

Mechanical and chemical unfolding of a single protein: *A*

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Citation Report

#	ARTICLE	IF	CITATIONS
3	Atomic force microscopy captures length phenotypes in single proteins. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 11288-11292.	3.3	190
4	Force spectroscopy of cell adhesion molecules. , 0, , .		0
5	Steered molecular dynamics simulation of conformational changes of immunoglobulin domain I27 interpret atomic force microscopy observations. Chemical Physics, 1999, 247, 141-153.	0.9	145
6	Single protein misfolding events captured by atomic force microscopy. Nature Structural Biology, 1999, 6, 1025-1028.	9.7	188
7	Unravelling the extracellular matrix. Nature Cell Biology, 1999, 1, E173-E174.	4.6	30
8	Saying a firm "no" to DNA re-replication. Nature Cell Biology, 1999, 1, E175-E177.	4.6	9
9	The micro-mechanics of single molecules studied with atomic force microscopy. Journal of Physiology, 1999, 520, 5-14.	1.3	68
10	Mechanical unfolding intermediates in titin modules. Nature, 1999, 402, 100-103.	13.7	789
11	Titin: a molecular control freak. Trends in Cell Biology, 1999, 9, 377-380.	3.6	109
12	The study of protein mechanics with the atomic force microscope. Trends in Biochemical Sciences, 1999, 24, 379-384.	3.7	313
14	Folding studies of immunoglobulin-like β -sandwich proteins suggest that they share a common folding pathway. Structure, 1999, 7, 1145-1153.	1.6	189
15	Steered molecular dynamics simulations of force-induced protein domain unfolding. , 1999, 35, 453-463.		246
16	Dynamic force spectroscopy of single DNA molecules. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 11277-11282.	3.3	561
17	Conformational transitions in single protein and polysaccharide molecules studied with AFM techniques. , 0, , .		1
18	Responsive Hybrid Hydrogels with Volume Transitions Modulated by a Titin Immunoglobulin Module. Bioconjugate Chemistry, 2000, 11, 734-740.	1.8	44
19	Stretching Single Molecules Along Unbinding and Unfolding Pathways with the Scanning Force Microscope. Chemistry - A European Journal, 2000, 6, 4249-4255.	1.7	10
20	The Mechanical Properties of Single Chromatin Fibers Under Tension. Single Molecules, 2000, 1, 185-192.	1.7	24
21	Force spectroscopy with single bio-molecules. Current Opinion in Chemical Biology, 2000, 4, 524-530.	2.8	388

#	ARTICLE	IF	CITATIONS
22	Stretching single molecules into novel conformations using the atomic force microscope. <i>Nature Structural Biology</i> , 2000, 7, 719-724.	9.7	283
23	Point mutations alter the mechanical stability of immunoglobulin modules. <i>Nature Structural Biology</i> , 2000, 7, 1117-1120.	9.7	206
24	Grabbing the cat by the tail: manipulating molecules one by one. <i>Nature Reviews Molecular Cell Biology</i> , 2000, 1, 130-136.	16.1	375
25	Protein folding mechanisms: new methods and emerging ideas. <i>Current Opinion in Structural Biology</i> , 2000, 10, 16-25.	2.6	125
26	Protein folding: Pulling back the frontiers. <i>Current Biology</i> , 2000, 10, R662-R664.	1.8	22
27	Mechanical design of proteins studied by single-molecule force spectroscopy and protein engineering. <i>Progress in Biophysics and Molecular Biology</i> , 2000, 74, 63-91.	1.4	400
28	Atomic force microscopy reveals the mechanical design of a modular protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 6527-6531.	3.3	276
29	Native topology determines force-induced unfolding pathways in globular proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 7254-7259.	3.3	164
30	Solid-state synthesis and mechanical unfolding of polymers of T4 lysozyme. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 139-144.	3.3	219
31	Unfolding proteins by external forces and temperature: The importance of topology and energetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 6521-6526.	3.3	282
32	Measuring the Forces that Control Protein Interactions. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 2000, 29, 1-26.	18.3	410
33	The Key Event in Force-Induced Unfolding of Titin's Immunoglobulin Domains. <i>Biophysical Journal</i> , 2000, 79, 51-65.	0.2	282
34	Model Energy Landscapes and the Force-Induced Dissociation of Ligand-Receptor Bonds. <i>Biophysical Journal</i> , 2000, 79, 1206-1212.	0.2	156
35	Mechanical Unfolding of a Î²-Hairpin Using Molecular Dynamics. <i>Biophysical Journal</i> , 2000, 78, 584-589.	0.2	63
36	Single Molecule Force Spectroscopy of Modular Proteins in the Nervous System. <i>Neuron</i> , 2000, 27, 435-446.	3.8	50
37	Atomic force microscopy of native purple membrane. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2000, 1460, 27-38.	0.5	121
38	States and transitions during forced unfolding of a single spectrin repeat. <i>FEBS Letters</i> , 2000, 476, 124-128.	1.3	107
39	Stress-Induced Structural Transitions in DNA and Proteins. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 2000, 29, 523-543.	18.3	99

#	ARTICLE	IF	CITATIONS
40	Hydrogen Bonding Governs the Elastic Properties of Poly(vinyl alcohol) in Water: A Single-Molecule Force Spectroscopic Studies of PVA by AFM. <i>Macromolecules</i> , 2000, 33, 465-469.	2.2	151
41	Single Polymer Chain Elongation of Poly(N-isopropylacrylamide) and Poly(acrylamide) by Atomic Force Microscopy. <i>Journal of Physical Chemistry B</i> , 2000, 104, 10258-10264.	1.2	112
42	Effect of Surface Hydrophobicity on Adsorption and Relaxation Kinetics of Albumin and Fibrinogen: A Single-Species and Competitive Behavior. <i>Langmuir</i> , 2001, 17, 3006-3016.	1.6	321
43	Force Measurement and Inhibitor Binding Assay of Monomer and Engineered Dimer of Bovine Carbonic Anhydrase B. <i>Biochemical and Biophysical Research Communications</i> , 2001, 285, 9-14.	1.0	23
44	Simulated Refolding of Stretched Titin Immunoglobulin Domains. <i>Biophysical Journal</i> , 2001, 81, 2268-2277.	0.2	48
45	Can Non-Mechanical Proteins Withstand Force? Stretching Barnase by Atomic Force Microscopy and Molecular Dynamics Simulation. <i>Biophysical Journal</i> , 2001, 81, 2344-2356.	0.2	234
46	Unfolding of Titin Domains Explains the Viscoelastic Behavior of Skeletal Myofibrils. <i>Biophysical Journal</i> , 2001, 80, 1442-1451.	0.2	178
47	Mechanical unfolding of single filamin A (ABP-280) molecules detected by atomic force microscopy. <i>FEBS Letters</i> , 2001, 498, 72-75.	1.3	112
48	Surface-dependent differences in fibrin assembly visualized by atomic force microscopy. <i>Surface Science</i> , 2001, 491, 421-432.	0.8	50
49	Kraftspektroskopie von einzelnen Biomolekülen: Biologische Makromoleküle besser begreifen " mit Einzelmolekülkraftmessungen und Computersimulationen. <i>Physik Journal</i> , 2001, 57, 55-61.	0.1	4
50	Study on Polymer Micelles of Hydrophobically Modified Ethyl Hydroxyethyl Cellulose Using Single-Molecule Force Spectroscopy. <i>Langmuir</i> , 2001, 17, 4799-4808.	1.6	21
51	Lattice Model Studies of Force-Induced Unfolding of Proteins. <i>Journal of Physical Chemistry B</i> , 2001, 105, 6648-6654.	1.2	26
52	Atomic Force Microscope Study of the Effect of the Immobilization Substrate on the Structure and Force-Extension Curves of a Multimeric Protein. <i>Langmuir</i> , 2001, 17, 3067-3075.	1.6	29
53	Force spectroscopy on single passive biomolecules and single biomolecular bonds. <i>Physics Reports</i> , 2001, 346, 343-385.	10.3	120
54	Single Chromatin Fibre Assembly Using Optical Tweezers. <i>Single Molecules</i> , 2001, 2, 91-97.	1.7	28
55	Title is missing!. <i>Biomedical Microdevices</i> , 2001, 3, 9-18.	1.4	13
56	Force and focal adhesion assembly: a close relationship studied using elastic micropatterned substrates. <i>Nature Cell Biology</i> , 2001, 3, 466-472.	4.6	1,924
57	Single molecule measurements of titin elasticity. <i>Progress in Biophysics and Molecular Biology</i> , 2001, 77, 1-44.	1.4	66

#	ARTICLE	IF	CITATIONS
58	Mapping the Folding Pathway of an Immunoglobulin Domain. <i>Structure</i> , 2001, 9, 355-366.	1.6	183
59	Scanning force microscopy in the applied biological sciences. <i>Biotechnology Advances</i> , 2001, 19, 451-485.	6.0	36
60	Force as a probe of membrane protein structure and function. <i>Current Opinion in Structural Biology</i> , 2001, 11, 433-439.	2.6	16
61	Atomic force microscopy of macromolecular interactions. <i>Current Opinion in Structural Biology</i> , 2001, 11, 567-572.	2.6	39
62	Stepwise unfolding of titin under force-clamp atomic force microscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 468-472.	3.3	336
63	Reversible Unfolding of Single RNA Molecules by Mechanical Force. <i>Science</i> , 2001, 292, 733-737.	6.0	839
64	Comparison of the early stages of forced unfolding for fibronectin type III modules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 5590-5595.	3.3	125
65	Mechanical unfolding and refolding of proteins: An off-lattice model study. <i>Physical Review E</i> , 2001, 63, 021905.	0.8	17
66	Multiple conformations of PEVK proteins detected by single-molecule techniques. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 10682-10686.	3.3	167
67	A nondestructive technique for determining the spring constant of atomic force microscope cantilevers. <i>Review of Scientific Instruments</i> , 2001, 72, 2340-2343.	0.6	37
68	Nanorheology measurement on a single polymer chain. <i>Applied Physics Letters</i> , 2002, 81, 724-726.	1.5	34
69	Structure and mechanics of single biomolecules: experiment and simulation. <i>Journal of Physics Condensed Matter</i> , 2002, 14, R383-R414.	0.7	88
70	Role of titin in vertebrate striated muscle. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2002, 357, 199-206.	1.8	55
71	Forced Unfolding of Single Proteins. <i>Methods in Cell Biology</i> , 2002, 68, 311-335.	0.5	1
72	Micromechanical Testing of Interfacial Protein Networks Demonstrates Ensemble Behavior Characteristic of a Nanostructured Biomaterial. <i>Langmuir</i> , 2002, 18, 5585-5591.	1.6	27
73	Electronic Properties of Functional Biomolecules at Metal/Aqueous Solution Interfaces. <i>Journal of Physical Chemistry B</i> , 2002, 106, 1131-1152.	1.2	165
74	AFM Evidence of Rayleigh Instability in Single Polymer Chains. <i>Langmuir</i> , 2002, 18, 2174-2182.	1.6	105
75	Titin; a multidomain protein that behaves as the sum of its parts 1 Edited by J. Karn. <i>Journal of Molecular Biology</i> , 2002, 315, 819-829.	2.0	93

#	ARTICLE	IF	CITATIONS
76	Different Molecular Mechanics Displayed by Titin's Constitutively and Differentially Expressed Tandem Ig Segments. <i>Journal of Structural Biology</i> , 2002, 137, 248-258.	1.3	83
77	PEVK Domain of Titin: An Entropic Spring with Actin-Binding Properties. <i>Journal of Structural Biology</i> , 2002, 137, 194-205.	1.3	179
78	Introduction to Atomic Force Microscopy (AFM) in Biology. <i>Current Protocols in Protein Science</i> , 2002, 29, Unit 17.7.	2.8	8
79	Conformations, Flexibility, and Interactions Observed on Individual Membrane Proteins by Atomic Force Microscopy. <i>Methods in Cell Biology</i> , 2002, 68, 257-299.	0.5	16
80	Mechanisms of Fast Protein Folding. <i>Annual Review of Biochemistry</i> , 2002, 71, 783-815.	5.0	110
81	Domain unfolding in neurofilament sidearms: effects of phosphorylation and ATP. <i>FEBS Letters</i> , 2002, 531, 397-401.	1.3	37
82	The Mechanical Hierarchies of Fibronectin Observed with Single-molecule AFM. <i>Journal of Molecular Biology</i> , 2002, 319, 433-447.	2.0	362
83	The Backbone Conformational Entropy of Protein Folding: Experimental Measures from Atomic Force Microscopy. <i>Journal of Molecular Biology</i> , 2002, 322, 645-652.	2.0	61
84	Mechanical Unfolding of a Titin Ig Domain: Structure of Unfolding Intermediate Revealed by Combining AFM, Molecular Dynamics Simulations, NMR and Protein Engineering. <i>Journal of Molecular Biology</i> , 2002, 322, 841-849.	2.0	200
85	Identifying Unfolding Intermediates of FN-III10 by Steered Molecular Dynamics. <i>Journal of Molecular Biology</i> , 2002, 323, 939-950.	2.0	159
86	The Effect of Core Destabilization on the Mechanical Resistance of I27. <i>Biophysical Journal</i> , 2002, 83, 458-472.	0.2	132
87	Steered Molecular Dynamics Studies of Titin I1 Domain Unfolding. <i>Biophysical Journal</i> , 2002, 83, 3435-3445.	0.2	111
88	Pathways and Intermediates in Forced Unfolding of Spectrin Repeats. <i>Structure</i> , 2002, 10, 1085-1096.	1.6	75
89	Biomolecular force measurements and the atomic force microscope. <i>Current Opinion in Biotechnology</i> , 2002, 13, 47-51.	3.3	127
90	Biointerface analysis on a molecular level. <i>Colloids and Surfaces B: Biointerfaces</i> , 2002, 23, 95-114.	2.5	41
91	Mechanistic aspects of protein/material interactions probed by atomic force microscopy. <i>Colloids and Surfaces B: Biointerfaces</i> , 2002, 23, 153-163.	2.5	42
92	Reversible stretching of a monomeric unit in a dimeric bovine carbonic anhydrase B with the atomic force microscope. <i>Ultramicroscopy</i> , 2002, 91, 253-259.	0.8	7
93	Folding and stretching in a Co-like model of titin. <i>Proteins: Structure, Function and Bioinformatics</i> , 2002, 49, 114-124.	1.5	64

#	ARTICLE	IF	CITATIONS
94	Reverse engineering of the giant muscle protein titin. <i>Nature</i> , 2002, 418, 998-1002.	13.7	487
95	The protein import motor of mitochondria. <i>Nature Reviews Molecular Cell Biology</i> , 2002, 3, 555-565.	16.1	358
96	Mechanical response of single filamin A (ABP-280) molecules and its role in the actin cytoskeleton. <i>Journal of Muscle Research and Cell Motility</i> , 2002, 23, 525-534.	0.9	37
97	Stretching fibronectin. <i>Journal of Muscle Research and Cell Motility</i> , 2002, 23, 575-580.	0.9	71
98	Titin as a modular spring: emerging mechanisms for elasticity control by titin in cardiac physiology and pathophysiology. <i>Journal of Muscle Research and Cell Motility</i> , 2002, 23, 457-470.	0.9	25
99	Cardiac titin: molecular basis of elasticity and cellular contribution to elastic and viscous stiffness components in myocardium. <i>Journal of Muscle Research and Cell Motility</i> , 2002, 23, 483-497.	0.9	83
100	Unfolding of titin domains studied by molecular dynamics simulations. <i>Journal of Muscle Research and Cell Motility</i> , 2002, 23, 513-521.	0.9	61
101	The protein import motor of mitochondria: a targeted molecular ratchet driving unfolding and translocation. <i>EMBO Journal</i> , 2002, 21, 3659-3671.	3.5	103
102	Extraction of Membrane Proteins from a Living Cell Surface Using the Atomic Force Microscope and Covalent Crosslinkers. <i>Cell Biochemistry and Biophysics</i> , 2003, 39, 101-118.	0.9	40
103	Gigantic variety: expression patterns of titin isoforms in striated muscles and consequences for myofibrillar passive stiffness. <i>Journal of Muscle Research and Cell Motility</i> , 2003, 24, 175-189.	0.9	167
104	M-band: a safeguard for sarcomere stability?. <i>Journal of Muscle Research and Cell Motility</i> , 2003, 24, 191-203.	0.9	78
105	Protein unfolding – an important process in vivo?. <i>Current Opinion in Structural Biology</i> , 2003, 13, 98-109.	2.6	153
106	Single-molecule folding. <i>Current Opinion in Structural Biology</i> , 2003, 13, 88-97.	2.6	228
107	Kinetics of a Three-Step Reaction Observed at the Single-Molecule Level. <i>Angewandte Chemie</i> , 2003, 115, 1970-1973.	1.6	12
108	Kinetics of a Three-Step Reaction Observed at the Single-Molecule Level. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 1926-1929.	7.2	56
109	Force mode atomic force microscopy as a tool for protein folding studies. <i>Analytica Chimica Acta</i> , 2003, 479, 87-105.	2.6	120
110	Molecular dynamics simulations of a protein model in uniform and elongational flows. <i>Proteins: Structure, Function and Bioinformatics</i> , 2003, 51, 224-235.	1.5	25
111	Finding a protein's Achilles heel. <i>Nature Structural and Molecular Biology</i> , 2003, 10, 674-676.	3.6	27

