

Irina A Shkel

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

21
papers

393
citations

12
h-index

19
g-index

22
ext. papers

501
ext. citations

6.2
avg, IF

3.4
L-index

#	Paper	IF	Citations
21	How Glutamate Promotes Liquid-liquid Phase Separation and DNA Binding Cooperativity of E. coli SSB Protein.. <i>Journal of Molecular Biology</i> , 2022 , 167562	6.5	2
20	Temperature effects on RNA polymerase initiation kinetics reveal which open complex initiates and that bubble collapse is stepwise. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	4
19	Fluorescence-Detected Conformational Changes in Duplex DNA in Open Complex Formation by RNA Polymerase: Upstream Wrapping and Downstream Bending Precede Clamp Opening and Insertion of the Downstream Duplex. <i>Biochemistry</i> , 2020 , 59, 1565-1581	3.2	8
18	Experimentally determined strengths of favorable and unfavorable interactions of amide atoms involved in protein self-assembly in water. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 27339-27345	11.5	4
17	RNA Polymerase: Step-by-Step Kinetics and Mechanism of Transcription Initiation. <i>Biochemistry</i> , 2019 , 58, 2339-2352	3.2	9
16	Quantifying Interactions of Nucleobase Atoms with Model Compounds for the Peptide Backbone and Glutamine and Asparagine Side Chains in Water. <i>Biochemistry</i> , 2018 , 57, 2227-2237	3.2	2
15	Mechanism of transcription initiation and promoter escape by . RNA polymerase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E3032-E3040	11.5	46
14	The mechanism and high-free-energy transition state of lac repressor-lac operator interaction. <i>Nucleic Acids Research</i> , 2017 , 45, 12671-12680	20.1	5
13	Experimental Atom-by-Atom Dissection of Amide-Amide and Amide-Hydrocarbon Interactions in HO. <i>Journal of the American Chemical Society</i> , 2017 , 139, 9885-9894	16.4	13
12	Basis of Protein Stabilization by K Glutamate: Unfavorable Interactions with Carbon, Oxygen Groups. <i>Biophysical Journal</i> , 2016 , 111, 1854-1865	2.9	25
11	Contributions of Coulombic and Hofmeister Effects to the Osmotic Activation of Escherichia coli Transporter ProP. <i>Biochemistry</i> , 2016 , 55, 1301-13	3.2	16
10	Positioning the Intracellular Salt Potassium Glutamate in the Hofmeister Series by Chemical Unfolding Studies of NTL9. <i>Biochemistry</i> , 2016 , 55, 2251-9	3.2	17
9	Separating chemical and excluded volume interactions of polyethylene glycols with native proteins: Comparison with PEG effects on DNA helix formation. <i>Biopolymers</i> , 2015 , 103, 517-27	2.2	33
8	Chemical Interactions of Polyethylene Glycols (PEGs) and Glycerol with Protein Functional Groups: Applications to Effects of PEG and Glycerol on Protein Processes. <i>Biochemistry</i> , 2015 , 54, 3528-42	3.2	68
7	Probing the protein-folding mechanism using denaturant and temperature effects on rate constants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 16784-9	11.5	26
6	Coulombic free energy and salt ion association per phosphate of all-atom models of DNA oligomer: dependence on oligomer size. <i>Soft Matter</i> , 2012 , 8, 9345-9355	3.6	9
5	Nonspecific DNA binding and bending by HU interfaces of the three binding modes characterized by salt-dependent thermodynamics. <i>Journal of Molecular Biology</i> , 2011 , 410, 241-67	6.5	15

4	Coulombic free energy of polymeric nucleic acid: low- and high-salt analytical approximations for the cylindrical Poisson-Boltzmann model. <i>Journal of Physical Chemistry B</i> , 2010 , 114, 10793-803	3-4	4
3	Interactions of cationic ligands and proteins with small nucleic acids: analytic treatment of the large coulombic end effect on binding free energy as a function of salt concentration. <i>Biochemistry</i> , 2006 , 45, 8411-26	3-2	14
2	Effect of the number of nucleic acid oligomer charges on the salt dependence of stability (ΔG_{37}) and melting temperature (T_m): NLPB analysis of experimental data. <i>Biochemistry</i> , 2004 , 43, 7090-101	3-2	37
1	Complete Asymptotic Solution of Cylindrical and Spherical Poisson-Boltzmann Equations at Experimental Salt Concentrations. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 5161-5170	3-4	35