Vitaly V Chaban

List of Publications by Year
in descending order

81	2,582	172457	206112
papers	citations	29 h-index	48 g-index

81	81	81	2679
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mutual miscibility of diethyl sulfoxide and acetonitrile: Fundamental origin. Journal of Molecular Liquids, 2022, 349, 118110.	4.9	9
2	Triethylsulfonium-based ionic liquids enforce lithium salt electrolytes. Physical Chemistry Chemical Physics, 2022, 24, 9418-9431.	2.8	7
3	Ammonium-, phosphonium- and sulfonium-based 2-cyanopyrrolidine ionic liquids for carbon dioxide fixation. Physical Chemistry Chemical Physics, 2022, 24, 9659-9672.	2.8	11
4	Diethyl sulfoxide as a novel neutral ligand in the platinum complex compound. Computational and Theoretical Chemistry, 2022, 1211, 113683.	2.5	7
5	Mixtures of Diethyl Sulfoxide and Methanol: Structure and Thermodynamics. Journal of Solution Chemistry, 2022, 51, 788-801.	1.2	6
6	Carbon Dioxide Chemisorption by Ammonium and Phosphonium Ionic Liquids: Quantum Chemistry Calculations. Journal of Physical Chemistry B, 2022, 126, 5497-5506.	2.6	10
7	Performance of supported metal catalysts in the dimethyl carbonate production by direct synthesis using CO2 and methanol. Journal of CO2 Utilization, 2021, 53, 101721.	6.8	14
8	DEVELOPMENT OF INEXPENSIVE CELLULOSE-BASED SORBENTS FOR CARBON DIOXIDE. Brazilian Journal of Chemical Engineering, 2019, 36, 511-521.	1.3	15
9	Transport Properties and Ion Aggregation in Mixtures of Room Temperature Ionic Liquids with Aprotic Dipolar Solvents. Springer Proceedings in Physics, 2018, , 67-109.	0.2	6
10	Cellulose based poly(ionic liquids): Tuning cation-anion interaction to improve carbon dioxide sorption. Fuel, 2018, 211, 76-86.	6.4	54
11	Electronic and thermodynamic properties of the amino- and carboxamido-functionalized C-60-based fullerenes: Towards non-volatile carbon dioxide scavengers. Journal of Chemical Thermodynamics, 2018, 116, 1-6.	2.0	15
12	Graphene/ionic liquid ultracapacitors: does ionic size correlate with energy storage performance?. New Journal of Chemistry, 2018, 42, 18409-18417.	2.8	26
13	Binary mixtures of novel sulfoxides and water: intermolecular structure, dynamic properties, thermodynamics, and cluster analysis. Physical Chemistry Chemical Physics, 2018, 20, 23754-23761.	2.8	20
14	Understanding weakly coordinating anions: tetrakis(pentafluorophenyl)borate paired with inorganic and organic cations. Journal of Molecular Modeling, 2017, 23, 86.	1.8	9
15	Ionic liquids composed of linear amphiphilic anions: Synthesis, physicochemical characterization, hydrophilicity and interaction with carbon dioxide. Journal of Molecular Liquids, 2017, 241, 64-73.	4.9	29
16	Exfoliation of Graphene in Ionic Liquids: Pyridinium versus Pyrrolidinium. Journal of Physical Chemistry C, 2017, 121, 911-917.	3.1	30
17	Structure, thermodynamic and electronic properties of carbon-nitrogen cubanes and protonated polynitrogen cations. Journal of Molecular Structure, 2017, 1149, 828-834.	3.6	9
18	A Weakly Coordinating Anion Substantially Enhances Carbon Dioxide Fixation by Calcium and Barium Salts. Energy & Fuels, 2017, 31, 9668-9674.	5.1	9

