

Maria Grazia De Angelis

List of Publications by Year in descending order

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83
papers

2,395
citations

136740

32
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233125

45
g-index

84
all docs

84
docs citations

84
times ranked

1856
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling solubility in semi-crystalline polymers: a critical comparative review. <i>Fluid Phase Equilibria</i> , 2022, 556, 113412.	1.4	19
2	Mixed Matrix Membranes Adsorbers (MMMA) for the Removal of Uremic Toxins from Dialysate. <i>Membranes</i> , 2022, 12, 203.	1.4	8
3	A comprehensive theoretical framework for the sub and supercritical sorption and transport of CO ₂ in polymers. <i>Chemical Engineering Journal</i> , 2022, 435, 135013.	6.6	7
4	An Analysis of the Effect of ZIF-8 Addition on the Separation Properties of Polysulfone at Various Temperatures. <i>Membranes</i> , 2021, 11, 427.	1.4	4
5	Towards a systematic determination of multicomponent gas separation with membranes: the case of CO ₂ /CH ₄ in cellulose acetates. <i>Journal of Membrane Science</i> , 2021, 628, 119226.	4.1	18
6	The influence of propane and n-butane on the structure and separation performance of cellulose acetate membranes. <i>Journal of Membrane Science</i> , 2021, 638, 119677.	4.1	12
7	Enabling experimental characterization and prediction of ternary mixed-gas sorption in polymers: C ₂ H ₆ /CO ₂ /CH ₄ in PIM-1. <i>Chemical Engineering Journal</i> , 2021, 426, 130715.	6.6	17
8	Mixed Matrix Membranes Based on Torlon [®] and ZIF-8 for High-Temperature, Size-Selective Gas Separations. <i>Membranes</i> , 2021, 11, 982.	1.4	3
9	Competitive H ₂ S & CO ₂ absorption in reactive aqueous methyldiethanolamine solution: Prediction with ePC-SAFT. <i>Fluid Phase Equilibria</i> , 2020, 511, 112453.	1.4	18
10	Gas Transport in Glassy Polymers. <i>Membranes</i> , 2020, 10, 400.	1.4	5
11	Molecular Simulations and Mechanistic Analysis of the Effect of CO ₂ Sorption on Thermodynamics, Structure, and Local Dynamics of Molten Atactic Polystyrene. <i>Macromolecules</i> , 2020, 53, 3669-3689.	2.2	17
12	Competitive sorption in CO ₂ /CH ₄ separations: the case of HAB-6FDA polyimide and its TR derivative and a general analysis of its impact on the selectivity of glassy polymers at multicomponent conditions. <i>Journal of Membrane Science</i> , 2020, 612, 118374.	4.1	32
13	Enhancing the Separation Performance of Glassy PPO with the Addition of a Molecular Sieve (ZIF-8): Gas Transport at Various Temperatures. <i>Membranes</i> , 2020, 10, 56.	1.4	15
14	Tuning the Molecular Weights, Chain Packing, and Gas-Transport Properties of CANAL Ladder Polymers by Short Alkyl Substitutions. <i>Macromolecules</i> , 2019, 52, 6294-6302.	2.2	46
15	Sorption of CO ₂ /CH ₄ mixtures in TZ-PIM, PIM-1 and PTMSP: Experimental data and NELF-model analysis of competitive sorption and selectivity in mixed gases. <i>Journal of Membrane Science</i> , 2019, 585, 136-149.	4.1	37
16	Modelling Mixed-Gas Sorption in Glassy Polymers for CO ₂ Removal: A Sensitivity Analysis of the Dual Mode Sorption Model. <i>Membranes</i> , 2019, 9, 8.	1.4	43
17	Models for Facilitated Transport Membranes: A Review. <i>Membranes</i> , 2019, 9, 26.	1.4	47
18	Effect of relative humidity on the gas transport properties of zeolite A/PTMSP mixed matrix membranes. <i>RSC Advances</i> , 2018, 8, 3536-3546.	1.7	21

