Phillip Choi

List of Publications by Year
in descending order

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	Estimation of linear, ring, and star polyethylene viscosity through proper orthogonal decomposition and <scp>Voronoi</scp> tessellation analysis of molecular dynamics data. Canadian Journal of Chemical Engineering, 2022, 100, 3196-3209.	0.9	1
2	On the applicability of regular solution and <scp>Floryâ€Huggins</scp> theories to asphaltene liquid mixtures. Canadian Journal of Chemical Engineering, 2022, 100, 1374-1383.	0.9	5
3	Microwave-Assisted Removal of Cyclohexane from Oil Sands Gangue. Industrial & Engineering Chemistry Research, 2022, 61, 6611-6617.	1.8	2
4	Composition dependence of cyclohexaneâ€extracted gangue drying at ambient conditions. Canadian Journal of Chemical Engineering, 2021, , .	0.9	1
5	Comparison between the kinetics of cyclohexane absorption and desorption for heterogeneous bitumen nanofilms. Fuel, 2021, 283, 118836.	3.4	0
6	A review on the relaxation dynamics analysis of unentangled polymers with different structures. Molecular Simulation, 2021, 47, 888-899.	0.9	2
7	A molecular dynamics study on the interfacial properties of millerite. Journal of Molecular Liquids, 2021, 334, 116031.	2.3	0
8	Structure and CO2 physisorption capacity of hydrotalcite-derived oxide. Journal of CO2 Utilization, 2020, 36, 64-75.	3.3	7
9	Prediction of crossover in the molecular weight dependence of polyethylene viscosity using a polymer free volume theory. Soft Matter, 2020, 16, 7458-7469.	1.2	7
10	Initial mass uptake dynamics and diffusivity of cyclohexane vapor in nano-scale bitumen films coated on substrates with different degrees of hydrophilicity. Fuel, 2020, 271, 117507.	3.4	1
11	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
12	Development of a torrefied wood pellet binder from the cross-linking between specified risk materials-derived peptides and epoxidized poly (vinyl alcohol). Renewable Energy, 2020, 162, 71-80.	4.3	15
13	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
14	On the diffusivity of ring polymers. Soft Matter, 2020, 16, 2350-2362.	1.2	9
15	A theory for the temperature effect on the chain length dependence of the diffusivity of oligomers. Soft Matter, 2020, 16, 4283-4289.	1.2	2
16	Revelation of the Nature of the Ligandâ€“PbS Bond and Its Implication on Chemical Functionalization of PbS. Journal of Physical Chemistry C, 2019, 123, 22981-22988.	1.5	2
17	Effect of confinement on the adsorption behavior of inorganic and organic ions at aqueousâ€“cyclohexane interfaces: a molecular dynamics study. Physical Chemistry Chemical Physics, 2019, 21, 20770-20781.	1.3	4
18	Pelletization of Torrefied Wood Using a Proteinaceous Binder Developed from Hydrolyzed Specified Risk Materials. Processes, 2019, 7, 229.	1.3	20

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19	Analysis of Brownian Dynamics and Molecular Dynamics Data of Unentangled Polymer Melts Using Proper Orthogonal Decomposition. Macromolecular Theory and Simulations, 2019, 28, 1800072.	0.6	8
20	Chemical Functionalization of ZnS: A Perspective from the Ligandâ€“ZnS Bond Character. Journal of Physical Chemistry C, 2019, 123, 6054-6061.	1.5	4
21	Thickness Dependence of the Diffusivity and Solubility of Cyclohexane in Nanoscale Bitumen Films. ACS Omega, 2019, 4, 21578-21586.	1.6	7
22	A free volume theory on the chain length dependence of the diffusivity of linear polymers. Soft Matter, 2019, 15, 9300-9309.	1.2	13
23	Effect of Inorganic Salt Contaminants on the Dissolution of Kaolinite Basal Surfaces in Alkali Media: A Molecular Dynamics Study. Journal of Physical Chemistry C, 2018, 122, 4937-4944.	1.5	7
