Denis Roizard

List of Publications by Year
in descending order

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113 papers	2,721 citations	201674 27 h-index	223800 46 g-index
115 all docs	115 docs citations	115 times ranked	2475 citing authors

#	Article	IF	Citations
1	Membrane processes for post-combustion carbon dioxide capture: A parametric study. Energy, 2006, 31, 2556-2570.	8.8	260
2	Biogas, membranes and carbon dioxide capture. Journal of Membrane Science, 2009, 328, 11-14.	8.2	106
3	Selective Sulfur Dioxide Removal Using Organic Solvents. Industrial & Engineering Chemistry Research, 1997, 36, 4628-4637.	3.7	101
4	A dense membrane contactor for intensified CO2 gas/liquid absorption in post-combustion capture. Journal of Membrane Science, 2011, 377, 261-272.	8.2	100
5	On Schroeder's paradox. Journal of Membrane Science, 2006, 278, 357-364.	8.2	73
6	Membrane Contactors for Postcombustion Carbon Dioxide Capture: A Comparative Study of Wetting Resistance on Long Time Scales. Industrial & Engineering Chemistry Research, 2011, 50, 8237-8244.	3.7	73
7	Ammonia based CO2 capture process using hollow fiber membrane contactors. Journal of Membrane Science, 2014, 455, 236-246.	8.2	72
8	A hybrid process combining oxygen enriched air combustion and membrane separation for post-combustion carbon dioxide capture. Separation and Purification Technology, 2009, 68, 30-36.	7.9	70
9	Covalent and Selective Grafting of Polyethylene Glycol Brushes at the Surface of ZIF-8 for the Processing of Membranes for Pervaporation. ACS Sustainable Chemistry and Engineering, 2019, 7, 6629-6639.	6.7	60
10	New copolyimide membranes with high siloxane content designed to remove polar organics from water by pervaporation. Journal of Membrane Science, 2004, 241, 55-64.	8.2	58
11	Modeling strategies of membrane contactors for post-combustion carbon capture: A critical comparative study. Chemical Engineering Science, 2013, 87, 393-407.	3.8	58
12	Multiporous Material from Fibrillar Syndiotactic Polystyrene Intercalates. Macromolecules, 2006, 39, 5957-5959.	4.8	53
13	Removal of volatile organic components (VOCs) from water by pervaporation: separation improvement by Dean vortices. Journal of Membrane Science, 1998, 142, 129-141.	8.2	50
14	Improvement of pervaporation PVA membranes by the controlled incorporation of fullerenol nanoparticles. Materials and Design, 2016, 96, 416-423.	7.0	48
15	Effect of pressure on the swelling and fluxes of dense PDMS membranes in nanofiltration: An experimental study. Journal of Membrane Science, 2013, 435, 110-119.	8.2	45
16	Investigation of new modification strategies for PVA membranes to improve their dehydration properties by pervaporation. Applied Surface Science, 2018, 450, 527-537.	6.1	44
17	Impact of thermal ageing on sorption and diffusion properties of PTMSP. Journal of Membrane Science, 2006, 270, 123-131.	8.2	42
18	Potentialities of a dense skin hollow fiber membrane contactor for biogas purification by pressurized water absorption. Journal of Membrane Science, 2016, 513, 236-249.	8.2	42