#	ARTICLE	IF	CITATIONS
112	Tag, you're degraded. <i>Nature Structural and Molecular Biology</i> , 2003, 10, 676-676.	3.6	2
113	Parallel protein-unfolding pathways revealed and mapped. <i>Nature Structural and Molecular Biology</i> , 2003, 10, 658-662.	3.6	153
114	The mechanical stability of ubiquitin is linkage dependent. <i>Nature Structural and Molecular Biology</i> , 2003, 10, 738-743.	3.6	436
115	Pulling geometry defines the mechanical resistance of a β -sheet protein. <i>Nature Structural and Molecular Biology</i> , 2003, 10, 731-737.	3.6	356
116	Hidden complexity in the mechanical properties of titin. <i>Nature</i> , 2003, 422, 446-449.	13.7	268
117	Two-piconewton slip bond between fibronectin and the cytoskeleton depends on talin. <i>Nature</i> , 2003, 424, 334-337.	13.7	408
118	The present view of the mechanism of protein folding. <i>Nature Reviews Molecular Cell Biology</i> , 2003, 4, 497-502.	16.1	366
119	Single molecule mechanochemistry of macromolecules. <i>Progress in Polymer Science</i> , 2003, 28, 1271-1295.	11.8	254
120	Single-Molecule Force Spectroscopy of Isolated and Aggregated Fibronectin Proteins on Negatively Charged Surfaces in Aqueous Liquids. <i>Langmuir</i> , 2003, 19, 9566-9572.	1.6	57
121	Single-Macromolecule Fluorescence Resonance Energy Transfer and Free-Energy Profiles. <i>Journal of Physical Chemistry B</i> , 2003, 107, 5058-5063.	1.2	98
122	Mechanical Design of the First Proximal Ig Domain of Human Cardiac Titin Revealed by Single Molecule Force Spectroscopy. <i>Journal of Molecular Biology</i> , 2003, 334, 75-86.	2.0	87
123	Mechanical Unfolding of a Titin Ig Domain: Structure of Transition State Revealed by Combining Atomic Force Microscopy, Protein Engineering and Molecular Dynamics Simulations. <i>Journal of Molecular Biology</i> , 2003, 330, 867-877.	2.0	168
124	The elasticity of single kettin molecules using a two-bead laser-tweezers assay. <i>FEBS Letters</i> , 2003, 535, 55-60.	1.3	54
125	Linkage between ATP Consumption and Mechanical Unfolding during the Protein Processing Reactions of an AAA+ Degradation Machine. <i>Cell</i> , 2003, 114, 511-520.	13.5	277
126	Kinetics from Nonequilibrium Single-Molecule Pulling Experiments. <i>Biophysical Journal</i> , 2003, 85, 5-15.	0.2	437
127	Similarity of Force-Induced Unfolding of Apomyoglobin to Its Chemical-Induced Unfolding: An Atomistic Molecular Dynamics Simulation Approach. <i>Biophysical Journal</i> , 2003, 85, 1492-1502.	0.2	13
128	Molecular Basis of Passive Stress Relaxation in Human Soleus Fibers: Assessment of the Role of Immunoglobulin-Like Domain Unfolding. <i>Biophysical Journal</i> , 2003, 85, 3142-3153.	0.2	40
129	Pathway Shifts and Thermal Softening in Temperature-Coupled Forced Unfolding of Spectrin Domains. <i>Biophysical Journal</i> , 2003, 85, 3286-3293.	0.2	89

#	ARTICLE	IF	CITATIONS
130	Specific binding of the regulatory protein ExpG to promoter regions of the galactoglucan biosynthesis gene cluster of <i>Sinorhizobium meliloti</i> - a combined molecular biology and force spectroscopy investigation. <i>Journal of Structural Biology</i> , 2003, 143, 145-152.	1.3	82
131	An overview of the biophysical applications of atomic force microscopy. <i>Biophysical Chemistry</i> , 2003, , .	1.5	0
132	Unfolding proteins in an external field: Can we always observe the intermediate states?. <i>Physical Review E</i> , 2003, 67, 031910.	0.8	19
133	Thermal microstrains measured by atomic force microscopy. <i>Review of Scientific Instruments</i> , 2003, 74, 3356-3361.	0.6	5
134	Theoretical studies of the mechanical unfolding of the muscle protein titin: Bridging the time-scale gap between simulation and experiment. <i>Journal of Chemical Physics</i> , 2003, 119, 9260-9268.	1.2	81
135	Stretching of macromolecules and proteins. <i>Reports on Progress in Physics</i> , 2003, 66, 1-45.	8.1	230
136	Unfolding dynamics of proteins under applied force. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003, 361, 713-730.	1.6	25
137	Measuring and visualizing single molecular interactions in biology. <i>Biochemical Society Transactions</i> , 2003, 31, 1052-1057.	1.6	32
138	Giant Protein Titin: Structural and Functional Aspects. , 2003, , 242-258.		0
140	Multiple sources of passive stress relaxation in muscle fibres. <i>Physics in Medicine and Biology</i> , 2004, 49, 3613-3627.	1.6	33
141	Association of the Chaperone β -crystallin with Titin in Heart Muscle. <i>Journal of Biological Chemistry</i> , 2004, 279, 7917-7924.	1.6	147
142	Methods in Modern Biophysics. , 2004, , .		8
143	The unfolding kinetics of ubiquitin captured with single-molecule force-clamp techniques. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 7299-7304.	3.3	325
144	Response to Comment on "Force-Clamp Spectroscopy Monitors the Folding Trajectory of a Single Protein". <i>Science</i> , 2004, 306, 411c-411c.	6.0	16
145	Tuning the Mechanical Stability of Fibronectin Type III Modules through Sequence Variations. <i>Structure</i> , 2004, 12, 21-30.	1.6	98
146	FnIII Domains. <i>Structure</i> , 2004, 12, 4-5.	1.6	7
147	Probing the Energy Landscape of the Membrane Protein Bacteriorhodopsin. <i>Structure</i> , 2004, 12, 871-879.	1.6	80
148	Scanning probe microscopy. <i>Comprehensive Series in Photochemical and Photobiological Sciences</i> , 0, , 375-428.	0.3	0

#	ARTICLE	IF	CITATIONS
149	The energy landscape for protein folding and possible connections to function. <i>Polymer</i> , 2004, 45, 547-555.	1.8	45
150	The Tension Mounts: Mechanics Meets Morphogenesis and Malignancy. <i>Journal of Mammary Gland Biology and Neoplasia</i> , 2004, 9, 325-342.	1.0	410
151	Thermal effects in stretching of Go-like models of titin and secondary structures. <i>Proteins: Structure, Function and Bioinformatics</i> , 2004, 56, 285-297.	1.5	73
152	Application of scanning probe microscopy to the characterization and fabrication of hybrid nanomaterials. <i>Microscopy Research and Technique</i> , 2004, 64, 415-434.	1.2	55
153	Effects of temperature and pH on the helicity of a peptide adsorbed to colloidal silica. <i>Colloids and Surfaces B: Biointerfaces</i> , 2004, 37, 113-127.	2.5	6
154	Effect of proline kinks on the mechanical unfolding of α -helices. <i>Chemical Physics Letters</i> , 2004, 399, 496-502.	1.2	5
155	Dynamics of a partially stretched protein molecule studied using an atomic force microscope. <i>Biophysical Chemistry</i> , 2004, 107, 51-61.	1.5	28
156	An overview of the biophysical applications of atomic force microscopy. <i>Biophysical Chemistry</i> , 2004, 107, 133-149.	1.5	198
157	Exploring the energy landscape of GFP by single-molecule mechanical experiments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 16192-16197.	3.3	321
158	Properties of Titin Immunoglobulin and Fibronectin-3 Domains. <i>Journal of Biological Chemistry</i> , 2004, 279, 46351-46354.	1.6	67
159	Polymer Models of Protein Stability, Folding, and Interactions. <i>Biochemistry</i> , 2004, 43, 2141-2154.	1.2	140
160	Time-Dependent Conformational Changes in Fibrinogen Measured by Atomic Force Microscopy. <i>Langmuir</i> , 2004, 20, 8846-8852.	1.6	131
161	Following Single Molecules by Force Spectroscopy. <i>Israel Journal of Chemistry</i> , 2004, 44, 363-372.	1.0	2
162	The Elasticity of Single Titin Molecules Using a Two-Bead Optical Tweezers Assay. <i>Biophysical Journal</i> , 2004, 87, 1112-1135.	0.2	89
163	Dependence of DNA Polymerase Replication Rate on External Forces: A Model Based on Molecular Dynamics Simulations. <i>Biophysical Journal</i> , 2004, 87, 1478-1497.	0.2	30
164	Reversible Mechanical Unfolding of Single Ubiquitin Molecules. <i>Biophysical Journal</i> , 2004, 87, 3995-4006.	0.2	87
165	Oriented Binding of the His6-Tagged Carboxyl-Tail of the L-type Ca ²⁺ Channel α_1 -Subunit to a New NTA-Functionalized Self-Assembled Monolayer. <i>Langmuir</i> , 2004, 20, 5885-5890.	1.6	33
166	Mechanical Processes in Biochemistry. <i>Annual Review of Biochemistry</i> , 2004, 73, 705-748.	5.0	721

#	ARTICLE	IF	CITATIONS
167	Simulation of the mechanical unfolding of ubiquitin: Probing different unfolding reaction coordinates by changing the pulling geometry. <i>Journal of Chemical Physics</i> , 2004, 121, 4826-4832.	1.2	75
168	Force-Clamp Spectroscopy Monitors the Folding Trajectory of a Single Protein. <i>Science</i> , 2004, 303, 1674-1678.	6.0	529
169	Integrated microfluidic isolation platform for magnetic particle manipulation in biological systems. <i>Applied Physics Letters</i> , 2004, 84, 1786-1788.	1.5	64
170	Urea-Induced Sequential Unfolding of Fibronectin: A Fluorescence Spectroscopy and Circular Dichroism Study. <i>Biochemistry</i> , 2004, 43, 1724-1735.	1.2	38
171	Atomic force microscopy: mechanical unfolding of proteins. <i>Methods</i> , 2004, 34, 100-111.	1.9	74
172	Linker-Gating Ring Complex as Passive Spring and Ca ²⁺ -Dependent Machine for a Voltage- and Ca ²⁺ -Activated Potassium Channel. <i>Neuron</i> , 2004, 42, 745-756.	3.8	162
173	The Tolerance of a Modular Protein to Duplication and Deletion of Internal Repeats. <i>Journal of Molecular Biology</i> , 2004, 344, 169-178.	2.0	47
174	Diameter Oscillation of Axonemes in Sea-Urchin Sperm Flagella. <i>Biophysical Journal</i> , 2004, 86, 346-352.	0.2	25
175	Mechanical stretching of proteins: calmodulin and titin. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 352, 28-42.	1.2	9
176	Adhesion mode atomic force microscopy study of dual component protein films. <i>Ultramicroscopy</i> , 2005, 102, 257-268.	0.8	28
177	Visualizing and manipulating individual protein molecules. <i>Physiological Measurement</i> , 2005, 26, R119-R153.	1.2	40
178	Nucleotide-dependent substrate recognition by the AAA+ HslUV protease. <i>Nature Structural and Molecular Biology</i> , 2005, 12, 245-251.	3.6	63
179	The folding pathway of a fast-folding immunoglobulin domain revealed by single-molecule mechanical experiments. <i>EMBO Reports</i> , 2005, 6, 46-51.	2.0	86
180	Direct measurement of protein energy landscape roughness. <i>EMBO Reports</i> , 2005, 6, 482-486.	2.0	99
181	Unfolding Induced by Mechanical Force. , 0, , 1111-1142.		6
183	Partitioning between unfolding and release of native domains during ClpXP degradation determines substrate selectivity and partial processing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 1390-1395.	3.3	94
184	The Nanomechanics of Polycystin-1 Extracellular Region. <i>Journal of Biological Chemistry</i> , 2005, 280, 40723-40730.	1.6	74
185	Topography of the free-energy landscape probed via mechanical unfolding of proteins. <i>Journal of Chemical Physics</i> , 2005, 122, 234915.	1.2	67

#	ARTICLE	IF	CITATIONS
186	Computer simulations of the translocation and unfolding of a protein pulled mechanically through a pore. <i>Journal of Chemical Physics</i> , 2005, 123, 124903.	1.2	70
187	Mechanical properties of the domains of titin in a Go-like model. <i>Journal of Chemical Physics</i> , 2005, 122, 054906.	1.2	27
188	Mechanical unfolding of ubiquitin molecules. <i>Journal of Chemical Physics</i> , 2005, 123, 194903.	1.2	28
189	Nonlinear elasticity of an α -helical polypeptide. <i>Physical Review E</i> , 2005, 71, 031905.	0.8	28
190	Theoretical studies of the kinetics of mechanical unfolding of cross-linked polymer chains and their implications for single-molecule pulling experiments. <i>Physical Review E</i> , 2005, 71, 021904.	0.8	29
191	Domain Unfolding Plays a Role in Superfibronectin Formation. <i>Journal of Biological Chemistry</i> , 2005, 280, 39143-39151.	1.6	57
192	Effect of protein structure on mitochondrial import. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 15435-15440.	3.3	94
193	Comparison of the protein-unfolding pathways between mitochondrial protein import and atomic-force microscopy measurements. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 17999-18004.	3.3	60
194	Simultaneous Force and Fluorescence Measurements of a Protein That Forms a Bond between a Living Bacterium and a Solid Surface. <i>Journal of Bacteriology</i> , 2005, 187, 2127-2137.	1.0	72
195	Single Adhesive Nanofibers from a Live Diatom Have the Signature Fingerprint of Modular Proteins. <i>Biophysical Journal</i> , 2005, 89, 4252-4260.	0.2	72
196	Stretching globular polymers. I. Single chains. <i>Journal of Chemical Physics</i> , 2005, 122, 194901.	1.2	14
197	The Elasticity of Individual Titin PEVK Exons Measured by Single Molecule Atomic Force Microscopy. <i>Journal of Biological Chemistry</i> , 2005, 280, 6261-6264.	1.6	56
198	Simulated force-induced unfolding of α -helices: dependence of stretching stability on primary sequence. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 2018-2026.	1.3	4
199	Titin and its associated proteins: the third myofilament system of the sarcomere. <i>Advances in Protein Chemistry</i> , 2005, 71, 89-119.	4.4	77
200	Single-Molecule Measurements of the Impact of Lipid Phase Behavior on Anchor Strengths. <i>Journal of Physical Chemistry B</i> , 2005, 109, 5985-5993.	1.2	24
201	Force Microscopy Studies of Fibronectin Adsorption and Subsequent Cellular Adhesion to Substrates with Well-Defined Surface Chemistries. <i>Langmuir</i> , 2005, 21, 4096-4107.	1.6	53
202	Molecular Level Investigations of the Inter- and Intramolecular Interactions of pH-Responsive Artificial Triblock Proteins. <i>Biomacromolecules</i> , 2005, 6, 1266-1271.	2.6	31
203	Mechanical Unfolding Intermediates Observed by Single-molecule Force Spectroscopy in a Fibronectin Type III Module. <i>Journal of Molecular Biology</i> , 2005, 345, 817-826.	2.0	138