24	Molecular Dynamics Study of the Role of Water in the Carbon Dioxide Intercalation in Chloride Ions Bearing Hydrotalcite. Journal of Physical Chemistry C, 2018, 122, 9507-9514.	1.5	6
25	Molecular Dynamics Study of Hydrophilic Sphalerite (110) Surface as Modified by Normal and Branched Butylthiols. Langmuir, 2018, 34, 3363-3373.	1.6	16
26	Development of hydrolysed protein-based plywood adhesive from slaughterhouse waste: effect of chemical modification of hydrolysed protein on moisture resistance of formulated adhesives. RSC Advances, 2018, 8, 2996-3008.	1.7	15
27	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
28	Single-Molecule MoS₂â€“Polymer Interaction and Efficient Aqueous Exfoliation of MoS₂ into Single Layer. Journal of Physical Chemistry C, 2018, 122, 8262-8269.	1.5	11
29	Underwater Adhesion of a Stimuli-Responsive Polymer on Highly Oriented Pyrolytic Graphite: A Single-Molecule Force Study. Journal of Physical Chemistry C, 2018, 122, 6721-6729.	1.5	9
30	Molecular dynamics study of the dissolution mechanism of kaolinite basal surfaces in alkali media. Applied Clay Science, 2018, 152, 29-37.	2.6	11
31	Study of Thermal Stability of Hydrotalcite and Carbon Dioxide Adsorption Behavior on Hydrotalcite-Derived Mixed Oxides Using Atomistic Simulations. ACS Omega, 2018, 3, 12041-12051.	1.6	11
32	Salt-Induced Phase Separation of Water and Cyclohexane within a Kaolinite Nanopore: A Molecular Dynamics Study. Journal of Physical Chemistry C, 2018, 122, 24215-24225.	1.5	8
33	Contributions of van der Waals Interactions and Hydrophobic Attraction to Molecular Adhesions on a Hydrophobic MoS₂ Surface in Water. Langmuir, 2018, 34, 14196-14203.	1.6	13
34	Velocity time correlation function of a rouse chain. Computational Materials Science, 2018, 155, 320-324.	1.4	3
35	Vacuum drying of cyclohexane from solventâ€extracted oil sands gangue. Canadian Journal of Chemical Engineering, 2017, 95, 459-466.	0.9	3
36	Molecular dynamics study of water diffusion in an amphiphilic block copolymer with large difference in the blocksâ€™ glass transition temperatures. Frontiers of Chemical Science and Engineering, 2017, 11, 440-447.	2.3	4

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37	Transport and removal of a solvent in porous media in the presence of bitumen, a highly viscous solute. Chemical Engineering Science, 2017, 165, 229-239.	1.9	5
38	Line tensions of galena (001) and sphalerite (110) surfaces: A molecular dynamics study. Journal of Molecular Liquids, 2017, 248, 634-642.	2.3	15
39	Probing Single-Molecule Adhesion of a Stimuli Responsive Oligo(ethylene glycol) Methacrylate Copolymer on a Molecularly Smooth Hydrophobic MoS₂ Basal Plane Surface. Langmuir, 2017, 33, 10429-10438.	1.6	9
40	Influence of structural Al and Si vacancies on the interaction of kaolinite basal surfaces with alkali cations: A molecular dynamics study. Computational Materials Science, 2017, 140, 267-274.	1.4	6
41	Enhancing the Adhesive Strength of a Plywood Adhesive Developed from Hydrolyzed Specified Risk Materials. Polymers, 2016, 8, 285.	2.0	27
42	Using surface geopolymerization reactions to strengthen Athabasca oil sands mature fine tailings. Canadian Journal of Chemical Engineering, 2016, 94, 1640-1647.	0.9	2
43	Solvent removal from cyclohexaneâ€extracted oil sands gangue. Canadian Journal of Chemical Engineering, 2016, 94, 408-414.	0.9	16
44	Effect of Humidity on the Permeability of Alcohols in Hydroxypropyl Xylan Films. ACS Sustainable Chemistry and Engineering, 2016, 4, 2578-2583.	3.2	4
