

Phillip Choi

List of Publications by Year in descending order

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90
papers

1,487
citations

304368

22
h-index

377514

34
g-index

91
all docs

91
docs citations

91
times ranked

1610
citing authors

#	ARTICLE	IF	CITATIONS
1	Application of Molecular Dynamics Simulation To Predict the Compatability between Water-Insoluble Drugs and Self-Associating Poly(ethylene oxide)- <i>b</i> -poly(μ -caprolactone) Block Copolymers. Biomacromolecules, 2008, 9, 3014-3023.	2.6	84
2	Polydispersity Index: How Accurately Does It Measure the Breadth of the Molecular Weight Distribution?. Chemistry of Materials, 2005, 17, 926-926.	3.2	70
3	Solvent screening for non-aqueous extraction of Alberta oil sands. Canadian Journal of Chemical Engineering, 2013, 91, 1153-1160.	0.9	65
4	A molecular dynamics study of the effects of branching characteristics of LDPE on its miscibility with HDPE. Polymer, 2002, 43, 1497-1502.	1.8	62
5	Roles of Nonpolar and Polar Intermolecular Interactions in the Improvement of the Drug Loading Capacity of PEO- <i>b</i> -PCL with Increasing PCL Content for Two Hydrophobic Cucurbitacin Drugs. Biomacromolecules, 2009, 10, 2584-2591.	2.6	53
6	Performance of Solvent Mixtures for Non-aqueous Extraction of Alberta Oil Sands. Energy & Fuels, 2015, 29, 2261-2267.	2.5	46
7	Molecular dynamics and thermal analysis study of anomalous thermodynamic behavior of poly (ether) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 267 Td	1.8	43
8	Descriptor of catalytic activity of metal sulfides for oxygen reduction reaction: a potential indicator for mineral flotation. Journal of Materials Chemistry A, 2018, 6, 9650-9656.	5.2	41
9	Molecular dynamics study of the encapsulation capability of a PCL-PEO based block copolymer for hydrophobic drugs with different spatial distributions of hydrogen bond donors and acceptors. Biomaterials, 2010, 31, 1780-1786.	5.7	40
10	Adhesives from Waste Protein Biomass for Oriented Strand Board Composites: Development and Performance. Macromolecular Materials and Engineering, 2014, 299, 1003-1012.	1.7	40
11	Rational design of block copolymer micelles to control burst drug release at a nanoscale dimension. Acta Biomaterialia, 2015, 24, 127-139.	4.1	40
12	Case studies of clinical hemodialysis membranes: influences of membrane morphology and biocompatibility on uremic blood-membrane interactions and inflammatory biomarkers. Scientific Reports, 2020, 10, 14808.	1.6	39
13	Prediction of the solubility of cucurbitacin drugs in self-associating poly(ethylene) molecular dynamics simulation. Biomaterials, 2010, 31, 345-357.	5.7	37
14	Migration of Fine Solids into Product Bitumen from Solvent Extraction of Alberta Oilsands. Energy & Fuels, 2014, 28, 2925-2932.	2.5	37
15	A Review of the Miscibility of Polyethylene Blends. Materials and Manufacturing Processes, 2006, 21, 135-142.	2.7	36
16	Biocomposites from hydrolyzed waste proteinaceous biomass: mechanical, thermal and moisture absorption performances. Journal of Materials Chemistry A, 2013, 1, 13186.	5.2	36
17	CO ₂ microbubbles – A potential fluid for enhanced oil recovery: Bulk and porous media studies. Journal of Petroleum Science and Engineering, 2016, 138, 160-173.	2.1	35
18	Biocompatibility enhancement of hemodialysis membranes using a novel zwitterionic copolymer: Experimental, in situ synchrotron imaging, molecular docking, and clinical inflammatory biomarkers investigations. Materials Science and Engineering C, 2020, 117, 111301.	3.8	31