#	ARTICLE	IF	CITATIONS
204	Single Molecule Studies of Antibody-Antigen Interaction Strength Versus Intra-molecular Antigen Stability. <i>Journal of Molecular Biology</i> , 2005, 347, 597-606.	2.0	106
205	Study of the Mechanical Properties of Myomesin Proteins Using Dynamic Force Spectroscopy. <i>Journal of Molecular Biology</i> , 2005, 348, 1127-1137.	2.0	23
206	The Remarkable Mechanical Strength of Polycystin-1 Supports a Direct Role in Mechanotransduction. <i>Journal of Molecular Biology</i> , 2005, 349, 861-871.	2.0	108
207	Cooperative Folding in a Multi-domain Protein. <i>Journal of Molecular Biology</i> , 2005, 349, 1045-1059.	2.0	68
208	Mechanical Unfolding of TNfn3: The Unfolding Pathway of a fnIII Domain Probed by Protein Engineering, AFM and MD Simulation. <i>Journal of Molecular Biology</i> , 2005, 350, 776-789.	2.0	110
209	Repetitive Pulling Catalyzes Co-translocational Unfolding of Barnase During Import Through a Mitochondrial Pore. <i>Journal of Molecular Biology</i> , 2005, 350, 1017-1034.	2.0	53
210	Molecular Extensibility of Mini-dystrophins and a Dystrophin Rod Construct. <i>Journal of Molecular Biology</i> , 2005, 352, 795-806.	2.0	44
211	Temperature Softening of a Protein in Single-molecule Experiments. <i>Journal of Molecular Biology</i> , 2005, 354, 497-503.	2.0	120
212	Free Energy Surfaces from Single-Molecule Force Spectroscopy. <i>Accounts of Chemical Research</i> , 2005, 38, 504-513.	7.6	227
213	Biophysical Investigations of Engineered Polyproteins: Implications for Force Data. <i>Biophysical Journal</i> , 2005, 88, 2022-2029.	0.2	32
214	Mechanically Unfolding the Small, Topologically Simple Protein L. <i>Biophysical Journal</i> , 2005, 89, 506-519.	0.2	154
215	Ligand Binding Modulates the Mechanical Stability of Dihydrofolate Reductase. <i>Biophysical Journal</i> , 2005, 89, 3337-3344.	0.2	103
216	Fingerprinting Single Molecules In Vivo. <i>Biophysical Journal</i> , 2005, 89, 3676-3677.	0.2	10
217	Force Spectroscopy. , 2005, , 404-428.		2
218	Force measurement of specific antibody-antigen interactions in pH-varied liquid environments. , 0, , .		0
219	AFM: a versatile tool in biophysics. <i>Measurement Science and Technology</i> , 2005, 16, R65-R92.	1.4	343
221	Mechanical unfolding revisited through a simple but realistic model. <i>Journal of Chemical Physics</i> , 2006, 124, 154909.	1.2	55
222	The molecular elasticity of the insect flight muscle proteins projectin and kettin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 4451-4456.	3.3	93

#	ARTICLE	IF	CITATIONS
223	Molecular mechanisms of cellular mechanics. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 3692.	1.3	76
224	Direct Detection of the Formation of V-Amylose Helix by Single Molecule Force Spectroscopy. <i>Journal of the American Chemical Society</i> , 2006, 128, 9387-9393.	6.6	51
225	Internal protein dynamics shifts the distance to the mechanical transition state. <i>Physical Review E</i> , 2006, 74, 061912.	0.8	15
226	Mechanical Unfolding of Segment-Swapped Protein G Dimer: Results from Replica Exchange Molecular Dynamics Simulations. <i>Journal of Physical Chemistry B</i> , 2006, 110, 14469-14474.	1.2	18
227	Frequency Modulation Atomic Force Microscopy Reveals Individual Intermediates Associated with each Unfolded I27 Titin Domain. <i>Biophysical Journal</i> , 2006, 90, 640-647.	0.2	38
228	Sacrificial Bonds and Hidden Length: Unraveling Molecular Mesostructures in Tough Materials. <i>Biophysical Journal</i> , 2006, 90, 1411-1418.	0.2	273
229	Mechanical Resistance of Proteins Explained Using Simple Molecular Models. <i>Biophysical Journal</i> , 2006, 90, 287-297.	0.2	106
230	Mapping the Energy Landscape of Biomolecules Using Single Molecule Force Correlation Spectroscopy: Theory and Applications. <i>Biophysical Journal</i> , 2006, 90, 3827-3841.	0.2	23
231	Stepwise Unfolding of Ankyrin Repeats in a Single Protein Revealed by Atomic Force Microscopy. <i>Biophysical Journal</i> , 2006, 90, L30-L32.	0.2	72
232	Fingerprinting DHFR in Single-Molecule AFM Studies. <i>Biophysical Journal</i> , 2006, 91, 2009-2010.	0.2	8
233	MECHANOTRANSDUCTION INVOLVING MULTIMODULAR PROTEINS: Converting Force into Biochemical Signals. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 2006, 35, 459-488.	18.3	397
234	Probing surfaces with single-polymer atomic force microscope experiments. <i>Biointerphases</i> , 2006, 1, MR1-MR21.	0.6	24
235	Single-molecule experiments in biological physics: methods and applications. <i>Journal of Physics Condensed Matter</i> , 2006, 18, R531-R583.	0.7	315
236	Protein Folding Simulation. <i>Chemical Reviews</i> , 2006, 106, 1898-1916.	23.0	191
237	Experimental Studies of the Dynamic Mechanical Response of a Single Polymer Chain. <i>Macromolecules</i> , 2006, 39, 6180-6185.	2.2	16
238	Ankyrin Repeat: A Unique Motif Mediating Protein-Protein Interactions. <i>Biochemistry</i> , 2006, 45, 15168-15178.	1.2	537
239	Sequence-Resolved Detection of Pausing by Single RNA Polymerase Molecules. <i>Cell</i> , 2006, 125, 1083-1094.	13.5	252
240	Force Sensing by Mechanical Extension of the Src Family Kinase Substrate p130Cas. <i>Cell</i> , 2006, 127, 1015-1026.	13.5	845

#	ARTICLE	IF	CITATIONS
241	Pulling single bacteriorhodopsin out of a membrane: Comparison of simulation and experiment. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006, 1758, 537-544.	1.4	24
242	Intrinsic Rates and Activation Free Energies from Single-Molecule Pulling Experiments. <i>Physical Review Letters</i> , 2006, 96, 108101.	2.9	725
243	Understanding the elasticity of fibronectin fibrils: Unfolding strengths of FN-III and GFP domains measured by single molecule force spectroscopy. <i>Matrix Biology</i> , 2006, 25, 175-184.	1.5	70
244	Characterizing Molecular Interactions in Different Bacteriorhodopsin Assemblies by Single-molecule Force Spectroscopy. <i>Journal of Molecular Biology</i> , 2006, 355, 640-650.	2.0	93
245	Bacteriorhodopsin Folds into the Membrane against an External Force. <i>Journal of Molecular Biology</i> , 2006, 357, 644-654.	2.0	93
246	Single Molecule Force Spectroscopy Reveals a Weakly Populated Microstate of the FnIII Domains of Tenascin. <i>Journal of Molecular Biology</i> , 2006, 361, 372-381.	2.0	16
247	Mechanical properties of cardiac titin's N2B-region by single-molecule atomic force spectroscopy. <i>Journal of Structural Biology</i> , 2006, 155, 263-272.	1.3	47
248	Imaging and detecting molecular interactions of single transmembrane proteins. <i>Neurobiology of Aging</i> , 2006, 27, 546-561.	1.5	38
250	Carbon nanotube tips for scanning probe microscopy. , 2006, , 295-313.		4
251	Dynamic Force Microscopy and Spectroscopy. <i>Nanoscience and Technology</i> , 2006, , 143-164.	1.5	0
252	Mechanically controlled preparation of protein intermediates in single molecule experiments. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 3492-3495.	0.8	1
253	Future lab-on-a-chip technologies for interrogating individual molecules. <i>Nature</i> , 2006, 442, 387-393.	13.7	679
254	Self-organization versus Watchmaker: Molecular motors and protein translocation. <i>BioSystems</i> , 2006, 84, 15-23.	0.9	21
255	The unfolding and folding dynamics of TNfnALL probed by single molecule force-ramp spectroscopy. <i>Polymer</i> , 2006, 47, 2548-2554.	1.8	20
256	Lipid membrane-induced optimization for ligand-receptor docking: recent tools and insights for the membrane catalysis model. <i>European Biophysics Journal</i> , 2006, 35, 92-103.	1.2	61
257	Characterizing folding, structure, molecular interactions and ligand gated activation of single sodium/proton antiporters. <i>Naunyn-Schmiedeberg's Archives of Pharmacology</i> , 2006, 372, 400-412.	1.4	2
258	Nonmechanical Protein Can Have Significant Mechanical Stability. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 642-645.	7.2	104
259	Engineering Proteins with Novel Mechanical Properties by Recombination of Protein Fragments. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 5633-5638.	7.2	33

#	ARTICLE	IF	CITATIONS
262	Single Molecule Studies of Protein Folding Using Atomic Force Microscopy. , 2007, 350, 139-168.		11
263	Measuring energies with an Atomic Force Microscope. Europhysics Letters, 2006, 74, 110-116.	0.7	4
264	Evaluation of free energy landscapes from manipulation experiments. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P03005-P03005.	0.9	13
265	A toy model of polymer stretching. Journal of Chemical Physics, 2006, 125, 084908.	1.2	3
267	Protein Nanomechanics " as Studied by AFM Single-Molecule Force Spectroscopy. , 2006, , 163-245.		25
268	Force-dependent chemical kinetics of disulfide bond reduction observed with single-molecule techniques. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 7222-7227.	3.3	324
269	Force-Dependent Fragility in RNA Hairpins. Physical Review Letters, 2006, 96, 218301.	2.9	60
270	Single Molecule Unzipping of Coiled Coils: Sequence Resolved Stability Profiles. Physical Review Letters, 2006, 96, 118102.	2.9	62
271	Mechanical Unfolding Pathways of the Enhanced Yellow Fluorescent Protein Revealed by Single Molecule Force Spectroscopy. Journal of Biological Chemistry, 2006, 281, 40010-40014.	1.6	88
272	Anisotropic deformation response of single protein molecules. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12724-12728.	3.3	280
273	Specific Bonds between an Iron Oxide Surface and Outer Membrane Cytochromes MtrC and OmcA from Shewanella oneidensis MR-1. Journal of Bacteriology, 2007, 189, 4944-4952.	1.0	126
274	Quasi-simultaneous imaging/pulling analysis of single polyprotein molecules by atomic force microscopy. Review of Scientific Instruments, 2007, 78, 113707.	0.6	22
275	Single-molecule force spectroscopy reveals a mechanically stable protein fold and the rational tuning of its mechanical stability. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9278-9283.	3.3	117
276	Transient violations of the second law of thermodynamics in protein unfolding examined using synthetic atomic force microscopy and the fluctuation theorem. Journal of Chemical Physics, 2007, 127, 105105.	1.2	6
277	Detecting Molecular Fingerprints in Single Molecule Force Spectroscopy Using Pattern Recognition. Japanese Journal of Applied Physics, 2007, 46, 5540.	0.8	12
278	Digital force-feedback for protein unfolding experiments using atomic force microscopy. Nanotechnology, 2007, 18, 044022.	1.3	10
279	Reconstructing the Free-Energy Landscape of a Mechanically Unfolded Model Protein. Physical Review Letters, 2007, 99, 168101.	2.9	25
280	Ising-Like Model for Protein Mechanical Unfolding. Physical Review Letters, 2007, 98, 148102.	2.9	62

#	ARTICLE	IF	CITATIONS
281	Protein mechanical unfolding: A model with binary variables. <i>Journal of Chemical Physics</i> , 2007, 127, 145105.	1.2	22
282	Revealing the bifurcation in the unfolding pathways of GFP by using single-molecule experiments and simulations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 20268-20273.	3.3	145
283	Atomic force microscopy and force spectroscopy study of Langmuir-Blodgett films formed by heteroacid phospholipids of biological interest. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 1190-1198.	1.4	38
284	Conformational Properties of Aggregated Polypeptides Determine ClpB-dependence in the Disaggregation Process. <i>Journal of Molecular Biology</i> , 2007, 371, 800-811.	2.0	26
285	Bacterial Sec-translocase Unfolds and Translocates a Class of Folded Protein Domains. <i>Journal of Molecular Biology</i> , 2007, 372, 422-433.	2.0	31
287	Mechanical stretching of proteins—a theoretical survey of the Protein Data Bank. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 283201.	0.7	113
288	Signatures of hydrophobic collapse in extended proteins captured with force spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 7916-7921.	3.3	99
289	Liquid-Structure Forces and Electrostatic Modulation of Biomolecular Interactions in Solution. <i>Journal of Physical Chemistry B</i> , 2007, 111, 227-241.	1.2	35
290	Nanoscale Ion Mediated Networks in Bone: Osteopontin Can Repeatedly Dissipate Large Amounts of Energy. <i>Nano Letters</i> , 2007, 7, 2491-2498.	4.5	123
291	Tandem Repeating Modular Proteins Avoid Aggregation in Single Molecule Force Spectroscopy Experiments. <i>Journal of Physical Chemistry A</i> , 2007, 111, 12402-12408.	1.1	8
292	Experimental Free Energy Surface Reconstruction from Single-Molecule Force Spectroscopy using Jarzynski's Equality. <i>Physical Review Letters</i> , 2007, 99, 068101.	2.9	181
293	High-Resolution, Single-Molecule Measurements of Biomolecular Motion. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 2007, 36, 171-190.	18.3	425
294	The Mechanical Unfolding of Ubiquitin through All-Atom Monte Carlo Simulation with a GÅ-Type Potential. <i>Biophysical Journal</i> , 2007, 92, 2054-2061.	0.2	35
295	Contour Length and Refolding Rate of a Small Protein Controlled by Engineered Disulfide Bonds. <i>Biophysical Journal</i> , 2007, 92, 225-233.	0.2	285
296	Mechanical Unfolding of RNA: From Hairpins to Structures with Internal Multiloops. <i>Biophysical Journal</i> , 2007, 92, 731-743.	0.2	83
297	Force Unfolding Kinetics of RNA using Optical Tweezers. II. Modeling Experiments. <i>Biophysical Journal</i> , 2007, 92, 3010-3021.	0.2	69
298	The Mechanical Fingerprint of a Parallel Polyprotein Dimer. <i>Biophysical Journal</i> , 2007, 92, L36-L38.	0.2	39
299	Unfolding of β^2 -Sheet Proteins in SDS. <i>Biophysical Journal</i> , 2007, 92, 3674-3685.	0.2	116

#	ARTICLE	IF	CITATIONS
300	Force-Clamp Spectroscopy of Single-Protein Monomers Reveals the Individual Unfolding and Folding Pathways of I27 and Ubiquitin. <i>Biophysical Journal</i> , 2007, 93, 2436-2446.	0.2	131
301	Secondary and Tertiary Structure Elasticity of Titin Z1Z2 and a Titin Chain Model. <i>Biophysical Journal</i> , 2007, 93, 1719-1735.	0.2	46
302	Analyzing Forced Unfolding of Protein Tandems by Ordered Variates, 1: Independent Unfolding Times. <i>Biophysical Journal</i> , 2007, 93, 1100-1115.	0.2	16
303	Exact Low-Force Kinetics from High-Force Single-Molecule Unfolding Events. <i>Biophysical Journal</i> , 2007, 93, 3373-3381.	0.2	22
304	Direct Observation of Active Protein Folding Using Lock-in Force Spectroscopy. <i>Biophysical Journal</i> , 2007, 93, 3989-3998.	0.2	92
305	Engineering proteins with tailored nanomechanical properties: a single molecule approach. <i>Organic and Biomolecular Chemistry</i> , 2007, 5, 3399.	1.5	21
306	Interrogation of Single Synthetic Polymer Chains and Polysaccharides by AFM-Based Force Spectroscopy. <i>ChemPhysChem</i> , 2007, 8, 2290-2307.	1.0	126
307	Structure-function relations of the giant elastic protein titin in striated and smooth muscle cells. <i>Muscle and Nerve</i> , 2007, 36, 740-755.	1.0	115
308	Impact of atomic force microscopy on interface and colloid science. <i>Advances in Colloid and Interface Science</i> , 2007, 133, 91-104.	7.0	76
309	Folding of tandem-linked domains. <i>Proteins: Structure, Function and Bioinformatics</i> , 2007, 67, 795-810.	1.5	8
310	Polyprotein of GB1 is an ideal artificial elastomeric protein. <i>Nature Materials</i> , 2007, 6, 109-114.	13.3	227
311	The folding and evolution of multidomain proteins. <i>Nature Reviews Molecular Cell Biology</i> , 2007, 8, 319-330.	16.1	341
312	Probing the chemistry of thioredoxin catalysis with force. <i>Nature</i> , 2007, 450, 124-127.	13.7	255
313	Mechanical unfolding of proteins: insights into biology, structure and folding. <i>Current Opinion in Structural Biology</i> , 2007, 17, 58-66.	2.6	107
314	High-frequency oscillations as a consequence of neglected serial damping in Hill-type muscle models. <i>Biological Cybernetics</i> , 2007, 97, 63-79.	0.6	84
315	Protein-DNA chimeras for single molecule mechanical folding studies with the optical tweezers. <i>European Biophysics Journal</i> , 2008, 37, 729-738.	1.2	93
316	Conformational properties of polymers. <i>Pramana - Journal of Physics</i> , 2008, 71, 283-295.	0.9	2
317	Pulling single molecules of titin by AFM—recent advances and physiological implications. <i>Pflügers Archiv European Journal of Physiology</i> , 2008, 456, 101-115.	1.3	96

