane for the Improved Human Blood-inert Properties. ACS Applied Bio Materials, 2019, 2, 39-48.	2.3	12
89	Membrane Partition and Mass Transfer in Ultrafiltration. Separation Science and Technology, 1990, 25, 507-534.	1.3	10
90	First investigations on the use of scanning tunnelling microscopy (STM) for the characterisation of porous membranes. Journal of Membrane Science, 1992, 67, 295-300.	4.1	10

#	Article	IF	Citations
91	Filtration of yeast suspensions: experimental observations and modelling of dead-end filtration with a compressible cake. Desalination, 2002, 147, 19-23.	4.0	9
92	Membrane processes for water disinfection: investigation on bacterial transfer mechanisms. Desalination, 2006, 199, 81-83.	4.0	9
93	Mass transfer properties of chlorinated aromatic polyamide reverse osmosis membranes. Separation and Purification Technology, 2012, 101, 60-67.	3.9	9
94	Human hepatic cell behavior on polysulfone membrane with double porosity level. Journal of Membrane Science, 2013, 428, 454-461.	4.1	9
95	Calibration of ultrafiltration membranes against size exclusion chromatography columns. Journal of Membrane Science, 2010, 346, 233-239.	4.1	8
96	Continuous monitoring of sodium concentration in blood during haemodialysis by a selective membrane and conductivity sensor. Sensors and Actuators B: Chemical, 1995, 27, 465-467.	4.0	7
97	Diffusive flows in ultrafiltration and their effect on membrane retention properties. Journal of Membrane Science, 1993, 80, 73-83.	4.1	6
98	Insight into the transport mechanism of solute removed in dialysis by a membrane with double functionality. Chemical Engineering Research and Design, 2017, 126, 97-108.	2.7	6
99	Protocol for the assessment of viral retention capability of membranes. Journal of Membrane Science, 2011, 381, 41-49.	4.1	5
100	Characterization of Skeletonema costatum intracellular organic matter and study of nanomechanical properties under different solution conditions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 506, 154-161.	2.3	5
101	Transmission of bio-molecules through porous membranes triggered by an external electric field. Journal of Controlled Release, 1994, 29, 113-123.	4.8	4
102	Potable water production by membrane processes: membrane characterization using a series of bacterial strains. Water Science and Technology: Water Supply, 2009, 9, 405-412.	1.0	2
103	Accelerated Ageing of Crosslinked Polyamide Membranes. Procedia Engineering, 2012, 44, 789.	1.2	2
104	A comment on the concentration polarization build-up in hollow fibers. Journal of Membrane Science, 1996, 114, 131-133.	4.1	1
105	Retention of Bentonite in Granular Natural Pozzolan: Implications for Water Filtration. Separation Science and Technology, 2008, 43, 1621-1631.	1.3	1
106	Effects of ionic strength on bacteriophage MS2 behavior: implications on the assessment of virus retention by ultrafiltration membranes. , 2010, , .		0