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19	Barrier properties and mechanical strength of bio-renewable, heat-sealable films based on gelatin, glycerol and soybean oil for sustainable food packaging. <i>Reactive and Functional Polymers</i> , 2018, 125, 29-36.	2.0	48
20	Reducing ageing of thin PTMSP films by incorporating graphene and graphene oxide: Effect of thickness, gas type and temperature. <i>Journal of Membrane Science</i> , 2018, 555, 258-267.	4.1	17
21	Evaluation of electrospun nanofibrous mats as materials for CO ₂ capture: A feasibility study on functionalized poly(acrylonitrile) (PAN). <i>Journal of Membrane Science</i> , 2018, 546, 128-138.	4.1	22
22	Permeability and Selectivity of PPO/Graphene Composites as Mixed Matrix Membranes for CO ₂ Capture and Gas Separation. <i>Polymers</i> , 2018, 10, 129.	2.0	38
23	Predictive calculations of gas solubility and permeability in glassy polymeric membranes: An overview. <i>Frontiers of Chemical Science and Engineering</i> , 2017, 11, 405-413.	2.3	24
24	A multiscale approach to predict the mixed gas separation performance of glassy polymeric membranes for CO ₂ capture: the case of CO ₂ /CH ₄ mixture in Matrimid [®] . <i>Journal of Membrane Science</i> , 2017, 539, 88-100.	4.1	30
25	Sorption, diffusion, and permeability of humid gases and aging of thermally rearranged (TR) polymer membranes from a novel ortho-hydroxypolyimide. <i>Journal of Membrane Science</i> , 2017, 542, 439-455.	4.1	22
26	Mixed gas sorption in glassy polymeric membranes. III. CO ₂ /CH ₄ mixtures in a polymer of intrinsic microporosity (PIM-1): Effect of temperature. <i>Journal of Membrane Science</i> , 2017, 524, 746-757.	4.1	52
27	The effect of humidity on the CO ₂ /N ₂ separation performance of copolymers based on hard polyimide segments and soft polyether chains: Experimental and modeling. <i>Green Energy and Environment</i> , 2016, 1, 201-210.	4.7	13
28	Sorption and transport of CO ₂ in copolymers containing soft (PEO, PPO) and hard (BKDA-ODA and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Science, 2016, 520, 187-200.	4.1	6
29	Atmospheric plasma assisted PLA/microfibrillated cellulose (MFC) multilayer biocomposite for sustainable barrier application. <i>Industrial Crops and Products</i> , 2016, 93, 235-243.	2.5	41
30	Solubility of Gases in Membranes. , 2016, , 1794-1796.		0
31	Equation of State Modeling of the Solubility of CO ₂ /C ₂ H ₆ Mixtures in Cross-Linked Poly(ethylene Tj ETQq1 1 0.784314 rgBT /Overlo	1.8	15
32	Solubility and diffusivity of liquids for food and pharmaceutical applications in crosslinked polydimethylsiloxane (PDMS) films: II. Experimental data on mixtures. <i>Journal of Membrane Science</i> , 2015, 492, 612-619.	4.1	10
33	Solubility and diffusivity of liquids for food and pharmaceutical applications in crosslinked polydimethylsiloxane (PDMS) films: I. Experimental data on pure organic components and vegetable oil. <i>Journal of Membrane Science</i> , 2015, 492, 600-611.	4.1	31
34	Effect of relative humidity and temperature on the gas transport properties of 6FDA [®] 6FpDA polyimide: Experimental study and modelling. <i>Journal of Membrane Science</i> , 2015, 485, 60-68.	4.1	27
35	Effect of Graphene and Graphene Oxide Nanoplatelets on the Gas Permselectivity and Aging Behavior of Poly(trimethylsilyl propyne) (PTMSP). <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 11199-11211.	1.8	47
36	Mixed gas sorption in glassy polymeric membranes: II. CO ₂ /CH ₄ mixtures in a polymer of intrinsic microporosity (PIM-1). <i>Journal of Membrane Science</i> , 2014, 459, 264-276.	4.1	56

