

# Bo Li

## List of Publications by Year in descending order

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48  
papers

1,238  
citations

430754

18  
h-index

360920

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g-index

49  
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49  
docs citations

49  
times ranked

572  
citing authors

#	ARTICLE	IF	CITATIONS
1	Passing from Discrete to Continuum Models of Electrostatic Energy. <i>SIAM Journal on Mathematical Analysis</i> , 2021, 53, 4568-4604.	0.9	0
2	Coupling Monte Carlo, Variational Implicit Solvation, and Binary Level-Set for Simulations of Biomolecular Binding. <i>Journal of Chemical Theory and Computation</i> , 2021, 17, 2465-2478.	2.3	6
3	Prediction of multiple dry-wet transition pathways with a mesoscale variational approach. <i>Journal of Chemical Physics</i> , 2021, 155, 124110.	1.2	0
4	The Calculus of Boundary Variations and the Dielectric Boundary Force in the Poisson-Boltzmann Theory for Molecular Solvation. <i>Journal of Nonlinear Science</i> , 2021, 31, 1.	1.0	2
5	A Generalized Rayleigh-Plesset Equation for Ions with Solvent Fluctuations. <i>SIAM Journal on Applied Mathematics</i> , 2021, 81, 1098-1115.	0.8	0
6	Minimizers for the Cahn-Hilliard Energy Functional under Strong Anchoring Conditions. <i>SIAM Journal on Applied Mathematics</i> , 2020, 80, 2299-2317.	0.8	1
7	Variational implicit-solvent predictions of the dry-wet transition pathways for ligand-receptor binding and unbinding kinetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 14989-14994.	3.3	12
8	Convergence of Phase-Field Free Energy and Boundary Force for Molecular Solvation. <i>Archive for Rational Mechanics and Analysis</i> , 2018, 227, 105-147.	1.1	14
9	Legendre Transforms of Electrostatic Free-Energy Functionals. <i>SIAM Journal on Applied Mathematics</i> , 2018, 78, 2973-2995.	0.8	2
10	Numerical methods for solvent Stokes flow and solute-solvent interfacial dynamics of charged molecules. <i>Journal of Computational Physics</i> , 2018, 374, 533-549.	1.9	1
11	Tailoring the Variational Implicit Solvent Method for New Challenges: Biomolecular Recognition and Assembly. <i>Frontiers in Molecular Biosciences</i> , 2018, 5, 13.	1.6	6
12	Re-Martinizing the Variational Implicit Solvent Method (VISM): Solvation Free Energy for Coarse-Grained Proteins. <i>Journal of Physical Chemistry B</i> , 2017, 121, 6538-6548.	1.2	10
13	Hybrid Monte Carlo and continuum modeling of electrolytes with concentration-induced dielectric variations. <i>Physical Review E</i> , 2016, 94, 053312.	0.8	8
14	Stochastic level-set variational implicit-solvent approach to solute-solvent interfacial fluctuations. <i>Journal of Chemical Physics</i> , 2016, 145, 054114.	1.2	10
15	Numerical Treatment of Stokes Solvent Flow and Solute-Solvent Interfacial Dynamics for Nonpolar Molecules. <i>Journal of Scientific Computing</i> , 2016, 67, 705-723.	1.1	2
16	Mean-field theory and computation of electrostatics with ionic concentration dependent dielectrics. <i>Communications in Mathematical Sciences</i> , 2016, 14, 249-271.	0.5	15
17	A self-consistent phase-field approach to implicit solvation of charged molecules with Poisson-Boltzmann electrostatics. <i>Journal of Chemical Physics</i> , 2015, 143, 243110.	1.2	8
18	Stability of a Cylindrical Solute-Solvent Interface: Effect of Geometry, Electrostatics, and Hydrodynamics. <i>SIAM Journal on Applied Mathematics</i> , 2015, 75, 907-928.	0.8	8