#	ARTICLE	IF	CITATIONS
318	An AFM/Rotaxane Molecular Reading Head for Sequence-Dependent DNA Structures. <i>Small</i> , 2008, 4, 1468-1475.	5.2	21
319	Mechanical unfolding of covalently linked GroES: Evidence of structural subunit intermediates. <i>Protein Science</i> , 2009, 18, 252-257.	3.1	5
320	A Single-Molecule Perspective on the Role of Solvent Hydrogen Bonds in Protein Folding and Chemical Reactions. <i>ChemPhysChem</i> , 2008, 9, 2836-2847.	1.0	39
321	Force spectroscopy of the fibrin(ogen)-fibrinogen interaction. <i>Biopolymers</i> , 2008, 89, 292-301.	1.2	10
322	An Effective Strategy for the Design of Proteins with Enhanced Mechanical Stability. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 6900-6903.	7.2	24
323	"Mechanical Engineering" of Elastomeric Proteins: Toward Designing New Protein Building Blocks for Biomaterials. <i>Advanced Functional Materials</i> , 2008, 18, 2643-2657.	7.8	43
325	Protein folding forces. <i>Journal of Theoretical Biology</i> , 2008, 251, 331-347.	0.8	10
326	Understanding the mechanical behaviour of human enamel from its structural and compositional characteristics. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2008, 1, 18-29.	1.5	295
327	Structure and Mechanics of Membrane Proteins. <i>Annual Review of Biochemistry</i> , 2008, 77, 127-148.	5.0	246
328	Engineered elastomeric proteins with dual elasticity can be controlled by a molecular regulator. <i>Nature Nanotechnology</i> , 2008, 3, 512-516.	15.6	68
329	Single-Molecule Studies of Protein Folding. <i>Annual Review of Biochemistry</i> , 2008, 77, 101-125.	5.0	299
330	Analyzing Forced Unfolding of Protein Tandems by Ordered Variates, 2: Dependent Unfolding Times. <i>Biophysical Journal</i> , 2008, 94, 2516-2528.	0.2	11
331	Distinguishing Specific and Nonspecific Interdomain Interactions in Multidomain Proteins. <i>Biophysical Journal</i> , 2008, 94, 622-628.	0.2	16
332	Toward a Molecular Understanding of the Anisotropic Response of Proteins to External Forces: Insights from Elastic Network Models. <i>Biophysical Journal</i> , 2008, 94, 3424-3435.	0.2	94
333	Selection of Optimal Variants of GÅ•Like Models of Proteins through Studies of Stretching. <i>Biophysical Journal</i> , 2008, 95, 3174-3191.	0.2	119
334	Direct Observation of Markovian Behavior of the Mechanical Unfolding of Individual Proteins. <i>Biophysical Journal</i> , 2008, 95, 782-788.	0.2	58
335	Single-Molecule Force Spectroscopy Reveals a Stepwise Unfolding of <i>Caenorhabditis elegans</i> Giant Protein Kinase Domains. <i>Biophysical Journal</i> , 2008, 95, 1360-1370.	0.2	44
336	Stabilization Provided by Neighboring Strands Is Critical for the Mechanical Stability of Proteins. <i>Biophysical Journal</i> , 2008, 95, 3935-3942.	0.2	33

#	ARTICLE	IF	CITATIONS
337	The Effect of Temperature on Mechanical Resistance of the Native and Intermediate States of I27. <i>Biophysical Journal</i> , 2008, 95, 5296-5305.	0.2	29
338	Free-energy landscape of mechanically unfolded model proteins: Extended Jarzinsky versus inherent structure reconstruction. <i>Physical Review E</i> , 2008, 78, 031907.	0.8	11
339	Divalent cations stabilize the aggregation of sulfated glycoproteins in the adhesive nanofibers of the biofouling diatom <i>Toxarium undulatum</i> . <i>Soft Matter</i> , 2008, 4, 811.	1.2	34
340	Recombination of protein fragments: A promising approach toward engineering proteins with novel nanomechanical properties. <i>Protein Science</i> , 2008, 17, 1815-1826.	3.1	18
341	The effects of macromolecular crowding on the mechanical stability of protein molecules. <i>Protein Science</i> , 2008, 17, 2156-2166.	3.1	64
342	Muscle performance in a soft-bodied terrestrial crawler: constitutive modelling of strain-rate dependency. <i>Journal of the Royal Society Interface</i> , 2008, 5, 349-362.	1.5	42
343	Pulling Direction as a Reaction Coordinate for the Mechanical Unfolding of Single Molecules. <i>Journal of Physical Chemistry B</i> , 2008, 112, 5968-5976.	1.2	135
345	Surface Forces and Nanorheology of Molecularly Thin Films. , 2008, , 417-515.		10
346	Elastic Bond Network Model for Protein Unfolding Mechanics. <i>Physical Review Letters</i> , 2008, 100, 098101.	2.9	79
347	Single Molecules and Nanotechnology. <i>Springer Series in Biophysics</i> , 2008, , .	0.4	8
348	The load dependence of rate constants. <i>Journal of Chemical Physics</i> , 2008, 128, 215101.	1.2	34
349	How Do Chemical Denaturants Affect the Mechanical Folding and Unfolding of Proteins?. <i>Journal of Molecular Biology</i> , 2008, 375, 316-324.	2.0	56
350	Examining the Dynamic Energy Landscape of an Antiporter upon Inhibitor Binding. <i>Journal of Molecular Biology</i> , 2008, 375, 1258-1266.	2.0	30
351	Mechanical Unfoldons as Building Blocks of Maltose-binding Protein. <i>Journal of Molecular Biology</i> , 2008, 378, 447-458.	2.0	72
352	Configurational Entropy Modulates the Mechanical Stability of Protein GB1. <i>Journal of Molecular Biology</i> , 2008, 379, 871-880.	2.0	38
353	A Simple and Practical Spreadsheet-Based Method to Extract Single-Molecule Dissociation Kinetics from Variable Loading-Rate Force Spectroscopy Data. <i>Journal of Physical Chemistry C</i> , 2008, 112, 19163-19167.	1.5	13
354	Analysis of the Unfolding Process of Green Fluorescent Protein by Molecular Dynamics Simulation. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8672-8680.	1.2	4
355	Manipulating the stability of fibronectin type III domains by protein engineering. <i>Nanotechnology</i> , 2008, 19, 384023.	1.3	4

#	ARTICLE	IF	CITATIONS
356	Measuring molecular rupture forces between single actin filaments and actin-binding proteins. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 9221-9226.	3.3	183
357	Recognition of misfolded proteins by Lon, a AAA ⁺ protease. Genes and Development, 2008, 22, 2267-2277.	2.7	216
358	Studying the folding of multidomain proteins. HFSP Journal, 2008, 2, 365-377.	2.5	69
359	Solvent molecules bridge the mechanical unfolding transition state of a protein. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3185-3190.	3.3	73
360	Mechanical Biochemistry of Proteins One Molecule at a Time. Journal of Biological Chemistry, 2008, 283, 6617-6621.	1.6	95
361	Folding domain B of protein A on a dynamically partitioned free energy landscape. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1489-1493.	3.3	19
362	Force-Clamp Spectroscopy Detects Residue Co-evolution in Enzyme Catalysis. Journal of Biological Chemistry, 2008, 283, 27121-27129.	1.6	16
363	The rate constant of polymer reversal inside a pore. Journal of Chemical Physics, 2008, 128, 114903.	1.2	32
364	New method for deciphering free energy landscape of three-state proteins. Journal of Chemical Physics, 2008, 129, 105102.	1.2	9
365	Single molecule force spectroscopy reveals engineered metal chelation is a general approach to enhance mechanical stability of proteins. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11152-11157.	3.3	96
366	Atomic force microscopy reveals parallel mechanical unfolding pathways of T4 lysozyme: Evidence for a kinetic partitioning mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1885-1890.	3.3	93
367	Evolution of the <i>ssrA</i> degradation tag in <i>Mycoplasma</i> : Specificity switch to a different protease. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16113-16118.	3.3	65
368	Reconstructing the free-energy landscape of a polyprotein by single-molecule experiments. Europhysics Letters, 2008, 82, 58006.	0.7	39
369	Model for Stretching and Unfolding the Giant Multidomain Muscle Protein Using Single-Molecule Force Spectroscopy. Physical Review Letters, 2008, 101, 248301.	2.9	37
370	Role of pulling direction in understanding the energy landscape of proteins. Physical Review E, 2008, 78, 021905.	0.8	12
371	Mechanical Unfolding and Refolding Pathways of Ubiquitin. Physical Review Letters, 2008, 100, 158104.	2.9	38
372	Viscoelasticity and Dynamics of Single Biopolymer Chain Measured with Magnetically Modulated Atomic Force Microscopy. AIP Conference Proceedings, 2008, , .	0.3	2
373	Translating Mechanical Force into Discrete Biochemical Signal Changes. , 0, , 286-338.		0

#	ARTICLE	IF	CITATIONS
374	Maximum likelihood estimation of protein kinetic parameters under weak assumptions from unfolding force spectroscopy experiments. <i>Physical Review E</i> , 2009, 80, 061916.	0.8	8
375	Direct measurement of spatial modes of a microcantilever from thermal noise. <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	19
376	On the remarkable mechanostability of scaffoldins and the mechanical clamp motif. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 13791-13796.	3.3	116
377	Work distribution in manipulated single biomolecules. <i>Physical Biology</i> , 2009, 6, 025011.	0.8	5
378	Substrate Binding Tunes Conformational Flexibility and Kinetic Stability of an Amino Acid Antiporter. <i>Journal of Biological Chemistry</i> , 2009, 284, 18651-18663.	1.6	36
379	Stretching Single Talin Rod Molecules Activates Vinculin Binding. <i>Science</i> , 2009, 323, 638-641.	6.0	1,297
380	Osmolyte-induced separation of the mechanical folding phases of ubiquitin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 10540-10545.	3.3	46
381	Stretching and unfolding of multidomain biopolymers: a statistical mechanics theory of titin. <i>Physical Biology</i> , 2009, 6, 025005.	0.8	15
382	Functional Role of the Extended Loop 2 in the Myosin 9b Head for Binding F-actin. <i>Journal of Biological Chemistry</i> , 2009, 284, 3663-3671.	1.6	14
383	Force spectroscopy of a single artificial biomolecule bond: The Kramers TM high-barrier limit holds close to the critical force. <i>Journal of Chemical Physics</i> , 2009, 130, 051103.	1.2	7
384	Mechanical Strength of 17 134 Model Proteins and Cysteine Slipknots. <i>PLoS Computational Biology</i> , 2009, 5, e1000547.	1.5	104
385	Nonparametric density estimation and optimal bandwidth selection for protein unfolding and unbinding data. <i>Journal of Chemical Physics</i> , 2009, 130, 015102.	1.2	21
386	Naturally Occurring Mutations Alter the Stability of Polycystin-1 Polycystic Kidney Disease (PKD) Domains. <i>Journal of Biological Chemistry</i> , 2009, 284, 32942-32949.	1.6	23
387	Direct observation of an ensemble of stable collapsed states in the mechanical folding of ubiquitin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 10534-10539.	3.3	116
388	Discovery Through the Computational Microscope. <i>Structure</i> , 2009, 17, 1295-1306.	1.6	302
390	Single-Molecule Mechanical Unfolding of Amyloidogenic β -Microglobulin: The Force-Spectroscopy Approach. <i>ChemPhysChem</i> , 2009, 10, 1471-1477.	1.0	6
391	A Force-Spectroscopy-Based Single-Molecule Metal-Binding Assay. <i>ChemPhysChem</i> , 2009, 10, 1450-1454.	1.0	15
392	Surprising Simplicity in the Single-Molecule Folding Mechanics of Proteins. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 820-822.	7.2	19

#	ARTICLE	IF	CITATIONS
393	Mechanics of forced unfolding of proteins. <i>Acta Biomaterialia</i> , 2009, 5, 1855-1863.	4.1	25
394	Mechanical Signaling on the Single Protein Level Studied Using Steered Molecular Dynamics. <i>Cell Biochemistry and Biophysics</i> , 2009, 55, 141-152.	0.9	27
395	Force-activated reactivity switch in a bimolecular chemical reaction. <i>Nature Chemistry</i> , 2009, 1, 236-242.	6.6	113
396	Comparison of transition states obtained upon modeling of unfolding of immunoglobulin-binding domains of proteins L and G caused by external action with transition states obtained in the absence of force probed by experiments. <i>Biochemistry (Moscow)</i> , 2009, 74, 316-328.	0.7	4
397	Single-molecule force spectroscopy of DNA-based reversible polymer bridges: Surface robustness and homogeneity. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 346, 20-27.	2.3	3
398	AFM measurements of interactions between the platelet integrin receptor GPIIb/IIIa and fibrinogen. <i>Colloids and Surfaces B: Biointerfaces</i> , 2009, 71, 138-147.	2.5	30
399	Single homopolypeptide chains collapse into mechanically rigid conformations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 12605-12610.	3.3	84
400	Mechanical unfolding of proteins L and G with constant force: Similarities and differences. <i>Journal of Chemical Physics</i> , 2009, 131, 045102.	1.2	29
401	Single Molecular Pair Interactions between Hydrophobically Modified Hydroxyethyl Cellulose and Amylose Determined by Dynamic Force Spectroscopy. <i>Langmuir</i> , 2009, 25, 10174-10182.	1.6	14
402	Temperature and Chemical Denaturant Dependence of Forced Unfolding of Titin I27. <i>Journal of Physical Chemistry B</i> , 2009, 113, 10845-10848.	1.2	35
403	Direct Observation of Tug-of-War during the Folding of a Mutually Exclusive Protein. <i>Journal of the American Chemical Society</i> , 2009, 131, 13347-13354.	6.6	27
404	Nanomechanics of Full-Length Nebulin: An Elastic Strain Gauge in the Skeletal Muscle Sarcomere. <i>Langmuir</i> , 2009, 25, 7496-7505.	1.6	12
405	How to measure forces with atomic force microscopy without significant influence from nonlinear optical lever sensitivity. <i>Review of Scientific Instruments</i> , 2009, 80, 093701.	0.6	53
406	Nanomechanical Properties of Tenascin-X Revealed by Single-Molecule Force Spectroscopy. <i>Journal of Molecular Biology</i> , 2009, 385, 1277-1286.	2.0	20
407	Mechanical Design of the Third FnIII Domain of Tenascin-C. <i>Journal of Molecular Biology</i> , 2009, 386, 1327-1342.	2.0	18
408	Modulating the Mechanical Stability of Extracellular Matrix Protein Tenascin-C in a Controlled and Reversible Fashion. <i>Journal of Molecular Biology</i> , 2009, 390, 820-829.	2.0	10
409	Mechanochemistry: One Bond at a Time. <i>ACS Nano</i> , 2009, 3, 1628-1645.	7.3	127
410	The C2 Domains of Human Synaptotagmin 1 Have Distinct Mechanical Properties. <i>Biophysical Journal</i> , 2009, 96, 1083-1090.	0.2	24

#	ARTICLE	IF	CITATIONS
411	Prestress and Adhesion Site Dynamics Control Cell Sensitivity to Extracellular Stiffness. <i>Biophysical Journal</i> , 2009, 96, 2009-2022.	0.2	38
412	Mechanical Characterization of Protein L in the Low-Force Regime by Electromagnetic Tweezers/Evanescence Nanometry. <i>Biophysical Journal</i> , 2009, 96, 3810-3821.	0.2	61
413	Crowding Effects on the Mechanical Stability and Unfolding Pathways of Ubiquitin. <i>Journal of Physical Chemistry B</i> , 2009, 113, 359-368.	1.2	27
414	Versatile cloning system for construction of multimeric proteins for use in atomic force microscopy. <i>Protein Science</i> , 2009, 11, 2179-2183.	3.1	102
415	Mechanically unfolding proteins: The effect of unfolding history and the supramolecular scaffold. <i>Protein Science</i> , 2009, 11, 2759-2765.	3.1	75
416	Pretransition and progressive softening of bovine carbonic anhydrase II as probed by single molecule atomic force microscopy. <i>Protein Science</i> , 2009, 14, 1447-1457.	3.1	58
417	Introduction to Atomic Force Microscopy (AFM) in Biology. <i>Current Protocols in Protein Science</i> , 2009, 58, Unit 17.7.1-19.	2.8	25
418	Handbook of Single-Molecule Biophysics. , 2009, , .		70
419	Ultrastable Atomic Force Microscopy: Atomic-Scale Stability and Registration in Ambient Conditions. <i>Nano Letters</i> , 2009, 9, 1451-1456.	4.5	82
420	Domain Insertion Effectively Regulates the Mechanical Unfolding Hierarchy of Elastomeric Proteins: Toward Engineering Multifunctional Elastomeric Proteins. <i>Journal of the American Chemical Society</i> , 2009, 131, 14050-14056.	6.6	23
421	Extended Kalman filter estimates the contour length of a protein in single molecule atomic force microscopy experiments. <i>Review of Scientific Instruments</i> , 2009, 80, 113104.	0.6	4
422	Simulation of the Mechanical Unfolding of the Ubiquitin by Pulling in Different Directions with Constant Speed. <i>Macromolecular Symposia</i> , 2009, 278, 105-113.	0.4	2
423	Two-, Three-, and Four-State Events Occur in the Mechanical Unfolding of Small Protein L Using Molecular Dynamics Simulations. <i>Protein and Peptide Letters</i> , 2010, 17, 92-103.	0.4	11
424	Design, Implementation, and Force Modeling of Quadrupole Magnetic Tweezers. <i>IEEE/ASME Transactions on Mechatronics</i> , 2010, 15, 704-713.	3.7	45
425	Understanding biology by stretching proteins: recent progress. <i>Current Opinion in Structural Biology</i> , 2010, 20, 63-69.	2.6	69
426	Unravelling the design principles for single protein mechanical strength. <i>Current Opinion in Structural Biology</i> , 2010, 20, 508-517.	2.6	61
428	Biomolecules under mechanical force. <i>Physics Reports</i> , 2010, 486, 1-74.	10.3	211
429	Uphill unfolding of native protein conformations in cubic lattices. <i>Journal of Computational Science</i> , 2010, 1, 6-12.	1.5	2

