Matteo Minelli

List of Publications by Year in descending order

59 papers	1,825 citations	201575 27 h-index	289141 40 g-index
60 all docs	60 docs citations	60 times ranked	2003 citing authors

#	Article	IF	Citations
1	Investigation of mass transport properties of microfibrillated cellulose (MFC) films. Journal of Membrane Science, 2010, 358, 67-75.	4.1	157
2	Geopolymers as solid adsorbent for CO2 capture. Chemical Engineering Science, 2016, 148, 267-274.	1.9	94
3	Polymer-Grafted Nanoparticle Membranes with Controllable Free Volume. Macromolecules, 2017, 50, 7111-7120.	2.2	88
4	Permeability and diffusivity of CO2 in glassy polymers with and without plasticization. Journal of Membrane Science, 2013, 435, 176-185.	4.1	85
5	Graphene-based coatings on polymer films for gas barrier applications. Carbon, 2016, 96, 503-512.	5.4	69
6	Analysis of modeling results for barrier properties in ordered nanocomposite systems. Journal of Membrane Science, 2009, 327, 208-215.	4.1	59
7	Tuning Selectivities in Gas Separation Membranes Based on Polymer-Grafted Nanoparticles. ACS Nano, 2020, 14, 17174-17183.	7.3	55
8	Gas permeation in perflurosulfonated membranes: Influence of temperature and relative humidity. International Journal of Hydrogen Energy, 2013, 38, 11973-11982.	3.8	54
9	A comprehensive model for mass transport properties in nanocomposites. Journal of Membrane Science, 2011, 381, 10-20.	4.1	50
10	Elementary prediction of gas permeability in glassy polymers. Journal of Membrane Science, 2017, 521, 73-83.	4.1	47
11	Nonequilibrium Sorption of Water in Polylactide. Macromolecules, 2012, 45, 7486-7494.	2.2	44
12	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
13	Modeling gas and vapor sorption in a polymer of intrinsic microporosity (PIM-1). Fluid Phase Equilibria, 2013, 347, 35-44.	1.4	42
14	Atmospheric plasma assisted PLA/microfibrillated cellulose (MFC) multilayer biocomposite for sustainable barrier application. Industrial Crops and Products, 2016, 93, 235-243.	2.5	41
15	A Predictive Model for Vapor Solubility and Volume Dilation in Glassy Polymers. Industrial & Engineering Chemistry Research, 2012, 51, 16505-16516.	1.8	38
16	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
17	An equation of state (EoS) based model for the fluid solubility in semicrystalline polymers. Fluid Phase Equilibria, 2014, 367, 173-181.	1.4	36
18	Gas permeability in glassy polymers: A thermodynamic approach. Fluid Phase Equilibria, 2016, 424, 44-51.	1.4	36

#	Article	IF	Citations
19	Study of gas permeabilities through polystyrene-block-poly(ethylene oxide) copolymers. Journal of Membrane Science, 2013, 432, 83-89.	4.1	35
20	Permeability and solubility of carbon dioxide in different glassy polymer systems with and without plasticization. Journal of Membrane Science, 2013, 444, 429-439.	4.1	35
21	CO2 plasticization effect on glassy polymeric membranes. Polymer, 2019, 163, 29-35.	1.8	32
22	Non-Fickian Diffusion of Water in Polylactide. Industrial & Engineering Chemistry Research, 2013, 52, 8664-8673.	1.8	31
23	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 Â®. Journal of Membrane Science, 2017, 539, 88-100.	4.1	30
24	Water sorption in microfibrillated cellulose (MFC): The effect of temperature and pretreatment. Carbohydrate Polymers, 2017, 174, 1201-1212.	5.1	30
25	Predictive model for gas and vapor solubility and swelling in glassy polymers I: Application to different polymer/penetrant systems. Fluid Phase Equilibria, 2014, 381, 1-11.	1.4	29
26	Selective Gas Permeation in Graphene Oxideâ€“Polymer Self-Assembled Multilayers. ACS Applied Materials & Interfaces, 2018, 10, 11242-11250.	4.0	29
27	The influence of moisture content on the polymer structure of polyvinyl alcohol in dispersion barrier coatings and its effect on the mass transport of oxygen. Journal of Coatings Technology Research, 2017, 14, 1345-1355.	1.2	28
28	Hybrid Pla/wild garlic antimicrobial composite films for food packaging application. Polymer Composites, 2019, 40, 893-900.	2.3	28
29	Gas Transport in Glassy Polymers: Prediction of Diffusional Time Lag. Membranes, 2018, 8, 8.	1.4	27
30	Test methods for the characterization of gas and vapor permeability in polymers for food packaging application: A review. Polymer Testing, 2020, 89, 106606.	2.3	27
31	110th Anniversary: Gas and Vapor Sorption in Glassy Polymeric Membranesâ€”Critical Review of Different Physical and Mathematical Models. Industrial & Engineering Chemistry Research, 2020, 59, 341-365.	1.8	26
32	A fundamental study of the extent of meaningful application of Maxwell's and Wiener's equations to the permeability of binary composite materials. Part I: A numerical computation approach. Chemical Engineering Science, 2013, 104, 630-637.	1.9	24
33	Predictive calculations of gas solubility and permeability in glassy polymeric membranes: An overview. Frontiers of Chemical Science and Engineering, 2017, 11, 405-413.	2.3	24
34	Thermodynamic model for the permeability of light gases in glassy polymers. AICHE Journal, 2015, 61, 2776-2788.	1.8	23
35	Modeling CO2 solubility and transport in poly(ethylene terephthalate) above and below the glass transition. Journal of Membrane Science, 2014, 451, 305-311.	4.1	20
36	Bulk-Processed Pd Nanocubeâ€“Poly(methyl methacrylate) Nanocomposites as Plasmonic Plastics for Hydrogen Sensing. ACS Applied Nano Materials, 2020, 3, 8438-8445.	2.4	20