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37	Modelling polylactide/water/dioxane systems for TIPS scaffold fabrication. Fluid Phase Equilibria, 2014, 374, 1-8.	1.4	11
38	Mass Transport in Hybrid PTMSP/Silica Membranes. Industrial & Engineering Chemistry Research, 2014, 53, 9243-9255.	1.8	12
39	An equation of state (EoS) based model for the fluid solubility in semicrystalline polymers. Fluid Phase Equilibria, 2014, 367, 173-181.	1.4	36
40	Mixed gas sorption in glassy polymeric membranes: I. CO ₂ /CH ₄ and n-C ₄ /CH ₄ mixtures sorption in poly(1-trimethylsilyl-1-propyne) (PTMSP). Journal of Membrane Science, 2014, 449, 97-108.	4.1	56
41	Solubility of Gases in Membranes. , 2014, , 1-3.		0
42	Modeling gas and vapor sorption in a polymer of intrinsic microporosity (PIM-1). Fluid Phase Equilibria, 2013, 347, 35-44.	1.4	42
43	Gas Solubility, Diffusivity, Permeability, and Selectivity in Mixed Matrix Membranes Based on PIM-1 and Fumed Silica. Industrial & Engineering Chemistry Research, 2013, 52, 10506-10520.	1.8	41
44	Vapor and Liquid Sorption in Matrimid Polyimide: Experimental Characterization and Modeling. Industrial & Engineering Chemistry Research, 2013, 52, 8936-8945.	1.8	46
45	Preface to Giulio Sarti Festschrift. Industrial & Engineering Chemistry Research, 2013, 52, 8623-8624.	1.8	0
46	A novel multiscale method for the prediction of the volumetric and gas solubility behavior of high-Tg polyimides. Fluid Phase Equilibria, 2012, 333, 87-96.	1.4	37
47	Non Equilibrium Modeling of Sorption of Gases and Vapors in Polymers of Intrinsic Microporosity (PIM). Procedia Engineering, 2012, 44, 147-149.	1.2	0
48	Modeling Solubility of CO ₂ and C ₂ H ₆ Mixtures in Crosslinked Poly(ethylene oxide) Copolymers. Procedia Engineering, 2012, 44, 347-350.	1.2	1
49	Gas sorption and permeation in mixed matrix membranes based on glassy polymers and silica nanoparticles. Current Opinion in Chemical Engineering, 2012, 1, 148-155.	3.8	23
50	FTIR-ATR Study of Water Distribution in a Short-Side-Chain PFSI Membrane. Macromolecules, 2012, 45, 1901-1912.	2.2	48
51	The effect of relative humidity on the gas permeability and swelling in PFSI membranes. International Journal of Hydrogen Energy, 2012, 37, 6308-6316.	3.8	90
52	Sorption of hydrocarbons and alcohols in addition-type poly(trimethyl silyl norbornene) and other high free volume glassy polymers. II: NELF model predictions. Journal of Membrane Science, 2012, 405-406, 201-211.	4.1	46
53	Calculation of the solubility of liquid solutes in glassy polymers. AIChE Journal, 2012, 58, 292-301.	1.8	34
54	Predictive Model for the Solubility of Fluid Mixtures in Glassy Polymers. Macromolecules, 2011, 44, 4852-4862.	2.2	70