#	ARTICLE	IF	CITATIONS
430	Phenotypic effects of Ehlers-Danlos syndrome-associated mutation on the FnIII domain of tenascin-C. <i>Protein Science</i> , 2010, 19, 2231-2239.	3.1	8
431	Optical trapping with high forces reveals unexpected behaviors of prion fibrils. <i>Nature Structural and Molecular Biology</i> , 2010, 17, 1422-1430.	3.6	56
432	Designed biomaterials to mimic the mechanical properties of muscles. <i>Nature</i> , 2010, 465, 69-73.	13.7	480
433	RNA Reactions One Molecule at a Time. <i>Cold Spring Harbor Perspectives in Biology</i> , 2010, 2, a003624-a003624.	2.3	23
434	Full distance-resolved folding energy landscape of one single protein molecule. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 2013-2018.	3.3	187
435	Quantitative approaches for characterising fibrillar protein nanostructures. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1274, 1.	0.1	0
436	Deconvolution of dynamic mechanical networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 21493-21498.	3.3	24
437	Naturally Occurring Osmolytes Modulate the Nanomechanical Properties of Polycystic Kidney Disease Domains. <i>Journal of Biological Chemistry</i> , 2010, 285, 38438-38443.	1.6	23
438	Correction of the viscous drag induced errors in macromolecular manipulation experiments using atomic force microscope. <i>Review of Scientific Instruments</i> , 2010, 81, 063703.	0.6	18
439	ROLE OF PULLING DIRECTION IN UNDERSTANDING THE ANISOTROPY OF THE RESISTANCE OF PROTEINS TO FORCE-INDUCED MECHANICAL UNFOLDING. <i>Modern Physics Letters B</i> , 2010, 24, 379-399.	1.0	8
440	Isopeptide Bonds Block the Mechanical Extension of Pili in Pathogenic <i>Streptococcus pyogenes</i> . <i>Journal of Biological Chemistry</i> , 2010, 285, 11235-11242.	1.6	94
441	Full Reconstruction of a Vectorial Protein Folding Pathway by Atomic Force Microscopy and Molecular Dynamics Simulations*. <i>Journal of Biological Chemistry</i> , 2010, 285, 38167-38172.	1.6	36
442	On the Impact of Precursor Unfolding during Protein Import into Chloroplasts. <i>Molecular Plant</i> , 2010, 3, 499-508.	3.9	29
443	Nanoindentation of virus capsids in a molecular model. <i>Journal of Chemical Physics</i> , 2010, 132, 015101.	1.2	41
444	Pathways of mechanical unfolding of FnIII10: Low force intermediates. <i>Journal of Chemical Physics</i> , 2010, 133, 065101.	1.2	14
445	First passage time distribution in stochastic processes with moving and static absorbing boundaries with application to biological rupture experiments. <i>Journal of Chemical Physics</i> , 2010, 133, 034105.	1.2	30
446	Modulating the Mechanical Stability of Extracellular Matrix Protein Tenascin-C in a Controlled and Reversible Fashion. <i>Biophysical Journal</i> , 2010, 98, 595a.	0.2	0
447	Equilibrium Sampling for Biomolecules under Mechanical Tension. <i>Biophysical Journal</i> , 2010, 98, 733-740.	0.2	6

#	ARTICLE	IF	CITATIONS
448	Tertiary and Secondary Structure Elasticity of a Six-Ig Titin Chain. <i>Biophysical Journal</i> , 2010, 98, 1085-1095.	0.2	30
449	Damage, Self-Healing, and Hysteresis in Spider Silks. <i>Biophysical Journal</i> , 2010, 98, 1941-1948.	0.2	38
450	Collapse Dynamics of Single Proteins Extended by Force. <i>Biophysical Journal</i> , 2010, 98, 2692-2701.	0.2	79
451	Fast and Forceful Refolding of Stretched α -Helical Solenoid Proteins. <i>Biophysical Journal</i> , 2010, 98, 3086-3092.	0.2	49
452	Mechanical Unfolding of Acylphosphatase Studied by Single-Molecule Force Spectroscopy and MD Simulations. <i>Biophysical Journal</i> , 2010, 99, 238-247.	0.2	26
453	Cholesterol-Dependent Nanomechanical Stability of Phase-Segregated Multicomponent Lipid Bilayers. <i>Biophysical Journal</i> , 2010, 99, 507-516.	0.2	96
454	A Tactile Response in <i>Staphylococcus aureus</i> . <i>Biophysical Journal</i> , 2010, 99, 2803-2811.	0.2	19
455	Nanomechanics of Lipid Bilayers: Heads or Tails?. <i>Journal of the American Chemical Society</i> , 2010, 132, 12874-12886.	6.6	135
456	Bonds between Fibronectin and Fibronectin-Binding Proteins on <i>Staphylococcus aureus</i> and <i>Lactococcus lactis</i> . <i>Langmuir</i> , 2010, 26, 10764-10770.	1.6	35
457	Protein Mechanics: From Single Molecules to Functional Biomaterials. <i>Accounts of Chemical Research</i> , 2010, 43, 1331-1341.	7.6	110
458	Methods in Modern Biophysics. , 2010, , .		3
459	Monte Carlo simulation of mechanical unfolding of proteins based on a simple two-state model. <i>International Journal of Biological Macromolecules</i> , 2010, 46, 159-166.	3.6	11
460	Molecular Basis for the Structural Stability of an Enclosed β -Barrel Loop. <i>Journal of Molecular Biology</i> , 2010, 402, 475-489.	2.0	12
461	Chloroplast Import Signals: The Length Requirement for Translocation In Vitro and In Vivo. <i>Journal of Molecular Biology</i> , 2010, 402, 510-523.	2.0	73
462	Measuring "Unmeasurable" Folding Kinetics of Proteins by Single-Molecule Force Spectroscopy. <i>Journal of Molecular Biology</i> , 2010, 402, 610-617.	2.0	6
463	Investigation of an Anomalously Accelerating Substitution in the Folding of a Prototypical Two-State Protein. <i>Journal of Molecular Biology</i> , 2010, 403, 446-458.	2.0	17
464	Nanomechanics of lipid bilayers by force spectroscopy with AFM: A perspective. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2010, 1798, 741-749.	1.4	148
465	Rate theories for biologists. <i>Quarterly Reviews of Biophysics</i> , 2010, 43, 219-293.	2.4	120

#	ARTICLE	IF	CITATIONS
466	Stretching single polypeptides: The effect of rotational constraints in the backbone. <i>Europhysics Letters</i> , 2010, 92, 53001.	0.7	18
467	Computational and single-molecule force studies of a macro domain protein reveal a key molecular determinant for mechanical stability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 1989-1994.	3.3	54
469	Application of HaloTag Protein to Covalent Immobilization of Recombinant Proteins for Single Molecule Force Spectroscopy. <i>Langmuir</i> , 2010, 26, 10433-10436.	1.6	44
470	What do we really measure in AFM punch-through experiments on supported lipid bilayers?. <i>Soft Matter</i> , 2011, 7, 7054.	1.2	32
471	Contrasting the Individual Reactive Pathways in Protein Unfolding and Disulfide Bond Reduction Observed within a Single Protein. <i>Journal of the American Chemical Society</i> , 2011, 133, 3104-3113.	6.6	21
472	Highly Covalent Ferric-Thiolate Bonds Exhibit Surprisingly Low Mechanical Stability. <i>Journal of the American Chemical Society</i> , 2011, 133, 6791-6798.	6.6	68
473	Force-Induced Change in Protein Unfolding Mechanism: Discrete or Continuous Switch?. <i>Journal of Physical Chemistry B</i> , 2011, 115, 1546-1561.	1.2	50
474	Single-Molecule Force-Clamp Spectroscopy: Dwell Time Analysis and Practical Considerations. <i>Langmuir</i> , 2011, 27, 1440-1447.	1.6	13
475	Facile Method of Constructing Polyproteins for Single-Molecule Force Spectroscopy Studies. <i>Langmuir</i> , 2011, 27, 5713-5718.	1.6	30
476	Chemical, Thermal, and Electric Field Induced Unfolding of Single Protein Molecules Studied Using Nanopores. <i>Analytical Chemistry</i> , 2011, 83, 5137-5144.	3.2	123
477	Inhibitor Binding Increases the Mechanical Stability of Staphylococcal Nuclease. <i>Biophysical Journal</i> , 2011, 100, 1094-1099.	0.2	30
478	Single Molecule Force Spectroscopy Reveals that Electrostatic Interactions Affect the Mechanical Stability of Proteins. <i>Biophysical Journal</i> , 2011, 100, 1534-1541.	0.2	31
479	Mechanically Unfolding Protein L Using a Laser-Feedback-Controlled Cantilever. <i>Biophysical Journal</i> , 2011, 100, 1800-1809.	0.2	4
480	Mechanics on Myocardium Deficient in the N2B Region of Titin: The Cardiac-Unique Spring Element Improves Efficiency of the Cardiac Cycle. <i>Biophysical Journal</i> , 2011, 101, 1385-1392.	0.2	24
481	Differential Mechanical Stability of Filamin A Rod Segments. <i>Biophysical Journal</i> , 2011, 101, 1231-1237.	0.2	51
482	Nonkinetic Modeling of the Mechanical Unfolding of Multimodular Proteins: Theory and Experiments. <i>Biophysical Journal</i> , 2011, 101, 1504-1512.	0.2	7
483	Direct Measurements of the Mechanical Stability of Zinc-Thiolate Bonds in Rubredoxin by Single-Molecule Atomic Force Microscopy. <i>Biophysical Journal</i> , 2011, 101, 1467-1473.	0.2	27
484	Mechanical Unfolding of Cardiac Myosin Binding Protein-C by Atomic Force Microscopy. <i>Biophysical Journal</i> , 2011, 101, 1968-1977.	0.2	40

#	ARTICLE	IF	CITATIONS
485	Dynamics of Protein Folding and Cofactor Binding Monitored by Single-Molecule Force Spectroscopy. <i>Biophysical Journal</i> , 2011, 101, 2009-2017.	0.2	24
487	Structure-Based Models of Biomolecules: Stretching of Proteins, Dynamics of Knots, Hydrodynamic Effects, and Indentation of Virus Capsids. , 2011, , 179-208.		3
488	Protein Nanomechanics. , 2011, , 227-261.		2
490	Tip-Based Nanofabrication. , 2011, , .		24
491	Adhesion through Single Peptide Aptamers. <i>Journal of Physical Chemistry A</i> , 2011, 115, 3657-3664.	1.1	20
492	Highly Anisotropic Stability and Folding Kinetics of a Single Coiled Coil Protein under Mechanical Tension. <i>Journal of the American Chemical Society</i> , 2011, 133, 12749-12757.	6.6	57
493	Kinetic Partitioning Mechanism Governs the Folding of the Third FnIII Domain of Tenascin-C: Evidence at the Single-Molecule Level. <i>Journal of Molecular Biology</i> , 2011, 412, 698-709.	2.0	12
494	Molecular Origin of the Hierarchical Elasticity of Titin: Simulation, Experiment, and Theory. <i>Annual Review of Biophysics</i> , 2011, 40, 187-203.	4.5	53
495	Single-molecule Force Spectroscopy Reveals the Individual Mechanical Unfolding Pathways of a Surface Layer Protein. <i>Journal of Biological Chemistry</i> , 2011, 286, 27416-27424.	1.6	16
496	Nanomechanics of Streptavidin Hubs for Molecular Materials. <i>Advanced Materials</i> , 2011, 23, 5684-5688.	11.1	26
498	Single-Molecule-Level Evidence for the Osmophobic Effect. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 4394-4397.	7.2	25
499	Forcing a connection: Impacts of single-molecule force spectroscopy on in vivo tension sensing. <i>Biopolymers</i> , 2011, 95, 332-344.	1.2	26
500	Probing osmolyte participation in the unfolding transition state of a protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 9759-9764.	3.3	13
501	Open source platform for the execution and analysis of mechanical refolding experiments. <i>Bioinformatics</i> , 2011, 27, 423-425.	1.8	6
502	Probing the Folded State of Fibronectin Type III Domains in Stretched Fibrils by Measuring Buried Cysteine Accessibility. <i>Journal of Biological Chemistry</i> , 2011, 286, 26375-26382.	1.6	40
503	Fast-folding α -helices as reversible strain absorbers in the muscle protein myomesin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 14139-14144.	3.3	59
504	Direct Quantification of the Attempt Frequency Determining the Mechanical Unfolding of Ubiquitin Protein. <i>Journal of Biological Chemistry</i> , 2011, 286, 31072-31079.	1.6	52
505	Ligand-modulated Parallel Mechanical Unfolding Pathways of Maltose-binding Proteins. <i>Journal of Biological Chemistry</i> , 2011, 286, 28056-28065.	1.6	45

#	ARTICLE	IF	CITATIONS
506	Molecular jammingâ€”The cystine slipknot mechanical clamp in all-atom simulations. <i>Journal of Chemical Physics</i> , 2011, 134, 085102.	1.2	16
507	Common Features at the Start of the Neurodegeneration Cascade. <i>PLoS Biology</i> , 2012, 10, e1001335.	2.6	60
508	Using Molecular Mechanics to Predict Bulk Material Properties of Fibronectin Fibers. <i>PLoS Computational Biology</i> , 2012, 8, e1002845.	1.5	21
509	Nanomechanics of Proteins, Both Folded and Disordered. , 2012, , 1-47.		0
510	Direct observation of proteolytic cleavage at the S2 site upon forced unfolding of the Notch negative regulatory region. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, E2757-65.	3.3	60
511	Spontaneous Dimerization of Titin Protein Z1Z2 Domains Induces Strong Nanomechanical Anchoring. <i>Journal of Biological Chemistry</i> , 2012, 287, 20240-20247.	1.6	11
512	Mechanical unfolding studies of protein molecules. <i>Biophysics (Nagoya-shi, Japan)</i> , 2012, 8, 51-58.	0.4	4
513	Dissociation Rate Constants of Human Fibronectin Binding to Fibronectin-binding Proteins on Living <i>Staphylococcus aureus</i> Isolated from Clinical Patients. <i>Journal of Biological Chemistry</i> , 2012, 287, 6693-6701.	1.6	28
514	Protein Folding Drives Disulfide Formation. <i>Cell</i> , 2012, 151, 794-806.	13.5	158
515	Analytical Approaches for Studying Transporters, Channels and Porins. <i>Chemical Reviews</i> , 2012, 112, 6227-6249.	23.0	42
516	Disease Detection and Management via Single Nanopore-Based Sensors. <i>Chemical Reviews</i> , 2012, 112, 6431-6451.	23.0	222
517	Using Nanoscale Substrate Curvature to Control the Dimerization of a Surface-Bound Protein. <i>ACS Nano</i> , 2012, 6, 10571-10580.	7.3	13
518	Iterative cloning, overexpression, purification and isotopic labeling of an engineered dimer of a Ca ²⁺ -binding protein of the Î² ² Î³-crystallin superfamily from <i>Methanosarcina acetivorans</i> . <i>Protein Expression and Purification</i> , 2012, 84, 116-122.	0.6	1
519	Energy landscape analysis of native folding of the prion protein yields the diffusion constant, transition path time, and rates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 14452-14457.	3.3	140
520	Stretching single polysaccharides and proteins using atomic force microscopy. <i>Chemical Society Reviews</i> , 2012, 41, 3523.	18.7	118
521	A Highly Compliant Protein Native State with a Spontaneous-like Mechanical Unfolding Pathway. <i>Journal of the American Chemical Society</i> , 2012, 134, 17068-17075.	6.6	29
522	AFM characterization of biomolecules in physiological environment by an advanced nanofabricated probe. <i>Microscopy Research and Technique</i> , 2012, 75, 1723-1731.	1.2	7
523	Polymer Nanomechanics. , 2012, , 377-404.		1

