

Donald R Paul

List of Publications by Year in descending order

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46
papers

4,922
citations

172386

29
h-index

243529

44
g-index

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all docs

46
docs citations

46
times ranked

5380
citing authors

#	ARTICLE	IF	CITATIONS
1	Water purification by membranes: The role of polymer science. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010, 48, 1685-1718.	2.4	798
2	Fundamental water and salt transport properties of polymeric materials. <i>Progress in Polymer Science</i> , 2014, 39, 1-42.	11.8	597
3	Surface Modification of Water Purification Membranes. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 4662-4711.	7.2	564
4	Perspectives on poly(dopamine). <i>Chemical Science</i> , 2013, 4, 3796.	3.7	338
5	Sub- <i>T_g</i> Cross-Linking of a Polyimide Membrane for Enhanced CO ₂ Plasticization Resistance for Natural Gas Separation. <i>Macromolecules</i> , 2011, 44, 6046-6056.	2.2	239
6	Solid-State Covalent Cross-Linking of Polyimide Membranes for Carbon Dioxide Plasticization Reduction. <i>Macromolecules</i> , 2003, 36, 1882-1888.	2.2	178
7	Comparison of membrane fouling at constant flux and constant transmembrane pressure conditions. <i>Journal of Membrane Science</i> , 2014, 454, 505-515.	4.1	169
8	Ion Activity Coefficients in Ion Exchange Polymers: Applicability of Manning's Counterion Condensation Theory. <i>Macromolecules</i> , 2015, 48, 8011-8024.	2.2	154
9	Partitioning of mobile ions between ion exchange polymers and aqueous salt solutions: importance of counter-ion condensation. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 6021-6031.	1.3	148
10	Predicting Salt Permeability Coefficients in Highly Swollen, Highly Charged Ion Exchange Membranes. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 4044-4056.	4.0	126
11	Ion Diffusion Coefficients in Ion Exchange Membranes: Significance of Counterion Condensation. <i>Macromolecules</i> , 2018, 51, 5519-5529.	2.2	123
12	Creating New Types of Carbon-Based Membranes. <i>Science</i> , 2012, 335, 413-414.	6.0	120
13	Salt concentration dependence of ionic conductivity in ion exchange membranes. <i>Journal of Membrane Science</i> , 2018, 547, 123-133.	4.1	119
14	Fouling mechanisms in constant flux crossflow ultrafiltration. <i>Journal of Membrane Science</i> , 2019, 574, 65-75.	4.1	109
15	Effect of fixed charge group concentration on equilibrium ion sorption in ion exchange membranes. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4638-4650.	5.2	105
16	Constant flux crossflow filtration evaluation of surface-modified fouling-resistant membranes. <i>Journal of Membrane Science</i> , 2014, 452, 171-183.	4.1	88
17	Synthesis and characterization of Thermally Rearranged (TR) polymers: influence of ortho-positioned functional groups of polyimide precursors on TR process and gas transport properties. <i>Journal of Materials Chemistry A</i> , 2013, 1, 262-272.	5.2	85
18	Synthesis and characterization of thermally rearranged (TR) polymers: effect of glass transition temperature of aromatic poly(hydroxyimide) precursors on TR process and gas permeation properties. <i>Journal of Materials Chemistry A</i> , 2013, 1, 6063.	5.2	82