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19	Molecular Dynamics Study on the Effect of Solvent Adsorption on the Morphology of Glycothermally Produced Al_2O_3 Particles. <i>Journal of Physical Chemistry C</i> , 2008, 112, 10145-10152.	1.5	30
20	Immiscibility of poly(ethylene) and poly(propylene): A molecular dynamics study. <i>Macromolecules</i> , 1995, 28, 8247-8250.	2.2	29
21	Enhancing the Adhesive Strength of a Plywood Adhesive Developed from Hydrolyzed Specified Risk Materials. <i>Polymers</i> , 2016, 8, 285.	2.0	27
22	Thermodynamic properties of poly(vinyl alcohol) with different tacticities estimated from molecular dynamics simulation. <i>Polymer</i> , 2013, 54, 4212-4219.	1.8	26
23	Measurement of solvent-independent polymer-polymer Flory-Huggins interaction parameters with the use of non-random partitioning solvents in inverse gas chromatography. <i>Polymer</i> , 2002, 43, 6677-6681.	1.8	22
24	Development of Proteinaceous Plywood Adhesive and Optimization of Its Lap Shear Strength. <i>Macromolecular Materials and Engineering</i> , 2015, 300, 198-209.	1.7	20
25	Pelletization of Torrefied Wood Using a Proteinaceous Binder Developed from Hydrolyzed Specified Risk Materials. <i>Processes</i> , 2019, 7, 229.	1.3	20
26	Study of the correctness of the solubility parameters obtained from indirect methods by molecular dynamics simulation. <i>Polymer</i> , 2004, 45, 1349-1356.	1.8	19
27	Molecular dynamics studies of the effects of branching characteristics on the crystalline structure of polyethylene. <i>Journal of Chemical Physics</i> , 2001, 115, 2827-2830.	1.2	18
28	Differences in the Solid-State Structures of Single-Site and Ziegler-Natta Linear Low-Density Polyethylenes As Revealed by Molecular Dynamics Simulation. <i>Macromolecules</i> , 2006, 39, 8517-8525.	2.2	18
29	Molecular origin of demixing, prior to crystallization, of atactic polypropylene/isotactic polypropylene blends upon cooling from the melt. <i>Journal of Chemical Physics</i> , 2004, 121, 8647.	1.2	17
30	Solvent removal from cyclohexane-extracted oil sands gangue. <i>Canadian Journal of Chemical Engineering</i> , 2016, 94, 408-414.	0.9	16
31	Molecular Dynamics Study of Hydrophilic Sphalerite (110) Surface as Modified by Normal and Branched Butylthiols. <i>Langmuir</i> , 2018, 34, 3363-3373.	1.6	16
32	Molecular dynamics study on structure evolution of monocarboxylic acid intercalated layered double hydroxides. <i>RSC Advances</i> , 2016, 6, 98804-98811.	1.7	15
33	Line tensions of galena (001) and sphalerite (110) surfaces: A molecular dynamics study. <i>Journal of Molecular Liquids</i> , 2017, 248, 634-642.	2.3	15
34	Development of hydrolysed protein-based plywood adhesive from slaughterhouse waste: effect of chemical modification of hydrolysed protein on moisture resistance of formulated adhesives. <i>RSC Advances</i> , 2018, 8, 2996-3008.	1.7	15
35	Development of a torrefied wood pellet binder from the cross-linking between specified risk materials-derived peptides and epoxidized poly(vinyl alcohol). <i>Renewable Energy</i> , 2020, 162, 71-80.	4.3	15
36	Contributions of van der Waals Interactions and Hydrophobic Attraction to Molecular Adhesions on a Hydrophobic MoS_2 Surface in Water. <i>Langmuir</i> , 2018, 34, 14196-14203.	1.6	13