#	ARTICLE	IF	CITATIONS
524	3.7 Simulation Studies of Force-Induced Unfolding. , 2012, , 138-147.		0
525	Worm-Like Ising Model for Protein Mechanical Unfolding under the Effect of Osmolytes. Biophysical Journal, 2012, 102, 342-350.	0.2	13
526	Minimalist Model for Force-Dependent DNA Replication. Biophysical Journal, 2012, 102, 810-818.	0.2	4
527	Tracking UNC-45 Chaperone-Myosin Interaction with a Titin Mechanical Reporter. Biophysical Journal, 2012, 102, 2212-2219.	0.2	24
528	Low Folding Cooperativity of Hp35 Revealed by Single-Molecule Force Spectroscopy and Molecular Dynamics Simulation. Biophysical Journal, 2012, 102, 1944-1951.	0.2	14
529	Single-Molecule Experiments Reveal the Flexibility of a Per-ARNT-Sim Domain and the Kinetic Partitioning in the Unfolding Pathway under Force. Biophysical Journal, 2012, 102, 2149-2157.	0.2	25
530	Engineered Bi-Histidine Metal Chelation Sites Map the Structure of the Mechanical Unfolding Transition State of an Elastomeric Protein Domain GB1. Biophysical Journal, 2012, 103, 807-816.	0.2	14
531	Mechanical Properties of β^2 -Catenin Revealed by Single-Molecule Experiments. Biophysical Journal, 2012, 103, 1744-1752.	0.2	28
532	Unequivocal Single-Molecule Force Spectroscopy of Intrinsically Disordered Proteins. Methods in Molecular Biology, 2012, 896, 71-87.	0.4	7
533	Single Molecule Force Spectroscopy Reveals Critical Roles of Hydrophobic Core Packing in Determining the Mechanical Stability of Protein GB1. Langmuir, 2012, 28, 12319-12325.	1.6	20
534	Force Spectroscopy of Self-Associating Homopolymers. Macromolecules, 2012, 45, 6704-6718.	2.2	16
535	A Versatile "Multiple Fishhooks" Approach for the Study of Ligand-Receptor Interactions Using Single-Molecule Atomic Force Microscopy. Langmuir, 2012, 28, 10020-10025.	1.6	21
536	The Molecular Mechanism Underlying Mechanical Anisotropy of the Protein GB1. Biophysical Journal, 2012, 103, 2361-2368.	0.2	32
537	Hydrogen Bond Strength Modulates the Mechanical Strength of Ferric-Thiolate Bonds in Rubredoxin. Journal of the American Chemical Society, 2012, 134, 4124-4131.	6.6	63
538	Evolution of the Potential Energy Landscape with Static Pulling Force for Two Model Proteins. Journal of Physical Chemistry B, 2012, 116, 8394-8411.	1.2	37
539	Multiscale characterization of a chimeric biomimetic polypeptide for stem cell culture. Bioinspiration and Biomimetics, 2012, 7, 046007.	1.5	18
540	A Rapid Cloning Method Employing Orthogonal End Protection. PLoS ONE, 2012, 7, e37617.	1.1	3
541	Protein-DNA Interactions Studies with Single Tethered Molecule Techniques. , 0, , .		0

#	ARTICLE	IF	CITATIONS
542	Protein unfolding and degradation by the AAA+ Lon protease. <i>Protein Science</i> , 2012, 21, 268-278.	3.1	40
544	Mechanically Untying a Protein Slipknot: Multiple Pathways Revealed by Force Spectroscopy and Steered Molecular Dynamics Simulations. <i>Journal of the American Chemical Society</i> , 2012, 134, 10428-10435.	6.6	60
545	Single molecule force spectroscopy using polyproteins. <i>Chemical Society Reviews</i> , 2012, 41, 4781.	18.7	153
546	Computational investigation of the effect of thermal perturbation on the mechanical unfolding of titin I27. <i>Journal of Molecular Modeling</i> , 2012, 18, 2823-2829.	0.8	8
547	Influence of substrate rigidity on primary nucleation of cell adhesion: A thermal fluctuation model. <i>Journal of Colloid and Interface Science</i> , 2012, 366, 200-208.	5.0	9
548	Hepatitis B surface antigen-antibody interactions studied by optical tweezers. <i>IET Nanobiotechnology</i> , 2012, 6, 9.	1.9	9
549	A Nanoscale Force Probe for Gauging Intermolecular Interactions. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 1903-1906.	7.2	13
550	Single Molecule Force Spectroscopy Reveals That Iron Is Released from the Active Site of Rubredoxin by a Stochastic Mechanism. <i>Journal of the American Chemical Society</i> , 2013, 135, 7992-8000.	6.6	28
551	Biophysics of the Failing Heart. <i>Biological and Medical Physics Series</i> , 2013, , .	0.3	5
552	Absorption Spectroscopy to Determine Macromolecule Structural Changes. , 2013, , 30-31.		1
553	A structure-based model fails to probe the mechanical unfolding pathways of the titin I27 domain. <i>Journal of Chemical Physics</i> , 2013, 139, 065103.	1.2	13
554	Ab Initio Molecular Modeling. , 2013, , 23-23.		0
555	Alternative Splicing Regulation: Structural and Biophysical Studies. , 2013, , 53-57.		1
556	Single Molecule Force Spectroscopy Reveals Critical Roles of Hydrophobic Core Packing in Determining the Mechanical Stability of Protein GB1. <i>Biophysical Journal</i> , 2013, 104, 399a.	0.2	4
557	Single-molecule Studies of Proteins. , 2013, , .		7
558	ATP-Driven Mechanical Work Performed by Molecular Motors. , 2013, , 135-141.		0
560	Plant protein interactions studied using AFM force spectroscopy: nanomechanical and adhesion properties. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 11339.	1.3	14
561	Conformational Dynamics of Single Protein Molecules Studied by Direct Mechanical Manipulation. <i>Advances in Protein Chemistry and Structural Biology</i> , 2013, 92, 93-133.	1.0	6

#	ARTICLE	IF	CITATIONS
562	High-Speed Force Spectroscopy Unfolds Titin at the Velocity of Molecular Dynamics Simulations. <i>Science</i> , 2013, 342, 741-743.	6.0	216
563	Molecular Biophysics for the Life Sciences. , 2013, , .		2
564	Single Molecule Force Spectroscopy Reveals the Molecular Mechanical Anisotropy of the FeS ₄ Metal Center in Rubredoxin. <i>Journal of the American Chemical Society</i> , 2013, 135, 17783-17792.	6.6	31
565	A New, Modular Mass Calibrant for High-Mass MALDI-MS. <i>Analytical Chemistry</i> , 2013, 85, 3425-3432.	3.2	20
566	Experimental and theoretical studies of mechanical unfolding of different proteins. <i>Biochemistry (Moscow)</i> , 2013, 78, 1216-1227.	0.7	3
567	Forced protein unfolding leads to highly elastic and tough protein hydrogels. <i>Nature Communications</i> , 2013, 4, 2974.	5.8	134
568	Multiple Unfolding Pathways of Leucine Binding Protein (LBP) Probed by Single-Molecule Force Spectroscopy (SMFS). <i>Journal of the American Chemical Society</i> , 2013, 135, 14768-14774.	6.6	36
569	Single molecule force spectroscopy reveals the temperature-dependent robustness and malleability of a hyperthermophilic protein. <i>Soft Matter</i> , 2013, 9, 9016.	1.2	18
570	Towards design principles for determining the mechanical stability of proteins. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 15767.	1.3	57
571	Protein Folding Under Mechanical Forces: A Physiological View. <i>Physiology</i> , 2013, 28, 9-17.	1.6	38
572	Force as a single molecule probe of multidimensional protein energy landscapes. <i>Current Opinion in Structural Biology</i> , 2013, 23, 48-57.	2.6	117
573	Orthogonal Self-Assembly in Folding Block Copolymers. <i>Journal of the American Chemical Society</i> , 2013, 135, 501-510.	6.6	184
574	Elasticity, structure, and relaxation of extended proteins under force. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 3847-3852.	3.3	81
575	Domain-Domain Interactions in Filamin A (16â€“23) Impose a Hierarchy of Unfolding Forces. <i>Biophysical Journal</i> , 2013, 104, 2022-2030.	0.2	8
576	Interactions of <i>Thellungiella</i> <i>salsuginea</i> dehydrins TsDHN-1 and TsDHN-2 with membranes at cold and ambient temperaturesâ€”Surface morphology and single-molecule force measurements show phase separation, and reveal tertiary and quaternary associations. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 967-980.	1.4	34
577	P130Cas substrate domain is intrinsically disordered as characterized by single-molecule force measurements. <i>Biophysical Chemistry</i> , 2013, 180-181, 37-43.	1.5	12
578	Towards constructing extracellular matrix-mimetic hydrogels: An elastic hydrogel constructed from tandem modular proteins containing tenascin FnIII domains. <i>Acta Biomaterialia</i> , 2013, 9, 6481-6491.	4.1	45
579	Intermolecular interactions dictating adhesion between ZnO and graphite. <i>Carbon</i> , 2013, 63, 517-522.	5.4	11

#	ARTICLE	IF	CITATIONS
580	Single-molecule studies of disulfide bond reduction pathways used by human thioredoxin. <i>Biophysical Chemistry</i> , 2013, 173-174, 31-38.	1.5	2
581	Single Molecule Force Spectroscopy on Titin Implicates Immunoglobulin Domain Stability as a Cardiac Disease Mechanism*. <i>Journal of Biological Chemistry</i> , 2013, 288, 5303-5315.	1.6	38
582	Mechanical Activation of a Multimeric Adhesive Protein Through Domain Conformational Change. <i>Physical Review Letters</i> , 2013, 110, 108102.	2.9	26
583	Absorbance of Light. , 2013, , 23-23.		0
584	Tracking unfolding and refolding reactions of single proteins using atomic force microscopy methods. <i>Methods</i> , 2013, 60, 151-160.	1.9	28
585	A1AO ATP Synthase. , 2013, , 23-23.		0
586	Single-Molecule Studies on PolySUMO Proteins Reveal Their Mechanical Flexibility. <i>Biophysical Journal</i> , 2013, 104, 2273-2281.	0.2	40
587	Functionalized AFM probes for force spectroscopy: eigenmode shapes and stiffness calibration through thermal noise measurements. <i>Nanotechnology</i> , 2013, 24, 225504.	1.3	21
588	Cross-Species Mechanical Fingerprinting of Cardiac Myosin Binding Protein-C. <i>Biophysical Journal</i> , 2013, 104, 2465-2475.	0.2	8
589	Surface-Dependent Mechanical Stability of Adsorbed Human Plasma Fibronectin on Ti6Al4V: Domain Unfolding and Stepwise Unraveling of Single Compact Molecules. <i>Langmuir</i> , 2013, 29, 8554-8560.	1.6	10
590	Atomic force microscopy and force spectroscopy on the assessment of protein folding and functionality. <i>Archives of Biochemistry and Biophysics</i> , 2013, 531, 116-127.	1.4	22
591	Altered mechanical properties of titin immunoglobulin domain 27 in the presence of calcium. <i>European Biophysics Journal</i> , 2013, 42, 301-307.	1.2	57
592	Mechanobiochemistry: harnessing biomacromolecules for force-responsive materials. <i>Polymer Chemistry</i> , 2013, 4, 3916.	1.9	44
593	Aminoacyl-tRNA Synthetases. , 2013, , 57-61.		1
594	Mechanical unfolding of long human telomeric RNA (TERRA). <i>Chemical Communications</i> , 2013, 49, 6397.	2.2	23
595	Force dependency of biochemical reactions measured by single-molecule force-clamp spectroscopy. <i>Nature Protocols</i> , 2013, 8, 1261-1276.	5.5	101
596	PaLaCe: A Coarse-Grain Protein Model for Studying Mechanical Properties. <i>Journal of Chemical Theory and Computation</i> , 2013, 9, 785-793.	2.3	48
597	Examination of the Polypeptide Substrate Specificity for <i>Escherichia coli</i> ClpA. <i>Biochemistry</i> , 2013, 52, 4941-4954.	1.2	16

#	ARTICLE	IF	CITATIONS
598	Tensile Mechanics of α -Helical Polypeptides. <i>Macromolecules</i> , 2013, 46, 7947-7956.	2.2	7
599	Single-Molecule Force Spectroscopy Identifies a Small Cold Shock Protein as Being Mechanically Robust. <i>Journal of Physical Chemistry B</i> , 2013, 117, 1819-1826.	1.2	23
600	Molecular organization of the mucins and glycocalyx underlying mucus transport over mucosal surfaces of the airways. <i>Mucosal Immunology</i> , 2013, 6, 379-392.	2.7	176
601	Effects of Ligand Binding on the Mechanical Properties of Ankyrin Repeat Protein Gankyrin. <i>PLoS Computational Biology</i> , 2013, 9, e1002864.	1.5	18
602	Analysis of the REJ Module of Polycystin-1 Using Molecular Modeling and Force-Spectroscopy Techniques. <i>Journal of Biophysics</i> , 2013, 2013, 1-11.	0.8	11
603	Thermodynamic modeling of a phase transformation in protein filaments with mechanical function. <i>New Journal of Physics</i> , 2013, 15, 065004.	1.2	10
604	An energetic model for macromolecules unfolding in stretching experiments. <i>Journal of the Royal Society Interface</i> , 2013, 10, 20130651.	1.5	34
605	Conformational Plasticity of the Essential Membrane-associated Mannosyltransferase PimA from <i>Mycobacteria</i> . <i>Journal of Biological Chemistry</i> , 2013, 288, 29797-29808.	1.6	24
606	Slippery Substrates Impair Function of a Bacterial Protease ATPase by Unbalancing Translocation versus Exit. <i>Journal of Biological Chemistry</i> , 2013, 288, 13243-13257.	1.6	26
607	Sawtooth patterns in force-extension curves of biomolecules: An equilibrium-statistical-mechanics theory. <i>Physical Review E</i> , 2013, 88, 012704.	0.8	22
608	Physics of engineered protein hydrogels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 587-601.	2.4	31
609	Cooperativity in Thermal and Force-Induced Protein Unfolding: Integration of Crack Propagation and Network Elasticity Models. <i>Physical Review Letters</i> , 2013, 110, 138101.	2.9	29
610	Insertion of Endocellulase Catalytic Domains into Thermostable Consensus Ankyrin Scaffolds: Effects on Stability and Cellulolytic Activity. <i>Applied and Environmental Microbiology</i> , 2013, 79, 6684-6696.	1.4	16
611	Protein-Based Textiles: Bio-Inspired and Bio-Derived Materials for Medical and Non-Medical Applications. <i>Journal of Chemical and Biological Interfaces</i> , 2013, 1, 25-34.	0.3	14
612	Recent Advances in Mathematical Modeling and Simulation of DNA Replication Process.. <i>Current Bioinformatics</i> , 2013, 8, 591-602.	0.7	0
613	Protein unfolding and refolding as transitions through virtual states. <i>Europhysics Letters</i> , 2014, 108, 28002.	0.7	5
614	Nanomechanics of Neurotoxic Proteins. , 2014, , 57-68.		0
615	Force-dependent conformational switch of α -catenin controls vinculin binding. <i>Nature Communications</i> , 2014, 5, 4525.	5.8	375

#	ARTICLE	IF	CITATIONS
616	Altered Thiol Chemistry in Human Amyotrophic Lateral Sclerosis-linked Mutants of Superoxide Dismutase 1. <i>Journal of Biological Chemistry</i> , 2014, 289, 26722-26732.	1.6	14
617	Mechanical unfolding of a simple model protein goes beyond the reach of one-dimensional descriptions. <i>Journal of Chemical Physics</i> , 2014, 141, 135102.	1.2	4
618	Theoretical tests of the mechanical protection strategy in protein nanomechanics. <i>Proteins: Structure, Function and Bioinformatics</i> , 2014, 82, 717-726.	1.5	13
619	Collisional and Coulombic Unfolding of Gas-Phase Proteins: High Correlation to Their Domain Structures in Solution. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 9209-9212.	7.2	110
620	The Structure of Misfolded Amyloidogenic Dimers: Computational Analysis of Force Spectroscopy Data. <i>Biophysical Journal</i> , 2014, 107, 2903-2910.	0.2	31
621	Reversible Unfolding and Refolding of Rubredoxin: A Single-Molecule Force Spectroscopy Study. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 14060-14063.	7.2	23
623	Single molecule mechanical manipulation for studying biological properties of proteins, <scp>DNA</scp>, and sugars. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2014, 6, 211-229.	3.3	34
624	Stochastic simulation of single-molecule pulling experiments. <i>European Physical Journal E</i> , 2014, 37, 99.	0.7	1
625	A wormlike chain model of forced desorption of a polymer adsorbed on an attractive wall. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P04020.	0.9	2
626	Mechanostability of Virus Capsids and Their Proteins in Structure-Based Models. <i>Springer Series in Bio-/neuroinformatics</i> , 2014, , 295-315.	0.1	3
627	Single-Molecule Studies of Intrinsically Disordered Proteins. <i>Chemical Reviews</i> , 2014, 114, 3281-3317.	23.0	121
628	How force unfolding differs from chemical denaturation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3413-3418.	3.3	83
629	Right- and left-handed three-helix proteins. II. Similarity and differences in mechanical unfolding of proteins. <i>Proteins: Structure, Function and Bioinformatics</i> , 2014, 82, 90-102.	1.5	10
630	Direct correlation of single-molecule properties with bulk mechanical performance for the biomimetic design of polymers. <i>Nature Materials</i> , 2014, 13, 1055-1062.	13.3	107
631	Mechanical Unfolding of Ribose Binding Protein and Its Comparison with Other Periplasmic Binding Proteins. <i>Journal of Physical Chemistry B</i> , 2014, 118, 11449-11454.	1.2	8
632	Reconstructing Folding Energy Landscapes by Single-Molecule Force Spectroscopy. <i>Annual Review of Biophysics</i> , 2014, 43, 19-39.	4.5	200
633	Stochastic but Highly Coordinated Protein Unfolding and Translocation by the ClpXP Proteolytic Machine. <i>Cell</i> , 2014, 158, 647-658.	13.5	120
634	Mechanically Tightening a Protein Slipknot into a Trefoil Knot. <i>Journal of the American Chemical Society</i> , 2014, 136, 11946-11955.	6.6	48

