Ionel Popa

List of Publications by Year
in descending order

53 papers	1,828 citations	257101 24 h-index	288905 40 g-index
58 all docs	58 docs citations	58 times ranked	1846 citing authors

#	Article	IF	Citations
1	Work Done by Titin Protein Folding Assists Muscle Contraction. Cell Reports, 2016, 14, 1339-1347.	2.9	147
2	Dynamics of Equilibrium Folding and Unfolding Transitions of Titin Immunoglobulin Domain under Constant Forces. Journal of the American Chemical Society, 2015, 137, 3540-3546.	6.6	135
3	Attractive and Repulsive Electrostatic Forces between Positively Charged Latex Particles in the Presence of Anionic Linear Polyelectrolytes. Journal of Physical Chemistry B, 2010, 114, 3170-3177.	1.2	130
4	A HaloTag Anchored Ruler for Week-Long Studies of Protein Dynamics. Journal of the American Chemical Society, 2016, 138, 10546-10553.	6.6	121
5	Nanomechanics of HaloTag Tethers. Journal of the American Chemical Society, 2013, 135, 12762-12771.	6.6	108
6	Force dependency of biochemical reactions measured by single-molecule force-clamp spectroscopy. Nature Protocols, 2013, 8, 1261-1276.	5.5	101
7	Importance of Charge Regulation in Attractive Double-Layer Forces between Dissimilar Surfaces. Physical Review Letters, 2010, 104, 228301.	2.9	89
8	Investigating forces between charged particles in the presence of oppositely charged polyelectrolytes with the multi-particle colloidal probe technique. Advances in Colloid and Interface Science, 2012, 179-182, 85-98.	7.0	79
9	Thin adsorbed films of a strong cationic polyelectrolyte on silica substrates. Journal of Colloid and Interface Science, 2007, 309, 28-35.	5.0	66
10	Attractive Electrostatic Forces between Identical Colloidal Particles Induced by Adsorbed Polyelectrolytes. Journal of Physical Chemistry B, 2009, 113, 8458-8461.	1.2	63
11	Rate limit of protein elastic response is tether dependent. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14416-14421.	3.3	59
12	Chemical unfolding of protein domains induces shape change in programmed protein hydrogels. Nature Communications, 2019, 10, 5439.	5.8	58
13	Direct Quantification of the Attempt Frequency Determining the Mechanical Unfolding of Ubiquitin Protein. Journal of Biological Chemistry, 2011, 286, 31072-31079.	1.6	52
14	Charge regulation effects on electrostatic patch-charge attraction induced by adsorbed dendrimers. Physical Chemistry Chemical Physics, 2010, 12, 4863.	1.3	49
15	A general method to quantify ligand-driven oligomerization from fluorescence-based images. Nature Methods, 2019, 16, 493-496.	9.0	47
16	Cation-induced shape programming and morphing in protein-based hydrogels. Science Advances, 2020, 6, eaba6112.	4.7	45
17	Mechanical Deformation Accelerates Protein Ageing. Angewandte Chemie - International Edition, 2017, 56, 9741-9746.	7.2	44
18	Adsorption of poly(l-lysine) on silica probed by optical reflectometry. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 360, 20-25.	2.3	43

