

Denis Roizard

List of Publications by Year in descending order

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113
papers

2,721
citations

201575

27
h-index

223716

46
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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. <i>Energy</i> , 2006, 31, 2556-2570.	4.5	260
2	Biogas, membranes and carbon dioxide capture. <i>Journal of Membrane Science</i> , 2009, 328, 11-14.	4.1	106
3	Selective Sulfur Dioxide Removal Using Organic Solvents. <i>Industrial & Engineering Chemistry Research</i> , 1997, 36, 4628-4637.	1.8	101
4	A dense membrane contactor for intensified CO ₂ gas/liquid absorption in post-combustion capture. <i>Journal of Membrane Science</i> , 2011, 377, 261-272.	4.1	100
5	On Schroeder's paradox. <i>Journal of Membrane Science</i> , 2006, 278, 357-364.	4.1	73
6	Membrane Contactors for Postcombustion Carbon Dioxide Capture: A Comparative Study of Wetting Resistance on Long Time Scales. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 8237-8244.	1.8	73
7	Ammonia based CO ₂ capture process using hollow fiber membrane contactors. <i>Journal of Membrane Science</i> , 2014, 455, 236-246.	4.1	72
8	A hybrid process combining oxygen enriched air combustion and membrane separation for post-combustion carbon dioxide capture. <i>Separation and Purification Technology</i> , 2009, 68, 30-36.	3.9	70
9	Covalent and Selective Grafting of Polyethylene Glycol Brushes at the Surface of ZIF-8 for the Processing of Membranes for Pervaporation. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 6629-6639.	3.2	60
10	New copolyimide membranes with high siloxane content designed to remove polar organics from water by pervaporation. <i>Journal of Membrane Science</i> , 2004, 241, 55-64.	4.1	58
11	Modeling strategies of membrane contactors for post-combustion carbon capture: A critical comparative study. <i>Chemical Engineering Science</i> , 2013, 87, 393-407.	1.9	58
12	Multiporous Material from Fibrillar Syndiotactic Polystyrene Intercalates. <i>Macromolecules</i> , 2006, 39, 5957-5959.	2.2	53
13	Removal of volatile organic components (VOCs) from water by pervaporation: separation improvement by Dean vortices. <i>Journal of Membrane Science</i> , 1998, 142, 129-141.	4.1	50
14	Improvement of pervaporation PVA membranes by the controlled incorporation of fullerene nanoparticles. <i>Materials and Design</i> , 2016, 96, 416-423.	3.3	48
15	Effect of pressure on the swelling and fluxes of dense PDMS membranes in nanofiltration: An experimental study. <i>Journal of Membrane Science</i> , 2013, 435, 110-119.	4.1	45
16	Investigation of new modification strategies for PVA membranes to improve their dehydration properties by pervaporation. <i>Applied Surface Science</i> , 2018, 450, 527-537.	3.1	44
17	Impact of thermal ageing on sorption and diffusion properties of PTMSP. <i>Journal of Membrane Science</i> , 2006, 270, 123-131.	4.1	42
18	Potentialities of a dense skin hollow fiber membrane contactor for biogas purification by pressurized water absorption. <i>Journal of Membrane Science</i> , 2016, 513, 236-249.	4.1	42