#	ARTICLE	IF	CITATIONS
635	Single Molecule Studies of Force-Induced S2 Site Exposure in the Mammalian Notch Negative Regulatory Domain. <i>Journal of Physical Chemistry B</i> , 2014, 118, 4761-4770.	1.2	5
636	Recombinant elastomeric protein biopolymers: progress and prospects. <i>Polymer Journal</i> , 2014, 46, 444-451.	1.3	21
637	The complex folding behavior of HIV-1-protease monomer revealed by optical-tweezer single-molecule experiments and molecular dynamics simulations. <i>Biophysical Chemistry</i> , 2014, 195, 32-42.	1.5	19
638	UNC-45B Chaperone: The Role of its Domains in the Interaction with the Myosin Motor Domain. <i>Biophysical Journal</i> , 2014, 107, 654-661.	0.2	15
639	Creation of a transient vapor nanogap between two fluidic reservoirs for single molecule manipulation. <i>Review of Scientific Instruments</i> , 2014, 85, 084301.	0.6	1
640	Mechanochemical basis of protein degradation by a double-ring AAA+ machine. <i>Nature Structural and Molecular Biology</i> , 2014, 21, 871-875.	3.6	77
641	Force spectroscopy of polymer desorption: theory and molecular dynamics simulations. <i>Soft Matter</i> , 2014, 10, 2785.	1.2	16
642	Electrostatically Tuned Self-Assembly of Branched Amphiphilic Peptides. <i>Journal of Physical Chemistry B</i> , 2014, 118, 8624-8630.	1.2	4
643	Theory of rapid force spectroscopy. <i>Nature Communications</i> , 2014, 5, 4463.	5.8	72
644	Molecular Calipers for Highly Precise and Accurate Measurements of Single-Protein Mechanics. <i>Langmuir</i> , 2014, 30, 2761-2767.	1.6	3
645	Ultrastable atomic force microscopy: Improved force and positional stability. <i>FEBS Letters</i> , 2014, 588, 3621-3630.	1.3	26
646	Kramers escape rate in overdamped systems with the power-law distribution. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014, 402, 299-305.	1.2	13
647	Improving single molecule force spectroscopy through automated real-time data collection and quantification of experimental conditions. <i>Ultramicroscopy</i> , 2014, 136, 7-14.	0.8	12
649	Capturing the Mechanical Unfolding Pathway of a Large Protein with Coiled-Coil Probes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 13429-13433.	7.2	17
651	Theory of force-extension curves for modular proteins and DNA hairpins. <i>Physical Review E</i> , 2015, 91, 052712.	0.8	23
652	Determination of contact maps in proteins: A combination of structural and chemical approaches. <i>Journal of Chemical Physics</i> , 2015, 143, 243105.	1.2	60
653	A Novel Strategy for Utilizing Voice Coil Servoactuators in Tensile Tests of Low Volume Protein Hydrogels. <i>Macromolecular Materials and Engineering</i> , 2015, 300, 369-376.	1.7	11
654	An Exploration of the Universe of Polyglutamine Structures. <i>PLoS Computational Biology</i> , 2015, 11, e1004541.	1.5	15

#	ARTICLE	IF	CITATIONS
655	Analyses of the cell mechanical damage during microinjection. <i>Soft Matter</i> , 2015, 11, 1434-1442.	1.2	24
656	The Role of Binding Site on the Mechanical Unfolding Mechanism of Ubiquitin. <i>Scientific Reports</i> , 2015, 5, 8757.	1.6	9
657	Protein denaturation at a single-molecule level: the effect of nonpolar environments and its implications on the unfolding mechanism by proteases. <i>Nanoscale</i> , 2015, 7, 2970-2977.	2.8	27
658	Mechanical stability analysis of the protein L immunoglobulin-binding domain by full alanine screening using molecular dynamics simulations. <i>Biotechnology Journal</i> , 2015, 10, 386-394.	1.8	6
659	Optimizing the calculation of energy landscape parameters from single-molecule protein unfolding experiments. <i>Physical Review E</i> , 2015, 91, 012710.	0.8	13
660	Direct Observation of Multimer Stabilization in the Mechanical Unfolding Pathway of a Protein Undergoing Oligomerization. <i>ACS Nano</i> , 2015, 9, 1189-1197.	7.3	18
661	Action of the Hsp70 chaperone system observed with single proteins. <i>Nature Communications</i> , 2015, 6, 6307.	5.8	58
662	Extraction of Accurate Biomolecular Parameters from Single-Molecule Force Spectroscopy Experiments. <i>ACS Nano</i> , 2015, 9, 1315-1324.	7.3	14
663	Small Peptide Binding Stiffens the Ubiquitin-like Protein SUMO1. <i>Biophysical Journal</i> , 2015, 108, 360-367.	0.2	15
664	Dynamics of Equilibrium Folding and Unfolding Transitions of Titin Immunoglobulin Domain under Constant Forces. <i>Journal of the American Chemical Society</i> , 2015, 137, 3540-3546.	6.6	135
665	Adsorption and desorption behavior of basic proteins on zeolites. <i>Separation and Purification Technology</i> , 2015, 149, 103-109.	3.9	25
666	Understanding the dependence on the pulling speed of the unfolding pathway of proteins. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015, 2015, P08003.	0.9	7
667	Multiscale Sensing of Antibody-Antigen Interactions by Organic Transistors and Single-Molecule Force Spectroscopy. <i>ACS Nano</i> , 2015, 9, 5051-5062.	7.3	113
668	Conformational rearrangements in the transmembrane domain of CNGA1 channels revealed by single-molecule force spectroscopy. <i>Nature Communications</i> , 2015, 6, 7093.	5.8	24
669	Identifying Sequential Substrate Binding at the Single-Molecule Level by Enzyme Mechanical Stabilization. <i>ACS Nano</i> , 2015, 9, 3996-4005.	7.3	16
670	Thermodynamics of force-dependent folding and unfolding of small protein and nucleic acid structures. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 1154-1160.	0.6	11
671	Specific Binding at the Cellulose Binding Module-Cellulose Interface Observed by Force Spectroscopy. <i>Langmuir</i> , 2015, 31, 3431-3440.	1.6	18
672	Direct Measurement of the Nanomechanical Stability of a Redox Protein Active Site and Its Dependence upon Metal Binding. <i>Journal of Physical Chemistry B</i> , 2015, 119, 12050-12058.	1.2	16

#	ARTICLE	IF	CITATIONS
673	Rapid and Robust Polyprotein Production Facilitates Single-Molecule Mechanical Characterization of Î±-Barrel Assembly Machinery Polypeptide Transport Associated Domains. ACS Nano, 2015, 9, 8811-8821.	7.3	26
674	Mapping the energy landscape for second-stage folding of a single membrane protein. Nature Chemical Biology, 2015, 11, 981-987.	3.9	78
675	Cooperative folding of intrinsically disordered domains drives assembly of a strong elongated protein. Nature Communications, 2015, 6, 7271.	5.8	52
676	The mechanochemistry of copper reports on the directionality of unfolding in model cupredoxin proteins. Nature Communications, 2015, 6, 7894.	5.8	57
677	Unbinding forces and energies between a siRNA molecule and a dendrimer measured by force spectroscopy. Nanoscale, 2015, 7, 20267-20276.	2.8	18
678	Influence of Secondary-Structure Folding on the Mutually Exclusive Folding Process of GL5/I27 Protein: Evidence from Molecular Dynamics Simulations. International Journal of Molecular Sciences, 2016, 17, 1962.	1.8	8
679	Single-molecule Force Spectroscopy Reveals the Calcium Dependence of the Alternative Conformations in the Native State of a ¹²⁵ I-Crystallin Protein. Journal of Biological Chemistry, 2016, 291, 18263-18275.	1.6	13
680	Synergistic enhancement of cellulase pairs linked by consensus ankyrin repeats: Determination of the roles of spacing, orientation, and enzyme identity. Proteins: Structure, Function and Bioinformatics, 2016, 84, 1043-1054.	1.5	4
681	Sequencing proteins with transverse ionic transport in nanochannels. Scientific Reports, 2016, 6, 25232.	1.6	17
682	Probing Small Molecule Binding to Unfolded Polyprotein Based on its Elasticity and Refolding. Biophysical Journal, 2016, 111, 2349-2357.	0.2	16
683	Mechano-adaptive sensory mechanism of Î±-catenin under tension. Scientific Reports, 2016, 6, 24878.	1.6	55
684	The Y9P Variant of the Titin I27 Module: Structural Determinants of Its Revisited Nanomechanics. Structure, 2016, 24, 606-616.	1.6	10
685	Recent Progress in Molecular Recognition Imaging Using Atomic Force Microscopy. Accounts of Chemical Research, 2016, 49, 503-510.	7.6	55
686	Signatures of protein thermal denaturation and local hydrophobicity in domain specific hydration behavior: a comparative molecular dynamics study. Molecular BioSystems, 2016, 12, 1139-1150.	2.9	11
687	Direct Identification of Protein-Protein Interactions by Single-Molecule Force Spectroscopy. Angewandte Chemie - International Edition, 2016, 55, 13970-13973.	7.2	24
688	Engineering Protein Hydrogels Using SpyCatcher-SpyTag Chemistry. Biomacromolecules, 2016, 17, 2812-2819.	2.6	75
689	Introduction to Atomic Force Microscopy (AFM) in Biology. Current Protocols in Protein Science, 2016, 85, 17.7.1-17.7.21.	2.8	7
690	Kinetic Ductility and Force-Spike Resistance of Proteins from Single-Molecule Force Spectroscopy. Biophysical Journal, 2016, 111, 832-840.	0.2	27

#	ARTICLE	IF	CITATIONS
691	Can Dissipative Properties of Single Molecules Be Extracted from a Force Spectroscopy Experiment?. <i>Biophysical Journal</i> , 2016, 111, 1163-1172.	0.2	10
692	The Power of Force: Insights into the Protein Folding Process Using Single-Molecule Force Spectroscopy. <i>Journal of Molecular Biology</i> , 2016, 428, 4245-4257.	2.0	27
693	Single-molecule force measurements of the polymerizing dimeric subunit of von Willebrand factor. <i>Physical Review E</i> , 2016, 93, 012410.	0.8	8
694	A HaloTag Anchored Ruler for Week-Long Studies of Protein Dynamics. <i>Journal of the American Chemical Society</i> , 2016, 138, 10546-10553.	6.6	121
695	Direct Identification of Protein-Protein Interactions by Single-Molecule Force Spectroscopy. <i>Angewandte Chemie</i> , 2016, 128, 14176-14179.	1.6	1
696	Advances in Quantum Mechanochemistry: Electronic Structure Methods and Force Analysis. <i>Chemical Reviews</i> , 2016, 116, 14137-14180.	23.0	140
697	Significance of 1B and 2B domains in modulating elastic properties of lamin A. <i>Scientific Reports</i> , 2016, 6, 27879.	1.6	18
698	Spectroscopic Monitoring of Mechanical Forces during Protein Folding by using Molecular Force Probes. <i>ChemPhysChem</i> , 2016, 17, 1486-1492.	1.0	14
699	Single-molecule Force Spectroscopy Predicts a Misfolded, Domain-swapped Conformation in human β^3 D-Crystallin Protein. <i>Journal of Biological Chemistry</i> , 2016, 291, 4226-4235.	1.6	42
700	Modular, Nondegenerate Polyprotein Scaffolds for Atomic Force Spectroscopy. <i>Biomacromolecules</i> , 2016, 17, 2502-2505.	2.6	12
701	The physics of pulling polyproteins: a review of single molecule force spectroscopy using the AFM to study protein unfolding. <i>Reports on Progress in Physics</i> , 2016, 79, 076601.	8.1	99
702	Nanopuller-open data acquisition platform for AFM force spectroscopy experiments. <i>Ultramicroscopy</i> , 2016, 164, 17-23.	0.8	5
703	Actively Controlled Hexapole Electromagnetic Actuating System Enabling 3-D Force Manipulation in Aqueous Solutions. <i>IEEE/ASME Transactions on Mechatronics</i> , 2016, 21, 1540-1551.	3.7	18
704	Probing of miniPEG β -PNA-DNA Hybrid Duplex Stability with AFM Force Spectroscopy. <i>Biochemistry</i> , 2016, 55, 1523-1528.	1.2	16
705	The solvent quality of water for poly(N-isopropylacrylamide) in the collapsed state: Implications from single-molecule studies. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2016, 34, 578-584.	2.0	10
706	Nanomechanics of Protein Unfolding Outside a Generic Nanopore. <i>ACS Nano</i> , 2016, 10, 317-323.	7.3	27
707	Single-molecule force spectroscopy on polyproteins and receptor-ligand complexes: The current toolbox. <i>Journal of Structural Biology</i> , 2017, 197, 3-12.	1.3	109
708	Optimizing force spectroscopy by modifying commercial cantilevers: Improved stability, precision, and temporal resolution. <i>Journal of Structural Biology</i> , 2017, 197, 13-25.	1.3	33

#	ARTICLE	IF	CITATIONS
709	Force generation by titin folding. <i>Protein Science</i> , 2017, 26, 1380-1390.	3.1	28
710	Protein unfolding under isometric tension – what force can integrins generate, and can it unfold FNIII domains?. <i>Current Opinion in Structural Biology</i> , 2017, 42, 98-105.	2.6	12
711	Force Spectroscopy of the Plasmodium falciparum Vaccine Candidate Circumsporozoite Protein Suggests a Mechanically Pliable Repeat Region. <i>Journal of Biological Chemistry</i> , 2017, 292, 2110-2119.	1.6	19
712	Staphylokinase Displays Surprisingly Low Mechanical Stability. <i>Langmuir</i> , 2017, 33, 1077-1083.	1.6	2
713	Combining the MARTINI and Structure-Based Coarse-Grained Approaches for the Molecular Dynamics Studies of Conformational Transitions in Proteins. <i>Journal of Chemical Theory and Computation</i> , 2017, 13, 1366-1374.	2.3	136
714	Multidomain proteins under force. <i>Nanotechnology</i> , 2017, 28, 174003.	1.3	34
715	Single-Molecule Force Spectroscopy Trajectories of a Single Protein and Its Polyproteins Are Equivalent: A Direct Experimental Validation Based on A Small Protein NuG2. <i>Angewandte Chemie</i> , 2017, 129, 6213-6217.	1.6	6
716	Competing Pathways and Multiple Folding Nuclei in a Large Multidomain Protein, Luciferase. <i>Biophysical Journal</i> , 2017, 112, 1829-1840.	0.2	12
717	Simulated Force Quench Dynamics Shows GB1 Protein Is Not a Two State Folder. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5162-5173.	1.2	14
718	Mg ²⁺ -Dependent High Mechanical Anisotropy of Three-Way Junction pRNA as Revealed by Single-Molecule Force Spectroscopy. <i>Angewandte Chemie</i> , 2017, 129, 9504-9508.	1.6	4
719	Mg ²⁺ -Dependent High Mechanical Anisotropy of Three-Way Junction pRNA as Revealed by Single-Molecule Force Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 9376-9380.	7.2	20
720	Discriminating Residue Substitutions in a Single Protein Molecule Using a Sub-nanopore. <i>ACS Nano</i> , 2017, 11, 5440-5452.	7.3	42
721	Compartmentalization of an ABC triblock copolymer single-chain nanoparticle via coordination-driven orthogonal self-assembly. <i>Polymer Chemistry</i> , 2017, 8, 3755-3763.	1.9	24
722	Mechanical forces regulate the reactivity of a thioester bond in a bacterial adhesin. <i>Journal of Biological Chemistry</i> , 2017, 292, 8988-8997.	1.6	30
723	Assessing the Potential of Folded Globular Polyproteins As Hydrogel Building Blocks. <i>Biomacromolecules</i> , 2017, 18, 636-646.	2.6	35
724	Single-Molecule Force Spectroscopy Trajectories of a Single Protein and Its Polyproteins Are Equivalent: A Direct Experimental Validation Based on A Small Protein NuG2. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 6117-6121.	7.2	32
725	Force Triggers YAP Nuclear Entry by Regulating Transport across Nuclear Pores. <i>Cell</i> , 2017, 171, 1397-1410.e14.	13.5	927
726	Role of Urea – Aromatic Stacking Interactions in Stabilizing the Aromatic Residues of the Protein in Urea-Induced Denatured State. <i>Journal of the American Chemical Society</i> , 2017, 139, 14931-14946.	6.6	47