45	Molecular dynamics study on structure evolution of monocarboxylic acid intercalated layered double hydroxides. RSC Advances, 2016, 6, 98804-98811.	1.7	15
46	Sorption equilibrium and kinetics for cyclohexane, toluene, and water on Athabasca oil sands solids. Canadian Journal of Chemical Engineering, 2016, 94, 220-230.	0.9	11
47	Diffusivity of Cucurbitacin B in water swollen polyethylene oxide-b-polycaprolactone matrices with different PCL/PEO weight ratios. Computational Materials Science, 2016, 118, 97-102.	1.4	3
48	CO2 microbubbles â€“ 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
49	Inverse Gas Chromatography Study of the Permeability of Aroma through Hydroxypropyl Xylan Films. ACS Sustainable Chemistry and Engineering, 2015, 3, 3114-3122.	3.2	8
50	Prediction of self diffusion coefficients of selected solvents in poly(vinyl alcohol) using lattice-free volume theory. Polymer, 2015, 58, 53-59.	1.8	6
51	Effect of partial atomic charges on the calculated free energy of solvation of poly(vinyl alcohol) in selected solvents. Journal of Molecular Modeling, 2015, 21, 58.	0.8	4
52	Performance of Solvent Mixtures for Non-aqueous Extraction of Alberta Oil Sands. Energy & Fuels, 2015, 29, 2261-2267.	2.5	46
53	Rational design of block copolymer micelles to control burst drug release at a nanoscale dimension. Acta Biomaterialia, 2015, 24, 127-139.	4.1	40
54	Development of Proteinaceous Plywood Adhesive and Optimization of Its Lap Shear Strength. Macromolecular Materials and Engineering, 2015, 300, 198-209.	1.7	20

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55	Adhesives from Waste Protein Biomass for Oriented Strand Board Composites: Development and Performance. Macromolecular Materials and Engineering, 2014, 299, 1003-1012.	1.7	40
56	Effect of stereochemical sequence on the dynamics of atactic polypropylene melt. Macromolecular Research, 2014, 22, 187-193.	1.0	3
57	Study of Cyclohexane Diffusion in Athabasca Asphaltenes. Energy & Fuels, 2014, 28, 1004-1011.	2.5	12
58	Molecular Dynamics Study of the Diffusivity of a Hydrophobic Drug Cucurbitacin B in Pseudo-poly(ethylene oxide-b-caprolactone) Micelle Environments. Langmuir, 2014, 30, 7798-7803.	1.6	11
59	Molecular dynamics study of the conformation and dynamics of precisely branched polyethylene. Polymer, 2014, 55, 5734-5738.	1.8	9
60	Migration of Fine Solids into Product Bitumen from Solvent Extraction of Alberta Oilsands. Energy & Fuels, 2014, 28, 2925-2932.	2.5	37
61	Polymer Mixtures. , 2013, , 231-274.		2
62	Biocomposites from hydrolyzed waste proteinaceous biomass: mechanical, thermal and moisture absorption performances. Journal of Materials Chemistry A, 2013, 1, 13186.	5.2	36
63	On the weak dependence of water diffusivity on the degree of hydrophobicity of acetylated hydroxypropyl xylan. Carbohydrate Polymers, 2013, 98, 644-649.	5.1	5
64	Thermodynamic properties of poly(vinyl alcohol) with different tacticities estimated from molecular dynamics simulation. Polymer, 2013, 54, 4212-4219.	1.8	26
65	Solvent screening for nonâ€aqueous extraction of Alberta oil sands. Canadian Journal of Chemical Engineering, 2013, 91, 1153-1160.	0.9	65
66	Molecular dynamics study of water diffusivity at low concentrations in non-swollen and swollen polyurethanes. Polymer, 2012, 53, 3253-3260.	1.8	9
67	Molecular dynamics study of the encapsulation capability of a PCLâ€“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
68	Prediction of the solubility of cucurbitacin drugs in self-associating poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 227 Td (oxide)-b molecular dynamics simulation. Biomaterials, 2010, 31, 345-357.	5.7	37