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19	Study of polymer-carbon mixed matrix membranes for CO ₂ separation from flue gas. Desalination, 2006, 199, 401-402.	4.0	41
20	Modeling of CO ₂ post-combustion capture using membrane contactors, comparison between one- and two-dimensional approaches. Journal of Membrane Science, 2014, 455, 64-74.	4.1	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.	1.3	39
22	Characterization of the SO ₂ -N-Formylmorpholine Complex: Application to a Regenerative Process for Waste Gas Scrubbing. Industrial & Engineering Chemistry Research, 2002, 41, 153-163.	1.8	36
23	Reverse selective NH ₃ /CO ₂ permeation in fluorinated polymers using membrane gas separation. Journal of Membrane Science, 2013, 441, 63-72.	4.1	35
24	CO ₂ Capture in Flue Gas: A Semiempirical Approach to Select a Potential Physical Solvent. Industrial & Engineering Chemistry Research, 2006, 45, 5044-5049.	1.8	34
25	Experimental evidence and implications of an imperfect upstream pressure step for the time-lag technique. Journal of Membrane Science, 2002, 207, 59-72.	1.9	34
26	Study of an innovative gas-liquid contactor for CO ₂ absorption. Energy Procedia, 2011, 4, 1769-1776.	4.1	31
27	Highly selective multi-block poly(ether-urea-imide)s for CO ₂ /N ₂ separation: Structure-morphology-properties relationships. Polymer, 2017, 131, 56-67.	1.8	30
28	Development and Characterization of New Pervaporation PVA Membranes for the Dehydration Using Bulk and Surface Modifications. Polymers, 2018, 10, 571.	2.0	29
29	Pushing the limits of intensified CO ₂ post-combustion capture by gas-liquid absorption through a membrane contactor. Chemical Engineering and Processing: Process Intensification, 2015, 91, 7-22.	1.8	28
30	Adiabatic modelling of CO ₂ capture by amine solvents using membrane contactors. Journal of Membrane Science, 2015, 493, 106-119.	4.1	28
31	Development and investigation of mixed-matrix PVA-fullerenol membranes for acetic acid dehydration by pervaporation. Separation and Purification Technology, 2017, 187, 285-293.	3.9	28
32	Pervaporative transport modelling in a ternary system: ethyltertiarybutylether/ethanol/polyurethaneimide. Journal of Membrane Science, 1996, 109, 65-76.	4.1	27
33	Investigation of pervaporation hybrid polyvinylchloride membranes for the separation of toluene-n-heptane mixtures case of clays as filler. Desalination, 2009, 241, 174-181.	4.0	26
34	1-Methyl-2-Pyrrolidinone : A Well-Adapted Solvent in the Benzothiazoles Synthesis. Synthetic Communications, 1990, 20, 3379-3384.	1.1	25
35	Carbon dioxide absorption by monoethanolamine in hollow fiber membrane contactors: A parametric investigation. AIChE Journal, 2012, 58, 2843-2855.	1.8	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 CO ₂ absorption in monoethanolamine. <i>Journal of Membrane Science</i> , 2012, 389, 1-16.	4.1	25
38	Polymer design for pervaporation membranes: influence of the soft segment size of block copolymers (polyurethaneimides or polyurea-imides) on their pervaporation features. <i>Journal of Membrane Science</i> , 1996, 118, 73-84.	4.1	24
39	Solubility and polarity parameters for assessing pervaporation and sorption properties. A critical comparison for ternary systems alcohol/ether/polyurethaneimide. <i>Journal of Membrane Science</i> , 1996, 121, 117-133.	4.1	24
40	Rigorous modelling of adiabatic multicomponent CO ₂ post-combustion capture using hollow fibre membrane contactors. <i>Chemical Engineering Science</i> , 2016, 145, 45-58.	1.9	24
41	Novel green PVA-fullerenol mixed matrix supported membranes for separating water-THF mixtures by pervaporation. <i>Environmental Science and Pollution Research</i> , 2018, 25, 20354-20362.	2.7	24
42	Improved Energy Efficiency of a Hybrid Pervaporation/Distillation Process for Acetic Acid Production: Identification of Target Membrane Performances by Simulation. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 7768-7779.	1.8	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. <i>International Journal of Greenhouse Gas Control</i> , 2017, 63, 449-461.	2.3	23
44	Synthesis, characterization and transport properties of a new siloxane-phosphazene copolymer. Extraction of n-butanol from water by pervaporation. <i>Journal of Membrane Science</i> , 1996, 113, 151-160.	4.1	21
45	CO ₂ /N ₂ Reverse Selective Gas Separation Membranes: Technological Opportunities and Scientific Challenges. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 3700-3701.	1.8	21
46	Role of Impurities on CO ₂ Injection: Experimental and Numerical Simulations of Thermodynamic Properties of Water-salt-gas Mixtures (CO ₂ + Co-injected Gases) Under Geological Storage Conditions. <i>Energy Procedia</i> , 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. <i>Separation and Purification Technology</i> , 2016, 161, 193-201.	3.9	21
48	Synthesis of novel block siloxane polymers for the removal of butanols from aqueous feed solutions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1998, 138, 335-343.	2.3	20
49	Polarity measurements in block copolymers (polyurethaneimides) and correlation with their pervaporation features. <i>Journal of Applied Polymer Science</i> , 1995, 56, 1567-1579.	1.3	19
50	Dense membrane permeation: From the limitations of the permeability concept back to the solution-diffusion model. <i>Journal of Membrane Science</i> , 2005, 266, 62-67.	4.1	19
51	Hollow fiber membrane contactor for hydrogen sulfide odor control. <i>AIChE Journal</i> , 2008, 54, 122-131.	1.8	19
52	CO ₂ capture by aqueous ammonia with hollow fiber membrane contactors: Gas phase reactions and performance stability. <i>Separation and Purification Technology</i> , 2018, 199, 189-197.	3.9	18
53	Modeling and simulation of CO ₂ capture in aqueous ammonia with hollow fiber composite membrane contactors using a selective dense layer. <i>Chemical Engineering Science</i> , 2018, 190, 345-360.	1.9	18
54	Enhanced Pervaporation Properties of PVA-Based Membranes Modified with Polyelectrolytes. Application to IPA Dehydration. <i>Polymers</i> , 2020, 12, 14.	2.0	18