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19	Epoxy resinâ€cement paste composite for wellbores: Evaluation of chemical degradation fostered carbon dioxide. , 2017, 7, 1065-1079.		8
20	Sodium-ion electrolytes based on ionic liquids: a role of cation-anion hydrogen bonding. Journal of Molecular Modeling, 2016, 22, 172.	1.8	8
21	Electrostatic charge confinement using bulky tetraoctylammonium cation and four anions. Chemical Physics Letters, 2016, 649, 44-47.	2.6	11
22	Vaporâ€“liquid equilibria in the binary mixtures of N-butylpyridinium hexafluorophophate and bis(trifluoromethanesulfonyl)imide ionic liquids with acetone: Molecular dynamics simulations. Fluid Phase Equilibria, 2016, 419, 75-83.	2.5	4
23	Anticorrosion Protection by Amineâ€“Ionic Liquid Mixtures: Experiments and Simulations. Journal of Chemical & Engineering Data, 2016, 61, 1803-1810.	1.9	35
24	Amination of Five Families of Room-Temperature Ionic Liquids: Computational Thermodynamics and Vibrational Spectroscopy. Journal of Chemical & Engineering Data, 2016, 61, 1917-1923.	1.9	11
25	CO2 capture: Tuning cation-anion interaction in urethane based poly(ionic liquids). Polymer, 2016, 102, 199-208.	3.8	38
26	Boron doping of grapheneâ€“pushing the limit. Nanoscale, 2016, 8, 15521-15528.	5.6	31
27	Amino-functionalized ionic liquids as carbon dioxide scavengers. Ab initio thermodynamics for chemisorption. Journal of Chemical Thermodynamics, 2016, 103, 1-6.	2.0	13
28	Vapor-liquid interface properties of diethyl sulfoxide-water and ethyl methyl sulfoxide-water mixtures: Molecular dynamics simulations and quantum-chemical calculations. Fluid Phase Equilibria, 2016, 427, 180-186.	2.5	6
29	Peculiar Aqueous Solubility Trend in Cucurbiturils Unraveled by Atomistic Simulations. Journal of Physical Chemistry B, 2016, 120, 7511-7516.	2.6	11
30	Protein remains stable at unusually high temperatures when solvated in aqueous mixtures of amino acid based ionic liquids. Journal of Molecular Modeling, 2016, 22, 258.	1.8	14
31	Energy Storage in Cubane Derivatives and Their Real-Time Decomposition: Computational Molecular Dynamics and Thermodynamics. ACS Energy Letters, 2016, 1, 189-194.	17.4	21
32	Solvation of the morpholinium cation in acetonitrile. Effect of an anion. Journal of Molecular Modeling, 2016, 22, 26.	1.8	4
33	New cellulose based ionic compounds as low-cost sorbents for CO2 capture. Fuel Processing Technology, 2016, 149, 131-138.	7.2	39
34	Halogenation of imidazolium-based ionic liquids: Thermodynamic perspective. Journal of Chemical Thermodynamics, 2016, 98, 81-85.	2.0	2
35	Force field development and simulations of senior dialkyl sulfoxides. Physical Chemistry Chemical Physics, 2016, 18, 10507-10515.	2.8	19
36	Ionization of cucurbiturils as a pathway to more stable hostâ€“guest complexes. Computational and Theoretical Chemistry, 2016, 1083, 7-11.	2.5	4

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37	Enhanced stability of the model miniâ€protein in amino acid ionic liquids and their aqueous solutions. Journal of Computational Chemistry, 2015, 36, 2044-2051.	3.3	35
38	The force field for imidazolium-based ionic liquids: Novel anions with polar residues. Chemical Physics Letters, 2015, 633, 132-138.	2.6	13
39	Competitive solvation of the imidazolium cation by water and methanol. Chemical Physics Letters, 2015, 623, 76-81.	2.6	31
40	Ionic Clusters vs Shear Viscosity in Aqueous Amino Acid Ionic Liquids. Journal of Physical Chemistry B, 2015, 119, 3824-3828.	2.6	23
41	Global minimum search via annealing: Nanoscale gold clusters. Chemical Physics Letters, 2015, 622, 75-79.	2.6	21
42	Selective chemical binding enhances cesium tolerance in plants through inhibition of cesium uptake. Scientific Reports, 2015, 5, 8842.	3.3	27
43	Are Fluorination and Chlorination of Morpholinium-Based Ionic Liquids Favorable?. Journal of Physical Chemistry B, 2015, 119, 9920-9924.	2.6	9
44	Rationalizing the role of the anion in CO₂ capture and conversion using imidazolium-based ionic liquid modified mesoporous silica. RSC Advances, 2015, 5, 64220-64227.	3.6	53
45	Hydrogen fluoride capture by imidazolium acetate ionic liquid. Chemical Physics Letters, 2015, 625, 110-115.	2.6	24
46	Systematic Refinement of Canongia Lopesâ€“PÃ¡dua Force Field for Pyrrolidinium-Based Ionic Liquids. Journal of Physical Chemistry B, 2015, 119, 6242-6249.	2.6	55
47	Synergistic Amination of Graphene: Molecular Dynamics and Thermodynamics. Journal of Physical Chemistry Letters, 2015, 6, 4397-4403.	4.6	23
48	Solvation of the fluorine containing anions and their lithium salts in propylene carbonate and dimethoxyethane. Journal of Molecular Modeling, 2015, 21, 172.	1.8	28
49	Nitrogenâ€“Nitrogen Bonds Undermine Stability of N-Doped Graphene. Journal of the American Chemical Society, 2015, 137, 11688-11694.	13.7	49
50	Graphene exfoliation in ionic liquids: unified methodology. RSC Advances, 2015, 5, 81229-81234.	3.6	26
51	The tricyanomethanide anion favors low viscosity of the pure ionic liquid and its aqueous mixtures. Physical Chemistry Chemical Physics, 2015, 17, 31839-31849.	2.8	24
52	Annealing relaxation of ultrasmall gold nanostructures. Chemical Physics Letters, 2015, 618, 46-50.	2.6	17
53	The thiocyanate anion is a primary driver of carbon dioxide capture by ionic liquids. Chemical Physics Letters, 2015, 618, 89-93.	2.6	28
54	Polarization versus Temperature in Pyridinium Ionic Liquids. Journal of Physical Chemistry B, 2014, 118, 13940-13945.	2.6	13