69	Roles of Nonpolar and Polar Intermolecular Interactions in the Improvement of the Drug Loading Capacity of PEO-b-PCL with Increasing PCL Content for Two Hydrophobic Cucurbitacin Drugs. Biomacromolecules, 2009, 10, 2584-2591.	2.6	53
70	Molecular Modelling-an Enabling Technology for Chemical Engineers. Canadian Journal of Chemical Engineering, 2008, 84, 265-268.	0.9	1
71	Application of Molecular Dynamics Simulation To Predict the Compatability between Water-Insoluble Drugs and Self-Associating Poly(ethylene oxide)-b-poly(Îµ-caprolactone) Block Copolymers. Biomacromolecules, 2008, 9, 3014-3023.	2.6	84
72	Molecular Dynamics Study on the Effect of Solvent Adsorption on the Morphology of Glycothermally Produced Î±-Al₂O₃ Particles. Journal of Physical Chemistry C, 2008, 112, 10145-10152.	1.5	30

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73	Molecular Dynamics Study of the Solid-State Structures of Linear-Low-Density Polyethylenes with Blocky Branches. Macromolecules, 2008, 41, 7109-7114.	2.2	6
74	Influence of stereoerrors on the formation of helices during early stage crystallization of isotactic polyproyplene. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 3349-3360.	2.4	6
75	A Review of the Miscibility of Polyethylene Blends. Materials and Manufacturing Processes, 2006, 21, 135-142.	2.7	36
76	Differences in the Solid-State Structures of Single-Site and Zieglerâ"Natta Linear Low-Density Polyethylenes As Revealed by Molecular Dynamics Simulation. Macromolecules, 2006, 39, 8517-8525.	2.2	18
77	Effect of Pressure on the Miscibility of Polyethylene/Poly(ethylene-alt-propylene) Blends. Macromolecular Theory and Simulations, 2006, 15, 563-572.	0.6	5
78	Thermodynamic analysis of the inequality of the cohesive energy density and internal pressure of polymers. Polymer Engineering and Science, 2005, 45, 798-800.	1.5	5
79	Polydispersity Index:â€‰ How Accurately Does It Measure the Breadth of the Molecular Weight Distribution?. Chemistry of Materials, 2005, 17, 926-926.	3.2	70
80	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. Journal of Chemical Physics, 2004, 121, 10674-10679.	1.2	2
81	Molecular origin of demixing, prior to crystallization, of atactic polypropylene/isotactic polypropylene blends upon cooling from the melt. Journal of Chemical Physics, 2004, 121, 8647.	1.2	17
82	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. Journal of Applied Polymer Science, 2004, 91, 1927-1931.	1.3	2
83	Differences between Zieglerâ€"Natta and Single-Site Linear Low-Density Polyethylenes as Characterized by Inverse Gas Chromatography. Macromolecular Rapid Communications, 2004, 25, 535-541.	2.0	5
84	Study of the correctness of the solubility parameters obtained from indirect methods by molecular dynamics simulation. Polymer, 2004, 45, 1349-1356.	1.8	19
85	Molecular dynamics and thermal analysis study of anomalous thermodynamic behavior of poly (ether) Tj ETQq1 1 0.784314 rgBT /Over	1.8	43
86	A Re-Examination of the Concept of Hildebrand Solubility Parameter for Polymers. Macromolecular Rapid Communications, 2002, 23, 484.	2.0	12
87	Measurement of solvent-independent polymerâ€"polymer Floryâ€"Huggins interaction parameters with the use of non-random partitioning solvents in inverse gas chromatography. Polymer, 2002, 43, 6677-6681.	1.8	22
88	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
89	Molecular dynamics studies of the effects of branching characteristics on the crystalline structure of polyethylene. Journal of Chemical Physics, 2001, 115, 2827-2830.	1.2	18
90	Immiscibility of poly(ethylene) and poly(propylene): A molecular dynamics study. Macromolecules, 1995, 28, 8247-8250.	2.2	29