# Irina A Shkel

List of Publications by Year
in descending order



| 21 | 584 | 623574 | 713332 |
|---|---|---|---|
| papers | citations | 14 h-index | 21 g-index |

| 22 | 22 | 22 | 583 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Chemical Interactions of Polyethylene Glycols (PEGs) and Glycerol with Protein Functional Groups: Applications to Effects of PEG and Glycerol on Protein Processes. Biochemistry, 2015, 54, 3528-3542. | 1.2 | 93 |
| 2 | Mechanism of transcription initiation and promoter escape by E . coli RNA polymerase. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E3032-E3040. | 3.3 | 72 |
| 3 | Separating chemical and excluded volume interactions of polyethylene glycols with native proteins: Comparison with PEG effects on DNA helix formation. Biopolymers, 2015, 103, 517-527. | 1.2 | 44 |
| 4 | Effect of the Number of Nucleic Acid Oligomer Charges on the Salt Dependence of Stability (Î” ) and Melting Temperature (Tm):Â NLPB Analysis of Experimental Dataâ€. Biochemistry, 2004, 43, 7090-7101. | 1.2 | 40 |
| 5 | Complete Asymptotic Solution of Cylindrical and Spherical Poissonâ^'Boltzmann Equations at Experimental Salt Concentrations. Journal of Physical Chemistry B, 2000, 104, 5161-5170. | 1.2 | 38 |
| 6 | Probing the protein-folding mechanism using denaturant and temperature effects on rate constants. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16784-16789. | 3.3 | 38 |
| 7 | Basis of Protein Stabilization by K Glutamate: Unfavorable Interactions with Carbon, Oxygen Groups. Biophysical Journal, 2016, 111, 1854-1865. | 0.2 | 35 |
| 8 | How Glutamate Promotes Liquid-liquid Phase Separation and DNA Binding Cooperativity of E. coli SSB Protein. Journal of Molecular Biology, 2022, 434, 167562. | 2.0 | 25 |
| 9 | Positioning the Intracellular Salt Potassium Glutamate in the Hofmeister Series by Chemical Unfolding Studies of NTL9. Biochemistry, 2016, 55, 2251-2259. | 1.2 | 23 |
| 10 | Experimental Atom-by-Atom Dissection of Amideâ€“Amide and Amideâ€“Hydrocarbon Interactions in H<sub>2</sub>O. Journal of the American Chemical Society, 2017, 139, 9885-9894. | 6.6 | 21 |
| 11 | Contributions of Coulombic and Hofmeister Effects to the Osmotic Activation of Escherichia coli Transporter ProP. Biochemistry, 2016, 55, 1301-1313. | 1.2 | 20 |
| 12 | Nonspecific DNA Binding and Bending by HUÎ±Î²: Interfaces of the Three Binding Modes Characterized by Salt-Dependent Thermodynamics. Journal of Molecular Biology, 2011, 410, 241-267. | 2.0 | 19 |
| 13 | RNA Polymerase: Step-by-Step Kinetics and Mechanism of Transcription Initiation. Biochemistry, 2019, 58, 2339-2352. | 1.2 | 18 |
| 14 | Fluorescence-Detected Conformational Changes in Duplex DNA in Open Complex Formation by Escherichia coli RNA Polymerase: Upstream Wrapping and Downstream Bending Precede Clamp Opening and Insertion of the Downstream Duplex. Biochemistry, 2020, 59, 1565-1581. | 1.2 | 18 |
| 15 | Interactions of Cationic Ligands and Proteins with Small Nucleic Acids:â€‰ Analytic Treatment of the Large Coulombic End Effect on Binding Free Energy as a Function of Salt Concentration. Biochemistry, 2006, 45, 8411-8426. | 1.2 | 17 |
| 16 | Temperature effects on RNA polymerase initiation kinetics reveal which open complex initiates and that bubble collapse is stepwise. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 15 |
| 17 | Experimentally determined strengths of favorable and unfavorable interactions of amide atoms involved in protein self-assembly in water. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27339-27345. | 3.3 | 14 |
| 18 | Coulombic free energy and salt ion association per phosphate of all-atom models of DNA oligomer: dependence on oligomer size. Soft Matter, 2012, 8, 9345. | 1.2 | 10 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | The mechanism and high-free-energy transition state of lac repressorâ€“lac operator interaction. Nucleic Acids Research, 2017, 45, 12671-12680. | 6.5 | 9 |
| 20 | Coulombic Free Energy of Polymeric Nucleic Acid: Low- and High-Salt Analytical Approximations for the Cylindrical Poissonâ’Boltzmann Model. Journal of Physical Chemistry B, 2010, 114, 10793-10803. | 1.2 | 6 |
| 21 | Quantifying Interactions of Nucleobase Atoms with Model Compounds for the Peptide Backbone and Glutamine and Asparagine Side Chains in Water. Biochemistry, 2018, 57, 2227-2237. | 1.2 | 6 |