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19	Study of polymer-carbon mixed matrix membranes for CO2 separation from flue gas. Desalination, 2006, 199, 401-402.	8.2	41
20	Modeling of CO2 post-combustion capture using membrane contactors, comparison between one- and two-dimensional approaches. Journal of Membrane Science, 2014, 455, 64-74.	8.2	40
21	Use of empirical polarity parameters to describe polymer/liquid interactions: Correlation of polymer swelling with solvent polarity in binary and ternary systems. Journal of Applied Polymer Science, 1994, 54, 1673-1684.	2.6	39
22	Characterization of the SO2â^'N-Formylmorpholine Complex:Â Application to a Regenerative Process for Waste Gas Scrubbing. Industrial & Engineering Chemistry Research, 2002, 41, 153-163.	3.7	36
23	Reverse selective NH3/CO2 permeation in fluorinated polymers using membrane gas separation. Journal of Membrane Science, 2013, 441, 63-72.	8.2	35
24	CO2Capture in Flue Gas:Â Semiempirical Approach to Select a Potential Physical Solvent. Industrial & Engineering Chemistry Research, 2006, 45, 5044-5049.	3.7	34
25	xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd"	3.8	34
26	Experimental evidence and implications of an imperfect upstream pressure step for the time-lag technique. Journal of Membrane Science, 2002, 207, 59-72.	8.2	31
27	Study of an innovative gas-liquid contactor for CO2 absorption. Energy Procedia, 2011, 4, 1769-1776.	1.8	30
28	Highly selective multi-block poly(ether-urea-imide)s for CO2/N2 separation: Structure-morphology-properties relationships. Polymer, 2017, 131, 56-67.	3.8	30
29	Development and Characterization of New Pervaporation PVA Membranes for the Dehydration Using Bulk and Surface Modifications. Polymers, 2018, 10, 571.	4.5	29
30	Pushing the limits of intensified CO2 post-combustion capture by gasâ€“liquid absorption through a membrane contactor. Chemical Engineering and Processing: Process Intensification, 2015, 91, 7-22.	3.6	28
31	Adiabatic modelling of CO 2 capture by amine solvents using membrane contactors. Journal of Membrane Science, 2015, 493, 106-119.	8.2	28
32	Development and investigation of mixed-matrix PVA-fullerenol membranes for acetic acid dehydration by pervaporation. Separation and Purification Technology, 2017, 187, 285-293.	7.9	28
33	Pervaporative transport modelling in a ternary system: ethyltertiarybutylether/ethanol/polyurethaneimide. Journal of Membrane Science, 1996, 109, 65-76.	8.2	27
34	Investigation of pervaporation hybrid polyvinylchloride membranes for the separation of tolueneâ€“n-heptane mixtures â€” case of clays as filler. Desalination, 2009, 241, 174-181.	8.2	26
35	1-Methyl-2-Pyrrolidinone : A Well-Adapted Solvent in the Benzothiazoles Synthesis. Synthetic Communications, 1990, 20, 3379-3384.	2.1	25
36	Carbon dioxide absorption by monoethanolamine in hollow fiber membrane contactors: A parametric investigation. AICHE Journal, 2012, 58, 2843-2855.	3.6	25

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37	Evaluating the intensification potential of membrane contactors for gas absorption in a chemical solvent: A generic one-dimensional methodology and its application to CO2 absorption in monoethanolamine. Journal of Membrane Science, 2012, 389, 1-16.	8.2	25
38	Polymer design for pervaporation membranes: influence of the soft segment size of block copolymers (polyurethaneimides or polyureaimides) on their pervaporation features. Journal of Membrane Science, 1996, 118, 73-84.	8.2	24
39	Solubility and polarity parameters for assessing pervaporation and sorption properties. A critical comparison for ternary systems alcohol/ether/polyurethaneimide. Journal of Membrane Science, 1996, 121, 117-133.	8.2	24
40	Rigorous modelling of adiabatic multicomponent CO2 post-combustion capture using hollow fibre membrane contactors. Chemical Engineering Science, 2016, 145, 45-58.	3.8	24
41	Novel green PVA-fullerenol mixed matrix supported membranes for separating water-THF mixtures by pervaporation. Environmental Science and Pollution Research, 2018, 25, 20354-20362.	5.3	24
42	Improved Energy Efficiency of a Hybrid Pervaporation/Distillation Process for Acetic Acid Production: Identification of Target Membrane Performances by Simulation. Industrial & Engineering Chemistry Research, 2014, 53, 7768-7779.	3.7	23
43	Evaluating the effects of CO 2 capture benchmarks on efficiency and costs of membrane systems for post-combustion capture: A parametric simulation study. International Journal of Greenhouse Gas Control, 2017, 63, 449-461.	4.6	23
44	Synthesis, characterization and transport properties of a new siloxane-phosphazene copolymer. Extraction of n-butanol from water by pervaporation. Journal of Membrane Science, 1996, 113, 151-160.	8.2	21
45	CO₂/N₂ Reverse Selective Gas Separation Membranes: Technological Opportunities and Scientific Challenges. Industrial & Engineering Chemistry Research, 2009, 48, 3700-3701.	3.7	21
46	Role of Impurities on CO2 Injection: Experimental and Numerical Simulations of Thermodynamic Properties of Water-salt-gas Mixtures (CO2 + Co-injected Gases) Under Geological Storage Conditions. Energy Procedia, 2013, 37, 3638-3645.	1.8	21
47	Study of the rejection of various solutes in OSN by a composite polydimethylsiloxane membrane: Investigation of the role of solute affinity. Separation and Purification Technology, 2016, 161, 193-201.	7.9	21
48	Synthesis of novel block siloxane polymers for the removal of butanols from aqueous feed solutions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 138, 335-343.	4.7	20
49	Polarity measurements in block copolymers (polyurethaneimides) and correlation with their pervaporation features. Journal of Applied Polymer Science, 1995, 56, 1567-1579.	2.6	19
50	Dense membrane permeation: From the limitations of the permeability concept back to the solution-diffusion model. Journal of Membrane Science, 2005, 266, 62-67.	8.2	19
51	Hollow fiber membrane contactor for hydrogen sulfide odor control. AICHE Journal, 2008, 54, 122-131.	3.6	19
52	CO2 capture by aqueous ammonia with hollow fiber membrane contactors: Gas phase reactions and performance stability. Separation and Purification Technology, 2018, 199, 189-197.	7.9	18
53	Modeling and simulation of CO2 capture in aqueous ammonia with hollow fiber composite membrane contactors using a selective dense layer. Chemical Engineering Science, 2018, 190, 345-360.	3.8	18
54	Enhanced Pervaporation Properties of PVA-Based Membranes Modified with Polyelectrolytes. Application to IPA Dehydration. Polymers, 2020, 12, 14.	4.5	18