#	ARTICLE	IF	CITATIONS
19	LS-VISM: A software package for analysis of biomolecular solvation. <i>Journal of Computational Chemistry</i> , 2015, 36, 1047-1059.	1.5	18
20	Diffused Solute-Solvent Interface with Poisson–Boltzmann Electrostatics: Free-Energy Variation and Sharp-Interface Limit. <i>SIAM Journal on Applied Mathematics</i> , 2015, 75, 2072-2092.	0.8	9
21	Analysis of coupled reaction–diffusion equations for RNA interactions. <i>Journal of Mathematical Analysis and Applications</i> , 2015, 425, 212-233.	0.5	5
22	Variational Implicit Solvation with Poisson–Boltzmann Theory. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 1454-1467.	2.3	45
23	Heterogeneous Hydration of p53/MDM2 Complex. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 1302-1313.	2.3	22
24	Variational Implicit-Solvent Modeling of Host–Guest Binding: A Case Study on Cucurbit[7]uril . <i>Journal of Chemical Theory and Computation</i> , 2013, 9, 4195-4204.	2.3	12
25	Motion of a Cylindrical Dielectric Boundary. <i>SIAM Journal on Applied Mathematics</i> , 2013, 73, 594-616.	0.8	10
26	Variational Implicit Solvation with Solute Molecular Mechanics: From Diffuse-Interface to Sharp-Interface Models. <i>SIAM Journal on Applied Mathematics</i> , 2013, 73, 1-23.	0.8	13
27	Evaluation of Hydration Free Energy by Level-Set Variational Implicit-Solvent Model with Coulomb-Field Approximation. <i>Journal of Chemical Theory and Computation</i> , 2013, 9, 1778-1787.	2.3	27
28	Ionic size effects: generalized Boltzmann distributions, counterion stratification and modified Debye length. <i>Nonlinearity</i> , 2013, 26, 2899-2922.	0.6	32
29	Phase-field approach to implicit solvation of biomolecules with Coulomb-field approximation. <i>Journal of Chemical Physics</i> , 2013, 139, 024111.	1.2	15
30	Competitive adsorption and ordered packing of counterions near highly charged surfaces: From mean-field theory to Monte Carlo simulations. <i>Physical Review E</i> , 2012, 85, 041406.	0.8	22
31	Level-Set Variational Implicit-Solvent Modeling of Biomolecules with the Coulomb-Field Approximation. <i>Journal of Chemical Theory and Computation</i> , 2012, 8, 386-397.	2.3	33
32	Dielectric Boundary Force in Molecular Solvation with the Poisson–Boltzmann Free Energy: A Shape Derivative Approach. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 2093-2111.	0.8	45
33	An Interface-Fitted Finite Element Level Set Method with Application to Solidification and Solvation. <i>Communications in Computational Physics</i> , 2011, 10, 32-56.	0.7	11
34	Mean-field description of ionic size effects with nonuniform ionic sizes: A numerical approach. <i>Physical Review E</i> , 2011, 84, 021901.	0.8	87
35	Yukawa-field approximation of electrostatic free energy and dielectric boundary force. <i>Nonlinearity</i> , 2011, 24, 3215-3236.	0.6	17
36	Level-set minimization of potential controlled Hadwiger valuations for molecular solvation. <i>Journal of Computational Physics</i> , 2010, 229, 8497-8510.	1.9	20

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37	Interfaces and hydrophobic interactions in receptor-ligand systems: A level-set variational implicit solvent approach. <i>Journal of Chemical Physics</i> , 2009, 131, 144102.	1.2	40
38	Continuum electrostatics for ionic solutions with non-uniform ionic sizes. <i>Nonlinearity</i> , 2009, 22, 811-833.	0.6	91
39	Coupling the Level-Set Method with Molecular Mechanics for Variational Implicit Solvation of Nonpolar Molecules. <i>Journal of Chemical Theory and Computation</i> , 2009, 5, 257-266.	2.3	44
40	Minimization of Electrostatic Free Energy and the Poisson-Boltzmann Equation for Molecular Solvation with Implicit Solvent. <i>SIAM Journal on Mathematical Analysis</i> , 2009, 40, 2536-2566.	0.9	83
41	Immersed-Interface Finite-Element Methods for Elliptic Interface Problems with Nonhomogeneous Jump Conditions. <i>SIAM Journal on Numerical Analysis</i> , 2008, 46, 472-495.	1.1	165
42	Electrostatic Free Energy and Its Variations in Implicit Solvent Models. <i>Journal of Physical Chemistry B</i> , 2008, 112, 3058-3069.	1.2	84
43	Application of the level-set method to the implicit solvation of nonpolar molecules. <i>Journal of Chemical Physics</i> , 2007, 127, 084503.	1.2	81
44	Variational Properties of Unbounded Order Parameters. <i>SIAM Journal on Mathematical Analysis</i> , 2006, 38, 16-36.	0.9	3
45	High-order surface relaxation versus the Ehrlich-Schwoebel effect. <i>Nonlinearity</i> , 2006, 19, 2581-2603.	0.6	15
46	Epitaxial Growth Without Slope Selection: Energetics, Coarsening, and Dynamic Scaling. <i>Journal of Nonlinear Science</i> , 2004, 14, 429-451.	1.0	47
47	Stability of a circular epitaxial island. <i>Physica D: Nonlinear Phenomena</i> , 2004, 198, 231-247.	1.3	8
48	Analysis of Island Dynamics in Epitaxial Growth of Thin Films. <i>Multiscale Modeling and Simulation</i> , 2003, 1, 150-171.	0.6	26