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55	Development of new pervaporation composite membranes for desalination: Theoretical and experimental investigations. <i>Desalination</i> , 2021, 507, 115006.	4.0	18
56	New Insights into Pervaporation Mass Transport under Increasing Downstream Pressure Conditions: Critical Role of Inert Gas Entrance. <i>Industrial & Engineering Chemistry Research</i> , 2001, 40, 1559-1565.	1.8	17
57	Investigations on the peculiar permeation properties of volatile organic compounds and permanent gases through PTMSP. <i>Journal of Membrane Science</i> , 2003, 220, 165-175.	4.1	17
58	Pervaporation properties of polypyrrolidinone-based membranes for EtOH/ETBE mixtures separation. <i>Journal of Applied Polymer Science</i> , 2006, 99, 3622-3630.	1.3	16
59	CO ₂ transfer in an aqueous potassium carbonate liquid membrane module with dense polymeric supporting layers: Influence of concentration, circulation flow rate and temperature. <i>Journal of Membrane Science</i> , 2008, 318, 317-326.	4.1	16
60	Potentials of pervaporation to assist VOCs™ recovery by liquid absorption. <i>Chemical Engineering Science</i> , 2009, 64, 1927-1935.	1.9	15
61	Synthesis of polysiloxane-imide membranes ‐ application to the extraction of organics from water mixtures. <i>Desalination</i> , 2004, 163, 203-206.	4.0	14
62	Membrane contactors for intensified post combustion carbon dioxide capture by gas‐liquid absorption in MEA: A parametric study. <i>Chemical Engineering Research and Design</i> , 2012, 90, 2325-2337.	2.7	14
63	Effects of water condensation on hollow fiber membrane contactor performance for CO ₂ capture by absorption into a chemical solvent. <i>Journal of Membrane Science</i> , 2018, 556, 365-373.	4.1	14
64	Asymmetric polyetherimide membranes (PEI) for nanofiltration treatment. <i>European Polymer Journal</i> , 2018, 105, 204-216.	2.6	14
65	Zn ⁺⁺ -complexes as models of metalloenzymes in micellar esterolysis : ligand structure-dependent stoichiometry of the complexes.. <i>Tetrahedron Letters</i> , 1991, 32, 193-196.	0.7	13
66	Separation of binary mixtures by dense membrane processes: influence of inert gas entrance under variable downstream pressure conditions. <i>Chemical Engineering Science</i> , 2003, 58, 2767-2775.	1.9	13
67	Contribution of sorption to global mass transfer during pervaporation of ethyl tert-butyl ether‐ ethanol mixtures through a polyurethaneimide film. <i>Journal of the Chemical Society, Faraday Transactions</i> , 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. <i>Journal of Applied Polymer Science</i> , 2020, 137, 48359.	1.3	11
69	Action of (2‐benzothiazolyl) methyllithium with organic polar functions. <i>Journal of Heterocyclic Chemistry</i> , 1991, 28, 1541-1544.	1.4	10
70	Copoly(alkyl ether imide) membranes as promising candidates for CO ₂ capture applications. <i>Separation and Purification Technology</i> , 2016, 161, 53-60.	3.9	10
71	Synthesis and permeability properties of crosslinkable elastomeric poly(vinyl allyl dimethylsilane)s. <i>Journal of Applied Polymer Science</i> , 2005, 96, 927-935.	1.3	9
72	Theoretical Studies on Carbon Dioxide Removal from a Gas Stream in Hollow Fiber Membrane Contactors. <i>Desalination and Water Treatment</i> , 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.	1.3	9
74	Pseudopeptide bioconjugate additives for CO ₂ separation membranes. Polymer International, 2016, 65, 1464-1473.	1.6	9
75	Relation between microstructure and glass transition temperature of poly[(methyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 662	1.6	8
76	Study of permeability process of organic substance vapors through poly(1-trimethylsilylpropyne). Desalination, 2004, 163, 267-272.	4.0	8
77	Stripping of CO ₂ 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 " interest and limitations. Desalination, 2002, 144, 109-113.	4.0	7
79	VOC's removal from water with a hybrid system coupling a PTMSP membrane module with a stripper. Desalination, 2004, 162, 41-46.	4.0	7
80	Removing of light hydrocarbons from gas mixtures using polymeric composite membranes based on poly(1-trimethylsilylpropyne). Desalination, 2006, 200, 253-255.	4.0	7
81	Gas permeability of combined membrane systems with mobile liquid carrier. Colloid Journal, 2006, 68, 518-525.	0.5	7
82	Permeation selectivity of gaseous isotopes through dense polymers: Peculiar behavior of the hydrogen isotopes. Journal of Membrane Science, 2008, 318, 373-378.	4.1	7
83	Synthesis and characterization of rubbery highly fluorinated siloxane-imide segmented copolymers. Polymer International, 2013, 62, 1413-1424.	1.6	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.	3.9	7
85	Copolystyrene derivatives: study of chemical modification of copoly(styrene acrylonitrile) (PSAN). Polymer, 1989, 30, 1938-1941.	1.8	6
86	Synthesis and characterization of new highly selective polyaryloxyphosphazene-polysiloxane crosslinked copolymer films. Application to the extraction of organic compounds from water by pervaporation. Macromolecular Symposia, 1996, 102, 225-232.	0.4	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.	3.1	6
88	Development of new pervaporation composite membranes for desalination: Membrane characterizations and experimental permeation data. Data in Brief, 2021, 35, 106943.	0.5	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.	2.6	4