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37	A predictive model for the permeability of gas mixtures in glassy polymers. Fluid Phase Equilibria, 2018, 455, 54-62.	1.4	19
38	Analysis of a Polystyreneâ€“Toluene System through â€œDynamicâ€•Sorption Tests: Glass Transitions and Retrograde Vitrification. Journal of Physical Chemistry B, 2017, 121, 9969-9981.	1.2	17
39	Highly Permeable Fluorinated Polymer Nanocomposites for Plasmonic Hydrogen Sensing. ACS Applied Materials & Interfaces, 2021, 13, 21724-21732.	4.0	17
40	On the interpretation of cryogenic sorption isotherms in glassy polymers. Journal of Membrane Science, 2017, 540, 229-242.	4.1	16
41	Coreâ€“shell graphene oxideâ€“polymer hollow fibers as water filters with enhanced performance and selectivity. Faraday Discussions, 2021, 227, 274-290.	1.6	16
42	On the role of diffusivity ratio and partition coefficient in diffusional molecular transport in binary composite materials, with special reference to the Maxwell equation. Journal of Membrane Science, 2014, 456, 162-166.	4.1	15
43	Equation of State Modeling of the Solubility of CO2/C2H6 Mixtures in Cross-Linked Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlo	1.8	15
44	Thermodynamic basis for vapor permeability in Ethyl Cellulose. Journal of Membrane Science, 2015, 473, 137-145.	4.1	15
45	Analysis and utilization of cryogenic sorption isotherms for high free volume glassy polymers. Polymer, 2019, 170, 157-167.	1.8	15
46	A fundamental study of the extent of meaningful application of Maxwellâ€™s and Wienerâ€™s equations to the permeability of binary composite materials. Part III: Extension of the binary cubes model to 3-phase media. Chemical Engineering Science, 2015, 131, 360-366.	1.9	14
47	A fundamental study of the extent of meaningful application of Maxwell×3s and Wiener×3s equations to the permeability of binary composite materials. Part II: A useful explicit analytical approach. Chemical Engineering Science, 2015, 131, 353-359.	1.9	12
48	Predictive model for gas and vapor sorption and swelling in glassy polymers: II. Effect of sample previous history. Fluid Phase Equilibria, 2017, 444, 47-55.	1.4	11
49	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
50	Effect of block copolymer morphology on crystallization and water transport. Polymer, 2017, 120, 209-216.	1.8	10
51	Thermodynamic Modeling of Gas Transport in Glassy Polymeric Membranes. Membranes, 2017, 7, 46.	1.4	10
52	Thermodynamic basis for vapor solubility in ethyl cellulose. Journal of Membrane Science, 2014, 469, 336-343.	4.1	9
53	Modeling mass transport in dense polymer membranes: cooperative synergy among multiple scale approaches. Current Opinion in Chemical Engineering, 2020, 28, 43-50.	3.8	9
54	Modeling Retrograde Vitrification in the Polystyreneâ€“Toluene System. Journal of Physical Chemistry B, 2018, 122, 3015-3022.	1.2	7

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55	A comprehensive theoretical framework for the sub and supercritical sorption and transport of CO2 in polymers. Chemical Engineering Journal, 2022, 435, 135013.	6.6	7
56	Modeling of oxygen permeation through filled polymeric layers for barrier coatings. Journal of Applied Polymer Science, 2017, 134, .	1.3	6
57	Probing effect of solvent concentration on glass transition and sub-Tg structural relaxation in polymer solvent mixtures: The case of polystyrene-toluene system. AIP Conference Proceedings, 2016, , .	0.3	0
58	Structure and sieving mechanism of high selective graphene-based membranes. AIP Conference Proceedings, 2018, , .	0.3	0
59	Pressurized Steam Conversion of Biomass Residues for Liquid Hydrocarbons Generation. Energies, 2021, 14, 1034.	1.6	0