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37	A free volume theory on the chain length dependence of the diffusivity of linear polymers. <i>Soft Matter</i> , 2019, 15, 9300-9309.	1.2	13
38	A Re-Examination of the Concept of Hildebrand Solubility Parameter for Polymers. <i>Macromolecular Rapid Communications</i> , 2002, 23, 484.	2.0	12
39	Study of Cyclohexane Diffusion in Athabasca Asphaltenes. <i>Energy & Fuels</i> , 2014, 28, 1004-1011.	2.5	12
40	Molecular Dynamics Study of the Diffusivity of a Hydrophobic Drug Cucurbitacin B in Pseudo-poly(ethylene oxide-b-caprolactone) Micelle Environments. <i>Langmuir</i> , 2014, 30, 7798-7803.	1.6	11
41	Sorption equilibrium and kinetics for cyclohexane, toluene, and water on Athabasca oil sands solids. <i>Canadian Journal of Chemical Engineering</i> , 2016, 94, 220-230.	0.9	11
42	Single-Molecule MoS ₂ Polymer Interaction and Efficient Aqueous Exfoliation of MoS ₂ into Single Layer. <i>Journal of Physical Chemistry C</i> , 2018, 122, 8262-8269.	1.5	11
43	Molecular dynamics study of the dissolution mechanism of kaolinite basal surfaces in alkali media. <i>Applied Clay Science</i> , 2018, 152, 29-37.	2.6	11
44	Study of Thermal Stability of Hydrotalcite and Carbon Dioxide Adsorption Behavior on Hydrotalcite-Derived Mixed Oxides Using Atomistic Simulations. <i>ACS Omega</i> , 2018, 3, 12041-12051.	1.6	11
45	Molecular dynamics study of water diffusivity at low concentrations in non-swollen and swollen polyurethanes. <i>Polymer</i> , 2012, 53, 3253-3260.	1.8	9
46	Molecular dynamics study of the conformation and dynamics of precisely branched polyethylene. <i>Polymer</i> , 2014, 55, 5734-5738.	1.8	9
47	Probing Single-Molecule Adhesion of a Stimuli Responsive Oligo(ethylene glycol) Methacrylate Copolymer on a Molecularly Smooth Hydrophobic MoS ₂ Basal Plane Surface. <i>Langmuir</i> , 2017, 33, 10429-10438.	1.6	9
48	Underwater Adhesion of a Stimuli-Responsive Polymer on Highly Oriented Pyrolytic Graphite: A Single-Molecule Force Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 6721-6729.	1.5	9
49	On the diffusivity of ring polymers. <i>Soft Matter</i> , 2020, 16, 2350-2362.	1.2	9
50	Inverse Gas Chromatography Study of the Permeability of Aroma through Hydroxypropyl Xylan Films. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 3114-3122.	3.2	8
51	Salt-Induced Phase Separation of Water and Cyclohexane within a Kaolinite Nanopore: A Molecular Dynamics Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 24215-24225.	1.5	8
52	Analysis of Brownian Dynamics and Molecular Dynamics Data of Unentangled Polymer Melts Using Proper Orthogonal Decomposition. <i>Macromolecular Theory and Simulations</i> , 2019, 28, 1800072.	0.6	8
53	Effect of Inorganic Salt Contaminants on the Dissolution of Kaolinite Basal Surfaces in Alkali Media: A Molecular Dynamics Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4937-4944.	1.5	7
54	Thickness Dependence of the Diffusivity and Solubility of Cyclohexane in Nanoscale Bitumen Films. <i>ACS Omega</i> , 2019, 4, 21578-21586.	1.6	7

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55	Structure and CO ₂ physisorption capacity of hydrotalcite-derived oxide. <i>Journal of CO₂ Utilization</i> , 2020, 36, 64-75.	3.3	7
56	Prediction of crossover in the molecular weight dependence of polyethylene viscosity using a polymer free volume theory. <i>Soft Matter</i> , 2020, 16, 7458-7469.	1.2	7
57	Influence of stereoerrors on the formation of helices during early stage crystallization of isotactic polypropylene. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007, 45, 3349-3360.	2.4	6
58	Molecular Dynamics Study of the Solid-State Structures of Linear-Low-Density Polyethylenes with Blocky Branches. <i>Macromolecules</i> , 2008, 41, 7109-7114.	2.2	6
59	Prediction of self diffusion coefficients of selected solvents in poly(vinyl alcohol) using lattice-free volume theory. <i>Polymer</i> , 2015, 58, 53-59.	1.8	6
60	Influence of structural Al and Si vacancies on the interaction of kaolinite basal surfaces with alkali cations: A molecular dynamics study. <i>Computational Materials Science</i> , 2017, 140, 267-274.	1.4	6
61	Molecular Dynamics Study of the Role of Water in the Carbon Dioxide Intercalation in Chloride Ions Bearing Hydrotalcite. <i>Journal of Physical Chemistry C</i> , 2018, 122, 9507-9514.	1.5	6
62	Differences between Ziegler-Natta and Single-Site Linear Low-Density Polyethylenes as Characterized by Inverse Gas Chromatography. <i>Macromolecular Rapid Communications</i> , 2004, 25, 535-541.	2.0	5
63	Thermodynamic analysis of the inequality of the cohesive energy density and internal pressure of polymers. <i>Polymer Engineering and Science</i> , 2005, 45, 798-800.	1.5	5
64	Effect of Pressure on the Miscibility of Polyethylene/Poly(ethylene-alt-propylene) Blends. <i>Macromolecular Theory and Simulations</i> , 2006, 15, 563-572.	0.6	5
65	On the weak dependence of water diffusivity on the degree of hydrophobicity of acetylated hydroxypropyl xylan. <i>Carbohydrate Polymers</i> , 2013, 98, 644-649.	5.1	5
66	Transport and removal of a solvent in porous media in the presence of bitumen, a highly viscous solute. <i>Chemical Engineering Science</i> , 2017, 165, 229-239.	1.9	5
67	On the applicability of regular solution and Flory-Huggins theories to asphaltene liquid mixtures. <i>Canadian Journal of Chemical Engineering</i> , 2022, 100, 1374-1383.	0.9	5
68	Effect of partial atomic charges on the calculated free energy of solvation of poly(vinyl alcohol) in selected solvents. <i>Journal of Molecular Modeling</i> , 2015, 21, 58.	0.8	4
69	Effect of Humidity on the Permeability of Alcohols in Hydroxypropyl Xylan Films. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 2578-2583.	3.2	4
70	Molecular dynamics study of water diffusion in an amphiphilic block copolymer with large difference in the blocks' glass transition temperatures. <i>Frontiers of Chemical Science and Engineering</i> , 2017, 11, 440-447.	2.3	4
71	Effect of confinement on the adsorption behavior of inorganic and organic ions at aqueous-cyclohexane interfaces: a molecular dynamics study. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 20770-20781.	1.3	4
72	Chemical Functionalization of ZnS: A Perspective from the Ligand-ZnS Bond Character. <i>Journal of Physical Chemistry C</i> , 2019, 123, 6054-6061.	1.5	4