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91	Un nouveau polymère catalyseur bifonctionnel: Le polyvinyl-5 (6)benzimidazolethianethiol Synthèse et catalyse de l'hydrolyse de l'acétate de. European Polymer Journal, 1983, 19, 729-735.	2.6	4
92	Synthesis of 4-chloro-3-nitrostyrene. Polymer Bulletin, 1986, 15, 431.	1.7	4
93	Design, synthesis and characterization of mixed matrix material for CO2 capture. Desalination, 2006, 200, 456-458.	4.0	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.	4.5	4
97	Controlled grafting of multi-block copolymers for improving membrane properties for CO2 separation. Polymer, 2022, 255, 125164.	1.8	4
98	Improved emulsion polymerization of 3-nitro-4-chlorostyrene. European Polymer Journal, 1993, 29, 965-969.	2.6	3
99	CO2 transport study in combined membrane system with aqueous potassium carbonate as a liquid carrier. Desalination, 2006, 200, 106-108.	4.0	3
100	Activité catalytique de composés associant une fonction thiol et une base hétérocyclique. Exemples de processus bifonctionnel. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1986, 83, 577-588.	0.2	3
101	Correlation pKa et activité catalytique des thiols dans la réaction d'hydrolyse de l'acétate de p-nitrophenyle. Canadian Journal of Chemistry, 1984, 62, 2330-2336.	0.6	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.	0.4	2
104	The Carbonic Anhydrase Promoted Carbon Dioxide Capture. Environmental Chemistry for A Sustainable World, 2020, , 1-44.	0.3	2
105	Action of (2-benzothiazolyl)methyl lithium with organic polar functions. Journal of Heterocyclic Chemistry, 1991, 28, 1933-1936.	1.4	1
106	Synthesis of a new styrene monomer: the 3-chloro-4-nitrostyrene. Polymer Bulletin, 1994, 33, 389-395.	1.7	1
107	Concentration of solutes by nanofiltration in organic solvents. Desalination, 2006, 200, 393-394.	4.0	1
108	Permeability of foil based on exfoliated graphite to C1-C6 alkanes. Petroleum Chemistry, 2013, 53, 612-618.	0.4	1

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109	Synthesis of polyvinyltrimethylsilane-graft-poly(ethylene glycol) copolymers and properties of gas-separating membranes formed on their basis. <i>Polymer Science - Series B</i> , 2014, 56, 282-289.	0.3	1
110	Investigation of polymer membranes modified by fullerene for dehydration of organic mixtures. <i>Journal of Physics: Conference Series</i> , 2017, 879, 012010.	0.3	1
111	Study of radical copolymerization of 4-chloro-3-nitrostyrene with vinyl monomers. <i>Polymer</i> , 1997, 38, 5879-5886.	1.8	0
112	Synthesis and CO ₂ sorption in poly(1-trimethylsilyl-1-propyne) and polyvinyltrimethylsilane containing ethylene oxide groups and N-butylimidazol-based "ionic liquids" groups. <i>Desalination and Water Treatment</i> , 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. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 9028-9039.	1.8	0