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55	Development of new pervaporation composite membranes for desalination: Theoretical and experimental investigations. Desalination, 2021, 507, 115006.	8.2	18
56	New Insights into Pervaporation Mass Transport under Increasing Downstream Pressure Conditions: Critical Role of Inert Gas Entrance. Industrial & Engineering Chemistry Research, 2001, 40, 1559-1565.	3.7	17
57	Investigations on the peculiar permeation properties of volatile organic compounds and permanent gases through PTMSP. Journal of Membrane Science, 2003, 220, 165-175.	8.2	17
58	Pervaporation properties of polypyrrolidinone-based membranes for EtOH/ETBE mixtures separation. Journal of Applied Polymer Science, 2006, 99, 3622-3630.	2.6	16
59	CO2 transfer in an aqueous potassium carbonate liquid membrane module with dense polymeric supporting layers: Influence of concentration, circulation flow rate and temperature. Journal of Membrane Science, 2008, 318, 317-326.	8.2	16
60	Potentials of pervaporation to assist VOCsâ€™ recovery by liquid absorption. Chemical Engineering Science, 2009, 64, 1927-1935.	3.8	15
61	Synthesis of polysiloxane-imide membranes â€" application to the extraction of organics from water mixtures. Desalination, 2004, 163, 203-206.	8.2	14
62	Membrane contactors for intensified post combustion carbon dioxide capture by gasâ€"liquid absorption in MEA: A parametric study. Chemical Engineering Research and Design, 2012, 90, 2325-2337.	5.6	14
63	Effects of water condensation on hollow fiber membrane contactor performance for CO2 capture by absorption into a chemical solvent. Journal of Membrane Science, 2018, 556, 365-373.	8.2	14
64	Asymmetric polyetherimide membranes (PEI) for nanofiltration treatment. European Polymer Journal, 2018, 105, 204-216.	5.4	14
65	Zn++-complexes as models of metalloenzymes in micellar esterolysis : ligand structure-dependent stoichiometry of the complexes.. Tetrahedron Letters, 1991, 32, 193-196.	1.4	13
66	Separation of binary mixtures by dense membrane processes: influence of inert gas entrance under variable downstream pressure conditions. Chemical Engineering Science, 2003, 58, 2767-2775.	3.8	13
67	Contribution of sorption to global mass transfer during pervaporation of ethyl tert-butyl etherâ€"ethanol mixtures through a polyurethaneimide film. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 1247-1251.	1.7	12
68	Investigation of OSN properties of PDMS membrane for the retention of dilute solutes with potential industrial applications. Journal of Applied Polymer Science, 2020, 137, 48359.	2.6	11
69	Action of (2â€benzothiazolyl) methyllithium with organic polar functions. Journal of Heterocyclic Chemistry, 1991, 28, 1541-1544.	2.6	10
70	Copoly(alkyl ether imide) membranes as promising candidates for CO2 capture applications. Separation and Purification Technology, 2016, 161, 53-60.	7.9	10
71	Synthesis and permeability properties of crosslinkable elastomeric poly(vinyl allyl dimethylsilane)s. Journal of Applied Polymer Science, 2005, 96, 927-935.	2.6	9
72	Theoretical Studies on Carbon Dioxide Removal from a Gas Stream in Hollow Fiber Membrane Contactors. Desalination and Water Treatment, 2010, 14, 146-157.	1.0	9