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55	Solubility of Gases and Liquids in Glassy Polymers. Annual Review of Chemical and Biomolecular Engineering, 2011, 2, 97-120.	3.3	78
56	Sorption and transport of hydrocarbons and alcohols in addition-type poly(trimethyl silyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50,702 Td (4.1	37
57	Study of the effect of organically functionalized silica nanoparticles on the properties of UV curable acrylic coatings. Progress in Organic Coatings, 2011, 72, 44-51.	1.9	10
58	Barrier properties of organicâ€“inorganic hybrid coatings based on polyvinyl alcohol with improved water resistance. Polymer Engineering and Science, 2010, 50, 144-153.	1.5	43
59	Mass Transport in Nanocomposite Materials for Membrane Separations. , 2010, , .		1
60	Modeling VOC Sorption and Transport in Glassy Polymeric Membranes. , 2010, , .		0
61	Water Transport in Proton Exchange Membranes: Insights from Time-Resolved Infrared Spectroscopy. ECS Transactions, 2010, 33, 1029-1033.	0.3	2
62	Prediction of Infinite Dilution Benzene Solubility in Linear Polyethylene Melts via the Direct Particle Deletion Method. Journal of Physical Chemistry B, 2010, 114, 6233-6246.	1.2	17
63	Gas and Vapor Transport in Mixed Matrix Membranes Based on Amorphous Teflon AF1600 and AF2400 and Fumed Silica. Industrial & Engineering Chemistry Research, 2010, 49, 11920-11935.	1.8	94
64	Non-Fickian Diffusion of Water in Nafion. Macromolecules, 2010, 43, 4667-4678.	2.2	86
65	Epoxy-siloxane hybrid coatings by a dual-curing process. Advances in Polymer Technology, 2009, 28, 77-85.	0.8	16
66	Gas and water vapor permeation in a short-side-chain PFSI membrane. Desalination, 2009, 240, 341-346.	4.0	14
67	Water and methanol permeation through short-side-chain perfluorosulphonic acid ionomeric membranes. Journal of Membrane Science, 2008, 322, 383-391.	4.1	18
68	Oxygen permeability of novel organicâ€“inorganic coatings: I. Effects of organicâ€“inorganic ratio and molecular weight of the organic component. European Polymer Journal, 2008, 44, 2581-2588.	2.6	62
69	Oxygen permeability of novel organicâ€“inorganic coatings: II. Modification of the organic component with a hydrogen-bond forming polymer. European Polymer Journal, 2008, 44, 3256-3263.	2.6	17
70	Solubility and Diffusivity of Gases in Mixed Matrix Membranes Containing Hydrophobic Fumed Silica: Correlations and Predictions Based on the NELF Model. Industrial & Engineering Chemistry Research, 2008, 47, 5214-5226.	1.8	50
71	Correlations between Penetrant Properties and Infinite Dilution Gas Solubility in Glassy Polymers:â€“ NELF Model Derivation. Industrial & Engineering Chemistry Research, 2007, 46, 7645-7656.	1.8	20
72	Surface and barrier properties of hybrid nanocomposites containing silica and PEO segments. Journal of Applied Polymer Science, 2007, 103, 4107-4115.	1.3	8

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73	NELF model prediction of the infinite dilution gas solubility in glassy polymers. Journal of Membrane Science, 2007, 289, 106-122.	4.1	74
74	Gas solubility and permeability in MFA. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 1637-1652.	2.4	9
75	Modeling gas sorption in amorphous Teflon through the non equilibrium thermodynamics for glassy polymers (NET-GP) approach. Desalination, 2006, 193, 82-89.	4.0	24
76	Water sorption and diffusion in a short-side-chain perfluorosulfonic acid ionomer membrane for PEMFCS: effect of temperature and pre-treatment. Desalination, 2006, 193, 398-404.	4.0	38
77	An interpretation of the relation between infinite dilution gas solubility and critical temperature in glassy polymers based on the NE-LF model. Desalination, 2006, 199, 466-468.	4.0	1
78	A quartz crystal microbalance study of water vapor sorption in a short side-chain PFSI membrane. Desalination, 2006, 200, 636-638.	4.0	16
79	Solubility of gases and vapors in glassy polymers modelled through non-equilibrium PHSC theory. Fluid Phase Equilibria, 2006, 241, 300-307.	1.4	39
80	Gas and Vapor Sorption, Permeation, and Diffusion in Poly(tetrafluoroethylene-co-perfluoromethyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.2	54
81	Permeation, diffusion, and sorption of dimethyl ether in fluoroelastomers. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 1987-2006.	2.4	13
82	Gas Sorption and Dilatation in Poly(2,2-bistrifluoromethyl-4,5-difluoro-1,3-dioxole-co-tetrafluoroethylene):Â Comparison of Experimental Data with Predictions of the Nonequilibrium Lattice Fluid Model. Macromolecules, 2002, 35, 1276-1288.	2.2	87
83	On productivity control in credit institutions. Engineering and Process Economics, 1979, 4, 77-87.	0.1	0