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55	Computationally Efficient Prediction of Ionic Liquid Properties. Journal of Physical Chemistry Letters, 2014, 5, 1973-1977.	4.6	16
56	Imidazolium Ionic Liquid Helps to Disperse Fullerenes in Water. Journal of Physical Chemistry Letters, 2014, 5, 1795-1800.	4.6	38
57	Water Phase Diagram Is Significantly Altered by Imidazolium Ionic Liquid. Journal of Physical Chemistry Letters, 2014, 5, 1623-1627.	4.6	11
58	The scaled-charge additive force field for amino acid based ionic liquids. Chemical Physics Letters, 2014, 616-617, 205-211.	2.6	41
59	A Highly Viscous Imidazolium Ionic Liquid inside Carbon Nanotubes. Journal of Physical Chemistry B, 2014, 118, 6234-6240.	2.6	50
60	Atomistic Force Field for Pyridinium-Based Ionic Liquids: Reliable Transport Properties. Journal of Physical Chemistry B, 2014, 118, 10716-10724.	2.6	50
61	Lipid Structure in Triolein Lipid Droplets. Journal of Physical Chemistry B, 2014, 118, 10335-10340.	2.6	22
62	Nanoscale Carbon Greatly Enhances Mobility of a Highly Viscous Ionic Liquid. ACS Nano, 2014, 8, 8190-8197.	14.6	65
63	Competitive solvation of (bis)(trifluoromethanesulfonyl)imide anion by acetonitrile and water. Chemical Physics Letters, 2014, 613, 90-94.	2.6	27
64	Does the Like Dissolves Like Rule Hold for Fullerene and Ionic Liquids?. Journal of Solution Chemistry, 2014, 43, 1019-1031.	1.2	40
65	Distribution of Neutral Lipids in the Lipid Droplet Core. Journal of Physical Chemistry B, 2014, 118, 11145-11151.	2.6	24
66	Structure and Supersaturation of Highly Concentrated Solutions of Buckyball in 1-Butyl-3-Methylimidazolium Tetrafluoroborate. Journal of Physical Chemistry B, 2014, 118, 7376-7382.	2.6	12
67	Novel Ultrathin Membranes Composed of Organic Ions. Journal of Physical Chemistry Letters, 2013, 4, 1216-1220.	4.6	13
68	Conductometric study of binary systems based on ionic liquids and acetonitrile in a wide concentration range. Electrochimica Acta, 2013, 105, 188-199.	5.2	77
69	Covalent Linking Greatly Enhances Photoinduced Electron Transfer in Fullerene-Quantum Dot Nanocomposites: Time-Domain Ab Initio Study. Journal of Physical Chemistry Letters, 2013, 4, 1-6.	4.6	90
70	Ionic and Molecular Liquids: Working Together for Robust Engineering. Journal of Physical Chemistry Letters, 2013, 4, 1423-1431.	4.6	103
71	Acetonitrile Boosts Conductivity of Imidazolium Ionic Liquids. Journal of Physical Chemistry B, 2012, 116, 7719-7727.	2.6	136
72	Ionic Vapor: What Does It Consist Of?. Journal of Physical Chemistry Letters, 2012, 3, 1657-1662.	4.6	32

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73	Confinement by Carbon Nanotubes Drastically Alters the Boiling and Critical Behavior of Water Droplets. ACS Nano, 2012, 6, 2766-2773.	14.6	59
74	A new model of chemical bonding in ionic melts. Journal of Chemical Physics, 2012, 136, 164112.	3.0	8
75	Polarizability versus mobility: atomistic force field for ionic liquids. Physical Chemistry Chemical Physics, 2011, 13, 16055.	2.8	149
76	How Toxic Are Ionic Liquid/Acetonitrile Mixtures?. Journal of Physical Chemistry Letters, 2011, 2, 2499-2503.	4.6	45
77	A new force field model of 1-butyl-3-methylimidazolium tetrafluoroborate ionic liquid and acetonitrile mixtures. Physical Chemistry Chemical Physics, 2011, 13, 19345.	2.8	57
78	A new force field model for the simulation of transport properties of imidazolium-based ionic liquids. Physical Chemistry Chemical Physics, 2011, 13, 7910.	2.8	168
79	Water Boiling Inside Carbon Nanotubes: Toward Efficient Drug Release. ACS Nano, 2011, 5, 5647-5655.	14.6	108
80	Heat-Driven Release of a Drug Molecule from Carbon Nanotubes: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2010, 114, 13481-13486.	2.6	70
81	The Phenomenological Account for Electronic Polarization in Ionic Liquid. ECS Transactions, 2010, 33, 43-55.	0.5	7