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19	Analysis of the transport properties of thermally rearranged (TR) polymers and polymers of intrinsic microporosity (PIM) relative to upper bound performance. <i>Journal of Membrane Science</i> , 2017, 525, 18-24.	4.1	80
20	The effect of permeate flux on membrane fouling during microfiltration of oily water. <i>Journal of Membrane Science</i> , 2017, 525, 25-34.	4.1	68
21	Effect of polymer structure on gas transport properties of selected aromatic polyimides, polyamides and TR polymers. <i>Journal of Membrane Science</i> , 2015, 493, 766-781.	4.1	63
22	Silica Nanohybrid Membranes with High CO ₂ Affinity for Green Hydrogen Purification. <i>Advanced Energy Materials</i> , 2011, 1, 634-642.	10.2	59
23	Free volume characterization of sulfonated styrenic pentablock copolymers using positron annihilation lifetime spectroscopy. <i>Journal of Membrane Science</i> , 2014, 453, 425-434.	4.1	45
24	Fouling propensity of a poly(vinylidene fluoride) microfiltration membrane to several model oil/water emulsions. <i>Journal of Membrane Science</i> , 2016, 514, 659-670.	4.1	44
25	Influence of polyimide precursor synthesis route and ortho-position functional group on thermally rearranged (TR) polymer properties: Pure gas permeability and selectivity. <i>Journal of Membrane Science</i> , 2014, 463, 73-81.	4.1	41
26	Effect of ambient carbon dioxide on salt permeability and sorption measurements in ion-exchange membranes. <i>Journal of Membrane Science</i> , 2015, 479, 55-66.	4.1	40
27	The effects of salt concentration and foulant surface charge on hydrocarbon fouling of a poly(vinylidene fluoride) microfiltration membrane. <i>Water Research</i> , 2017, 117, 230-241.	5.3	38
28	Effect of fixed charge group concentration on salt permeability and diffusion coefficients in ion exchange membranes. <i>Journal of Membrane Science</i> , 2018, 566, 307-316.	4.1	34
29	Influence of toluene on CO ₂ and CH ₄ gas transport properties in thermally rearranged (TR) polymers based on 3,3'-dihydroxy-4,4'-diamino-biphenyl (HAB) and 2,2'-bis-(3,4-dicarboxyphenyl) hexafluoropropane dianhydride (6FDA). <i>Journal of Membrane Science</i> , 2016, 514, 282-293.	4.1	30
30	Water Vapor Sorption, Diffusion, and Dilation in Polybenzimidazoles. <i>Macromolecules</i> , 2018, 51, 7197-7208.	2.2	30
31	Influence of temperature on gas solubility in thermally rearranged (TR) polymers. <i>Journal of Membrane Science</i> , 2017, 533, 75-83.	4.1	29
32	Predictive calculation of hydrogen and helium solubility in glassy and rubbery polymers. <i>Journal of Membrane Science</i> , 2015, 475, 110-121.	4.1	27
33	A crossflow filtration system for constant permeate flux membrane fouling characterization. <i>Review of Scientific Instruments</i> , 2013, 84, 035003.	0.6	25
34	Gas permeation properties of thermally rearranged (TR) isomers and their aromatic polyimide precursors. <i>Journal of Membrane Science</i> , 2016, 518, 88-99.	4.1	24
35	Nonequilibrium Lattice Fluid Modeling of Gas Solubility in HAB-6FDA Polyimide and Its Thermally Rearranged Analogues. <i>Macromolecules</i> , 2016, 49, 8768-8779.	2.2	21
36	Co-extruded polymeric films for gas separation membranes. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	1.3	18

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37	Chemical Modification of Butyl Rubber with Maleic Anhydride via Nitroxide Chemistry and Its Application in Polymer Blends. <i>Polymers</i> , 2017, 9, 63.	2.0	15
38	Water and salt transport properties of disulfonated poly(arylene ether sulfone) desalination membranes formed by solvent-free melt extrusion. <i>Journal of Membrane Science</i> , 2018, 546, 234-245.	4.1	15
39	Effect of Water Content on Sodium Chloride Sorption in Cross-Linked Cation Exchange Membranes. <i>Macromolecules</i> , 2019, 52, 2569-2579.	2.2	14
40	Extruder-made TPO nanocomposites. I. Effect of maleated polypropylene and organoclay ratio on the morphology and mechanical properties. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2012, 50, 1577-1588.	2.4	10
41	Preface: Advanced Membrane Technology III: Membrane Engineering for Process Intensification Conference. <i>Industrial & Engineering Chemistry Research</i> , 2007, 46, 2235-2235.	1.8	5
42	Comparison of the Permeation of MgCl ₂ versus NaCl in Highly Charged Sulfonated Polymer Membranes. <i>ACS Symposium Series</i> , 2011, , 239-245.	0.5	2
43	Extruder-made TPO nanocomposites. II. Effect of maleated poly(propylene)/organoclay ratio on morphology and thermal expansion behavior. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 952-965.	2.4	2
44	Announcement: New Associate Editor. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 3633-3633.	1.8	1
45	Preface Membrane Engineering. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 7609-7609.	1.8	0
46	Announcement: New Associate Editor. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 4769-4769.	1.8	0