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73	To What Extent Does Temperature Affect Absorption in Gas-Liquid Hollow Fiber Membrane Contactors?. Separation Science and Technology, 2015, 50, 1331-1343.	2.5	9
74	Pseudopeptide bioconjugate additives for CO₂ separation membranes. Polymer International, 2016, 65, 1464-1473.	3.1	9
75	Relation between microstructure and glass transition temperature of poly[(methyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 662	3.1	8
76	Study of permeability process of organic substance vapors through poly(1 -trimethylsilylpropyne). Desalination, 2004, 163, 267-272.	8.2	8
77	Stripping of CO2 in Post-combustion Capture with Chemical Solvents: Intensification Potential of Hollow Fiber Membrane Contactors. Energy Procedia, 2017, 114, 1334-1341.	1.8	8
78	Characterization of film transport properties for organic vapors using the time-lag method â€" interest and limitations. Desalination, 2002, 144, 109-113.	8.2	7
79	VOC's removal from water with a hybrid system coupling a PTMSP membrane module with a stripper. Desalination, 2004, 162, 41-46.	8.2	7
80	Removing of light hydrocarbons from gas mixtures using polymeric composite membranes based on poly(1-trimethylsilylpropyne). Desalination, 2006, 200, 253-255.	8.2	7
81	Gas permeability of combined membrane systems with mobile liquid carrier. Colloid Journal, 2006, 68, 518-525.	1.3	7
82	Permeation selectivity of gaseous isotopes through dense polymers: Peculiar behavior of the hydrogen isotopes. Journal of Membrane Science, 2008, 318, 373-378.	8.2	7
83	Synthesis and characterization of rubbery highly fluorinated siloxane-imide segmented copolymers. Polymer International, 2013, 62, 1413-1424.	3.1	7
84	PDMS membranes modified by polyelectrolyte multilayer deposition to improve OSN separation of diluted solutes in toluene. Separation and Purification Technology, 2020, 237, 116331.	7.9	7
85	Copolystyrene derivatives: study of chemical modification of copoly(styrene acrylonitrile) (PSAN). Polymer, 1989, 30, 1938-1941.	3.8	6
86	Synthesis and characterization of new highly selective polyaryloxyphosphazeneâ€polysiloxane crosslinked copolymer films. Application to the extraction of organic compounds from water by pervaporation. Macromolecular Symposia, 1996, 102, 225-232.	0.7	6
87	Tailored adhesion behavior of polyelectrolyte thin films deposited on plasma-treated poly(dimethylsiloxane) for functionalized membranes. Applied Surface Science, 2016, 369, 482-491.	6.1	6
88	Development of new pervaporation composite membranes for desalination: Membrane characterizations and experimental permeation data. Data in Brief, 2021, 35, 106943.	1.0	6
89	Investigations of rubbery copolyimides for the preparation of asymmetric pervaporation membranes. Desalination and Water Treatment, 2010, 14, 67-77.	1.0	5
90	Synthese et polymerisation du diamino-3,4 styrene. European Polymer Journal, 1982, 18, 893-900.	5.4	4