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73	Effect of stereochemical sequence on the dynamics of atactic polypropylene melt. <i>Macromolecular Research</i> , 2014, 22, 187-193.	1.0	3
74	Diffusivity of Cucurbitacin B in water swollen polyethylene oxide-b-polycaprolactone matrices with different PCL/PEO weight ratios. <i>Computational Materials Science</i> , 2016, 118, 97-102.	1.4	3
75	Vacuum drying of cyclohexane from solvent-extracted oil sands gangue. <i>Canadian Journal of Chemical Engineering</i> , 2017, 95, 459-466.	0.9	3
76	Velocity time correlation function of a rouse chain. <i>Computational Materials Science</i> , 2018, 155, 320-324.	1.4	3
77	Calculation of pressure using the virtual-volume-variation method and the virial method from chain conformations obtained by Monte Carlo simulations on the second nearest neighbor diamond lattice. <i>Journal of Chemical Physics</i> , 2004, 121, 10674-10679.	1.2	2
78	Study of the effect of branch content of octene-based linear low-density polyethylene on its melt miscibility with high-density polyethylene by inverse gas chromatography. <i>Journal of Applied Polymer Science</i> , 2004, 91, 1927-1931.	1.3	2
79	<i>Polymer Mixtures</i> , 2013, , 231-274.		2
80	Using surface geopolymerization reactions to strengthen Athabasca oil sands mature fine tailings. <i>Canadian Journal of Chemical Engineering</i> , 2016, 94, 1640-1647.	0.9	2
81	Revelation of the Nature of the Ligand-PbS Bond and Its Implication on Chemical Functionalization of PbS. <i>Journal of Physical Chemistry C</i> , 2019, 123, 22981-22988.	1.5	2
82	A theory for the temperature effect on the chain length dependence of the diffusivity of oligomers. <i>Soft Matter</i> , 2020, 16, 4283-4289.	1.2	2
83	A review on the relaxation dynamics analysis of unentangled polymers with different structures. <i>Molecular Simulation</i> , 2021, 47, 888-899.	0.9	2
84	Microwave-Assisted Removal of Cyclohexane from Oil Sands Gangue. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 6611-6617.	1.8	2
85	Molecular Modelling-an Enabling Technology for Chemical Engineers. <i>Canadian Journal of Chemical Engineering</i> , 2008, 84, 265-268.	0.9	1
86	Initial mass uptake dynamics and diffusivity of cyclohexane vapor in nano-scale bitumen films coated on substrates with different degrees of hydrophilicity. <i>Fuel</i> , 2020, 271, 117507.	3.4	1
87	Composition dependence of cyclohexane-extracted gangue drying at ambient conditions. <i>Canadian Journal of Chemical Engineering</i> , 2021, , .	0.9	1
88	Estimation of linear, ring, and star polyethylene viscosity through proper orthogonal decomposition and Voronoi tessellation analysis of molecular dynamics data. <i>Canadian Journal of Chemical Engineering</i> , 2022, 100, 3196-3209.	0.9	1
89	Comparison between the kinetics of cyclohexane absorption and desorption for heterogeneous bitumen nanofilms. <i>Fuel</i> , 2021, 283, 118836.	3.4	0
90	A molecular dynamics study on the interfacial properties of millerite. <i>Journal of Molecular Liquids</i> , 2021, 334, 116031.	2.3	0