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19	Charge Reversal of Sulfate Latex Particles by Adsorbed Linear Poly(ethylene imine) Probed by Multiparticle Colloidal Probe Technique. Journal of Physical Chemistry B, 2011, 115, 9098-9105.	1.2	37
20	Multidomain proteins under force. Nanotechnology, 2017, 28, 174003.	1.3	34
21	Large Mechanical Response of Single Dendronized Polymers Induced by Ionic Strength. Angewandte Chemie - International Edition, 2010, 49, 4250-4253.	7.2	31
22	Binding-Induced Stabilization Measured on the Same Molecular Protein Substrate Using Single-Molecule Magnetic Tweezers and Heterocovalent Attachments. Journal of Physical Chemistry B, 2020, 124, 3283-3290.	1.2	31
23	Study of Biomechanical Properties of Protein-Based Hydrogels Using Force-Clamp Rheometry. Macromolecules, 2018, 51, 1441-1452.	2.2	29
24	Long-Ranged Attractive Forces Induced by Adsorbed Dendrimers: Direct Force Measurements and Computer Simulations. Langmuir, 2009, 25, 12435-12438.	1.6	27
25	The elastic free energy of a tandem modular protein under force. Biochemical and Biophysical Research Communications, 2015, 460, 434-438.	1.0	27
26	Modeling Protein-Based Hydrogels under Force. Physical Review Letters, 2018, 121, 168101.	2.9	27
27	Proteins Breaking Bad: A Free Energy Perspective. Journal of Physical Chemistry Letters, 2017, 8, 3642-3647.	2.1	22
28	Conformational Changes of Polyamidoamine (PAMAM) Dendrimers Adsorbed on Silica Substrates. Macromolecules, 2011, 44, 5069-5071.	2.2	19
29	Does protein unfolding play a functional role <i>in vivo</i>?. FEBS Journal, 2021, 288, 1742-1758.	2.2	14
30	Mechanical regulation of talin through binding and history-dependent unfolding. Science Advances, 2022, 8, .	4.7	13
31	Effective Charge of Adsorbed Poly(amido amine) Dendrimers: Transition from Heterogeneous to Homogeneous Charge Distribution. Macromolecules, 2010, 43, 1129-1136.	2.2	12
32	A Novel Strategy for Utilizing Voice Coil Servoactuators in Tensile Tests of Low Volume Protein Hydrogels. Macromolecular Materials and Engineering, 2015, 300, 369-376.	1.7	11
33	Comparative photophysical properties of some widely used fluorescent proteins under two-photon excitation conditions. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 262, 120133.	2.0	10
34	Mechanobiology: protein refolding under force. Emerging Topics in Life Sciences, 2018, 2, 687-699.	1.1	8
35	The extracellular matrixâ€"myosin pathway in mechanotransduction: from molecule to tissue. Emerging Topics in Life Sciences, 2018, 2, 727-737.	1.1	8
36	Force-Clamp Rheometry for Characterizing Protein-based Hydrogels. Journal of Visualized Experiments, 2018, , .	0.2	7

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37	Mechanical Deformation Accelerates Protein Ageing. Angewandte Chemie, 2017, 129, 9873-9878.	1.6	5
38	Kinetic Method of Producing Pores Inside Protein-Based Biomaterials without Compromising Their Structural Integrity. ACS Biomaterials Science and Engineering, 2022, 8, 1132-1142.	2.6	4
39	Adsorption and Self-Organization of Dendrimers at Waterâ€“Solid Interfaces. Chimia, 2009, 63, 279.	0.3	3
40	The Science of Stretching: Mechanical Anisotropy in Titin Ig Domains. Biophysical Journal, 2016, 110, 393a.	0.2	3
41	Exploring Forces between Individual Colloidal Particles with the Atomic Force Microscope. Chimia, 2012, 66, 214.	0.3	2
42	Nonexponential kinetics captured in sequential unfolding of polyproteins over a range of loads. Current Research in Structural Biology, 2022, 4, 106-117.	1.1	2
43	Using Magnets and Flexible 3D-Printed Structures to Illustrate Protein (Un)folding. Journal of Chemical Education, 2022, 99, 3074-3082.	1.1	2
44	Halotag Tethers to Study Titin Folding at the Single Molecule Level. Biophysical Journal, 2014, 106, 391a.	0.2	1
45	Temperature Dependence of the Mechanical Unfolding of Single Ubiquitin Proteins. Biophysical Journal, 2011, 100, 398a.	0.2	0
46	Single Molecule Oxidative Folding. Biophysical Journal, 2012, 102, 174a.	0.2	0
47	Direct Observation of Titin Immunoglobulin Domain Unfolding-Refolding in Muscle Sarcomeres. Biophysical Journal, 2015, 108, 170a.	0.2	0
48	Revisiting the Free Energy of Modular Proteins under Force. Biophysical Journal, 2015, 108, 355a.	0.2	0
49	Protein Folding Drives Muscle Contraction. Biophysical Journal, 2016, 110, 636a.	0.2	0
50	Proving the Role of Entropic Elasticity in Protein Folding. Biophysical Journal, 2016, 110, 180a.	0.2	0
51	Investigating the Scaling Behavior of Multidomain Proteins under Force using Single Molecule and Ensemble Force-Clamp Spectroscopy. Biophysical Journal, 2017, 112, 456a.	0.2	0
52	Protein Aging: Loss of Folding Contraction due to Oxidation of Cryptic Side Chains. Biophysical Journal, 2017, 112, 490a.	0.2	0
53	Biomechanical Characterization of Protein-Based Hydrogels using a Force-Clamp Rheometer. Biophysical Journal, 2018, 114, 354a.	0.2	0