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91	Un nouveau polymÃ¨re catalyseur bifonctionnel: Le polyvinyl-5 (6)benzimidazolemÃ©thanethiol SynthÃ¨se et catalyse de l'hydrolyse de l'acÃ©tate de. European Polymer Journal, 1983, 19, 729-735.	5.4	4
92	Synthesis of 4-chloro-3-nitrostyrene. Polymer Bulletin, 1986, 15, 431.	3.3	4
93	Design, synthesis and characterization of mixed matrix material for CO2 capture. Desalination, 2006, 200, 456-458.	8.2	4
94	Gas permeability: A simple and efficient method for testing membrane material/solvent compatibility for membrane contactors applications. Desalination and Water Treatment, 2010, 14, 7-15.	1.0	4
95	Development of a CO2 Capture Process Based on Ammonia Solvent and a Dedicated Composite Hollow Fibre Membrane Contactor. Energy Procedia, 2014, 63, 651-658.	1.8	4
96	Interplay of inlet temperature and humidity on energy penalty for CO2 post-combustion capture: Rigorous analysis and simulation of a single stage gas permeation process. Energy, 2016, 116, 517-525.	8.8	4
97	Controlled grafting of multi-block copolymers for improving membrane properties for CO2 separation. Polymer, 2022, 255, 125164.	3.8	4
98	Improved emulsion polymerization of 3-nitro-4-chlorostyrene. European Polymer Journal, 1993, 29, 965-969.	5.4	3
99	CO2 transport study in combined membrane system with aqueous potassium carbonate as a liquid carrier. Desalination, 2006, 200, 106-108.	8.2	3
100	ActivitÃ© estÃ©rolytique de composÃ©s associant une fonction thiol et une base hÃ©tÃ©rocyclique. Exemples de processus bifonctionnel. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1986, 83, 577-588.	0.2	3
101	Correlation pKa â€“ activitÃ© catalytique des thiols dans la rÃ©action d'hydrolyse de l'acÃ©tate de p-nitrophÃ©nyle. Canadian Journal of Chemistry, 1984, 62, 2330-2336.	1.1	2
102	Design and synthesis of biomimetic polyacrylamides. Reactive & Functional Polymers, 1989, 10, 211-217.	0.8	2
103	Structural studies of nanosized porous membrane catalytic systems highly active in dry reforming of biomass conversion products. Russian Chemical Bulletin, 2011, 60, 2588-2596.	1.5	2
104	The Carbonic Anhydrase Promoted Carbon Dioxide Capture. Environmental Chemistry for A Sustainable World, 2020, , 1-44.	0.5	2
105	Action of (2â€benzothiazolyl)methyllithium with organic polar functions. Journal of Heterocyclic Chemistry, 1991, 28, 1933-1936.	2.6	1
106	Synthesis of a new styrene monomer: the 3-chloro-4-nitrostyrene. Polymer Bulletin, 1994, 33, 389-395.	3.3	1
107	Concentration of solutes by nanofiltration in organic solvents. Desalination, 2006, 200, 393-394.	8.2	1
108	Permeability of foil based on exfoliated graphite to C1-C6 alkanes. Petroleum Chemistry, 2013, 53, 612-618.	1.4	1

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109	Synthesis of polyvinyltrimethylsilane-graft-poly(ethylene glycol) copolymers and properties of gas-separating membranes formed on their basis. Polymer Science - Series B, 2014, 56, 282-289.	0.8	1
110	Investigation of polymer membranes modified by fullerenol for dehydration of organic mixtures. Journal of Physics: Conference Series, 2017, 879, 012010.	0.4	1
111	Study of radical copolymerization of 4-chloro-3-nitrostyrene with vinyl monomers. Polymer, 1997, 38, 5879-5886.	3.8	0
112	Synthesis and CO₂sorption in poly(1-trimethylsilyl-1-propyne) and polyvinyltrimethylsilane containing ethylene oxide groups and N-butylimidazol-based â€œionic liquidsâ€•groups. Desalination and Water Treatment, 2011, 35, 255-262.	1.0	0
113	Investigation of the Sorption of Heavy Aromatic Compounds in Polymers: Application to the Cleaning of Synthesis Gas. Industrial & Engineering Chemistry Research, 2016, 55, 9028-9039.	3.7	0