#	ARTICLE	IF	CITATIONS
727	Steering chemical reactions with force. <i>Nature Reviews Chemistry</i> , 2017, 1, .	13.8	95
728	Directional mechanical stability of Bacteriophage ϕ 29 motor's 3WJ-pRNA: Extraordinary robustness along portal axis. <i>Science Advances</i> , 2017, 3, e1601684.	4.7	17
729	Effect of directional pulling on mechanical protein degradation by ATP-dependent proteolytic machines. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E6306-E6313.	3.3	44
730	Mechanotransduction properties of the cytoplasmic tail of PECAM1. <i>Biology of the Cell</i> , 2017, 109, 312-321.	0.7	14
731	Asymmetric Conformational Transitions in AAA+ Biological Nanomachines Modulate Direction-Dependent Substrate Protein Unfolding Mechanisms. <i>Journal of Physical Chemistry B</i> , 2017, 121, 7108-7121.	1.2	10
732	Rapid Characterization of a Mechanically Labile α -Helical Protein Enabled by Efficient Site-Specific Bioconjugation. <i>Journal of the American Chemical Society</i> , 2017, 139, 9867-9875.	6.6	67
733	Native flexibility of structurally homologous proteins: insights from anisotropic network model. <i>BMC Biophysics</i> , 2017, 10, 1.	4.4	5
734	Metal Chelation Dynamically Regulates the Mechanical Properties of Engineered Protein Hydrogels. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 742-749.	2.6	26
735	Molecular Force Sensors: From Fundamental Concepts toward Applications in Cell Biology. <i>Advanced Materials Interfaces</i> , 2017, 4, 1600441.	1.9	30
736	Comparative thermal inactivation analysis of <i>Aspergillus oryzae</i> and <i>Thiellavia terrestris</i> cutinase: Role of glycosylation. <i>Biotechnology and Bioengineering</i> , 2017, 114, 63-73.	1.7	33
737	Quantitative dual-channel FRET microscopy. <i>Optics Express</i> , 2017, 25, 26089.	1.7	10
738	Theory of Semiflexible Filaments and Networks. <i>Polymers</i> , 2017, 9, 52.	2.0	45
739	<i>Lactobacillus reuteri</i> Surface Mucus Adhesins Upregulate Inflammatory Responses Through Interactions With Innate C-Type Lectin Receptors. <i>Frontiers in Microbiology</i> , 2017, 8, 321.	1.5	43
740	Improved Force Spectroscopy Using Focused-Ion-Beam-Modified Cantilevers. <i>Methods in Enzymology</i> , 2017, 582, 321-351.	0.4	15
741	Unusually high mechanical stability of bacterial adhesin extender domains having calcium clamps. <i>PLoS ONE</i> , 2017, 12, e0174682.	1.1	3
742	Protein unfolding mechanisms and their effects on folding experiments. <i>F1000Research</i> , 2017, 6, 1723.	0.8	31
743	Revealing Abrupt and Spontaneous Ruptures of Protein Native Structure under picoNewton Compressive Force Manipulation. <i>ACS Nano</i> , 2018, 12, 2448-2454.	7.3	9
744	Improved data analysis method of single-molecule experiments based on probability optimization. <i>Chinese Physics B</i> , 2018, 27, 018703.	0.7	3

#	ARTICLE	IF	CITATIONS
745	The Important Roles of Water in Protein Folding: an Approach by Single Molecule Force Spectroscopy. Chinese Journal of Polymer Science (English Edition), 2018, 36, 379-384.	2.0	8
746	Tailored Polyproteins Using Sequential Staple and Cut. Bioconjugate Chemistry, 2018, 29, 1714-1719.	1.8	26
747	Partitioning and Enhanced Self-Assembly of Actin in Polypeptide Coacervates. Biophysical Journal, 2018, 114, 1636-1645.	0.2	78
748	The cohesin module is a major determinant of cellulosome mechanical stability. Journal of Biological Chemistry, 2018, 293, 7139-7147.	1.6	15
749	The Work of Titin Protein Folding as a Major Driver in Muscle Contraction. Annual Review of Physiology, 2018, 80, 327-351.	5.6	66
750	Differences in the mechanical unfolding pathways of apo- and copper-bound azurins. Scientific Reports, 2018, 8, 1989.	1.6	21
751	Determining the Physical Properties of Molecules with Nanometer-Scale Pores. ACS Sensors, 2018, 3, 251-263.	4.0	28
752	Two-State Folding Energy Determination Based on Transition Points in Nonequilibrium Single-Molecule Experiments. Journal of Physical Chemistry Letters, 2018, 9, 811-816.	2.1	11
753	Study of Biomechanical Properties of Protein-Based Hydrogels Using Force-Clamp Rheometry. Macromolecules, 2018, 51, 1441-1452.	2.2	29
754	Going Vertical To Improve the Accuracy of Atomic Force Microscopy Based Single-Molecule Force Spectroscopy. ACS Nano, 2018, 12, 198-207.	7.3	22
755	Disulfide isomerization reactions in titin immunoglobulin domains enable a mode of protein elasticity. Nature Communications, 2018, 9, 185.	5.8	70
756	Deciphering the Mechanical Properties of Type III Secretion System EspA Protein by Single Molecule Force Spectroscopy. Langmuir, 2018, 34, 6261-6270.	1.6	6
757	History, rare, and multiple events of mechanical unfolding of repeat proteins. Journal of Chemical Physics, 2018, 148, 123335.	1.2	15
758	Unfolding dynamics of small peptides biased by constant mechanical forces. Molecular Systems Design and Engineering, 2018, 3, 204-213.	1.7	4
759	Detection of Membrane Mechanical Properties and Endocytosis by Single Molecule Force Spectroscopy. , 2018, , 91-115.		0
760	Single molecule force spectroscopy: a new tool for bioinorganic chemistry. Current Opinion in Chemical Biology, 2018, 43, 58-67.	2.8	23
761	Learning and Estimation of Single Molecule Behavior. , 2018, , .		1
762	Protein Detection Through Single Molecule Nanopore. Chinese Journal of Analytical Chemistry, 2018, 46, e1838-e1846.	0.9	3

#	ARTICLE	IF	CITATIONS
763	Error Bounds on a Mixed Entropy Inequality. , 2018, , .		5
764	Folding pathway of an Ig domain is conserved on and off the ribosome. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11284-E11293.	3.3	86
765	A topological order parameter for describing folding free energy landscapes of proteins. Journal of Chemical Physics, 2018, 149, 175101.	1.2	2
766	The power of the force: mechano-physiology of the giant titin. Emerging Topics in Life Sciences, 2018, 2, 681-686.	1.1	1
767	Mechanobiology: protein refolding under force. Emerging Topics in Life Sciences, 2018, 2, 687-699.	1.1	8
768	Single molecule study on the mechanical response of the sixth domain of adseverin. Japanese Journal of Applied Physics, 2018, 57, 08NB06.	0.8	0
769	Reversible two-state folding of the ultrafast protein gpW under mechanical force. Communications Chemistry, 2018, 1, .	2.0	16
770	Force-Clamp Rheometry for Characterizing Protein-based Hydrogels. Journal of Visualized Experiments, 2018, , .	0.2	7
771	Energy Landscapes of Macromolecules with Unique 3D Structures. Biophysics (Russian Federation), 2018, 63, 485-496.	0.2	7
772	Correlating Conformational Dynamics with the Von Willebrand Factor Reductase Activity of Factor H Using Single Molecule Force Measurements. Journal of Physical Chemistry B, 2018, 122, 10653-10658.	1.2	1
773	Implications of Molecular Topology for Nanoscale Mechanical Unfolding. Journal of Physical Chemistry B, 2018, 122, 9703-9712.	1.2	7
774	Conformational entropy of a single peptide controlled under force governs protease recognition and catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11525-11530.	3.3	11
775	Atomic Force Microscopy for Protein Detection and Their Physicochemical Characterization. International Journal of Molecular Sciences, 2018, 19, 1142.	1.8	51
776	Structuralâ€elastic determination of the force-dependent transition rate of biomolecules. Chemical Science, 2018, 9, 5871-5882.	3.7	45
777	Transient modes of zeolite surface growth from 3D gel-like islands to 2D single layers. Nature Communications, 2018, 9, 2129.	5.8	69
778	Determining Stable Single Alpha Helical (SAH) Domain Properties by Circular Dichroism and Atomic Force Microscopy. Methods in Molecular Biology, 2018, 1805, 185-211.	0.4	3
779	Unraveling the Mechanical Unfolding Pathways of a Multidomain Protein: Phosphoglycerate Kinase. Biophysical Journal, 2018, 115, 46-58.	0.2	6
780	High-Speed Force Spectroscopy for Single Protein Unfolding. Methods in Molecular Biology, 2018, 1814, 243-264.	0.4	10

#	ARTICLE	IF	CITATIONS
781	AFM-Based Single-Molecule Force Spectroscopy of Proteins. <i>Methods in Molecular Biology</i> , 2018, 1814, 35-47.	0.4	16
782	Single-molecule force-unfolding of titin I27 reveals a correlation between the size of the surrounding anions and its mechanical stability. <i>Chemical Communications</i> , 2018, 54, 9635-9638.	2.2	18
784	Injectable dynamic covalent hydrogels of boronic acid polymers cross-linked by bioactive plant-derived polyphenols. <i>Biomaterials Science</i> , 2018, 6, 2487-2495.	2.6	72
785	Segmentation and the Entropic Elasticity of Modular Proteins. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 4707-4713.	2.1	19
786	Navigating the Nuclear Envelope: One or Multiple Transport Mechanisms for Integral Membrane Proteins?. <i>Nucleic Acids and Molecular Biology</i> , 2018, , 151-177.	0.2	0
787	Mechanical architecture and folding of E. coli type 1 pilus domains. <i>Nature Communications</i> , 2018, 9, 2758.	5.8	55
788	Efficient and simplified nanomechanical analysis of intrinsically disordered proteins. <i>Nanoscale</i> , 2018, 10, 16857-16867.	2.8	8
789	Monitoring Unfolding of Titin I27 Single and Bi Domain with High-Pressure NMR Spectroscopy. <i>Biophysical Journal</i> , 2018, 115, 341-352.	0.2	6
790	Mechanical Polyprotein Assembly Using Sfp and Sortase-Mediated Domain Oligomerization for Single-Molecule Studies. <i>Small Methods</i> , 2018, 2, 1800039.	4.6	19
791	Generalization of the elastic network model for the study of large conformational changes in biomolecules. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 17020-17028.	1.3	26
792	Engineering protein polymers of ultrahigh molecular weight <i>via</i> supramolecular polymerization: towards mimicking the giant muscle protein titin. <i>Chemical Science</i> , 2019, 10, 9277-9284.	3.7	12
793	Proteins: Boil, Mash, Stick in a Stew. <i>Journal of Physical Chemistry B</i> , 2019, 123, 8341-8350.	13	
794	Do graphene oxide nanostructured coatings mitigate bacterial adhesion?. <i>Environmental Science: Nano</i> , 2019, 6, 2863-2875.	2.2	8
795	Mechanical unfolding of spectrin reveals a super-exponential dependence of unfolding rate on force. <i>Scientific Reports</i> , 2019, 9, 11101.	1.6	9
796	Unfolding of polymers tethered to viscoelastic substrates. <i>Soft Matter</i> , 2019, 15, 6885-6895.	1.2	1
797	Concurrent atomic force spectroscopy. <i>Communications Physics</i> , 2019, 2, .	2.0	16
798	Multistep Protein Unfolding Scenarios from the Rupture of a Complex Metal Cluster Cd ₃ S ₉ . <i>Scientific Reports</i> , 2019, 9, 10518.	1.6	14
799	Grafted biopolymers II: synthesis and characterization. , 2019, , 43-63.		1

#	ARTICLE	IF	CITATIONS
800	The mechanical stability of proteins regulates their translocation rate into the cell nucleus. <i>Nature Physics</i> , 2019, 15, 973-981.	6.5	36
801	Nanomechanical properties of steric zipper globular structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 22478-22484.	3.3	0
802	Force driven transition of a globular polyelectrolyte. <i>Journal of Chemical Physics</i> , 2019, 151, 174902.	1.2	4
803	Protein Translocation Activity in Surface-Supported Lipid Bilayers. <i>Langmuir</i> , 2019, 35, 12246-12256.	1.6	10
804	Single-Molecule Force Spectroscopy Reveals that Iron-Dependent Ligand Bonds Modulate Proteins in Different Modes. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 5428-5433.	2.1	18
805	Role of Diffusion in Unfolding and Translocation of Multidomain Titin I27 Substrates by a Clp ATPase Nanomachine. <i>Journal of Physical Chemistry B</i> , 2019, 123, 2623-2635.	1.2	13
806	Enzymatic biosynthesis and immobilization of polyprotein verified at the single-molecule level. <i>Nature Communications</i> , 2019, 10, 2775.	5.8	77
807	Understanding the catch-bond kinetics of biomolecules on a one-dimensional energy landscape. <i>Communications Chemistry</i> , 2019, 2, .	2.0	23
808	Distinct mechanical properties in homologous spectrin-like repeats of utrophin. <i>Scientific Reports</i> , 2019, 9, 5210.	1.6	6
809	Force-dependent unfolding and folding dynamics of protein alpha-catenin modulation domains. <i>Journal of Innovative Optical Health Sciences</i> , 2019, 12, .	0.5	1
810	Direct observation of the fast and robust folding of a slipknotted protein by optical tweezers. <i>Nanoscale</i> , 2019, 11, 3945-3951.	2.8	19
811	Multiplexed protein force spectroscopy reveals equilibrium protein folding dynamics and the low-force response of von Willebrand factor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 18798-18807.	3.3	69
812	Direct single-molecule quantification reveals unexpectedly high mechanical stability of vinculin-talin/catenin linkages. <i>Science Advances</i> , 2019, 5, eaav2720.	4.7	40
813	Single molecule force spectroscopy of a streptomycin-binding RNA aptamer: An out-of-equilibrium molecular dynamics study. <i>Journal of Chemical Physics</i> , 2019, 151, 195102.	1.2	2
814	The hierarchical emergence of worm-like chain behaviour from globular domain polymer chains. <i>Soft Matter</i> , 2019, 15, 8778-8789.	1.2	10
815	Thermal versus mechanical unfolding in a model protein. <i>Journal of Chemical Physics</i> , 2019, 151, 185105.	1.2	6
816	Nature of the Pre-Chemistry Ensemble in Mitogen-Activated Protein Kinases. <i>Journal of Molecular Biology</i> , 2019, 431, 145-157.	2.0	12
817	RTX Adhesins are Key Bacterial Surface Megaproteins in the Formation of Biofilms. <i>Trends in Microbiology</i> , 2019, 27, 453-467.	3.5	30

#	ARTICLE	IF	CITATIONS
818	Forces during cellular uptake of viruses and nanoparticles at the ventral side. <i>Nature Communications</i> , 2020, 11, 32.	5.8	35
819	New Method toward a Robust Covalently Attached Cross-Linked Nanofiltration Membrane. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 47948-47956.	4.0	11
820	Probing fibronectin adsorption on chemically defined surfaces by means of single molecule force microscopy. <i>Scientific Reports</i> , 2020, 10, 15662.	1.6	9
821	Piecewise All-Atom SMD Simulations Reveal Key Secondary Structures in Luciferase Unfolding Pathway. <i>Biophysical Journal</i> , 2020, 119, 2251-2261.	0.2	3
822	Quantitative determination of mechanical stability in the novel coronavirus spike protein. <i>Nanoscale</i> , 2020, 12, 16409-16413.	2.8	49
823	Single molecule protein stabilisation translates to macromolecular mechanics of a protein network. <i>Soft Matter</i> , 2020, 16, 6389-6399.	1.2	23
824	Unfolding compactly folded molecular domains: Overall stiffness modifies the force-barrier relation. <i>Chemical Physics Letters</i> , 2020, 758, 137924.	1.2	5
825	Simultaneous measurement of rheological properties in a microfluidic rheometer. <i>Physics of Fluids</i> , 2020, 32, 052001.	1.6	10
826	OaAEP1-Mediated Enzymatic Synthesis and Immobilization of Polymerized Protein for Single-Molecule Force Spectroscopy. <i>Journal of Visualized Experiments</i> , 2020, , .	0.2	7
827	Rate-dependent forceâ€“extension models for single-molecule force spectroscopy experiments. <i>Physical Biology</i> , 2020, 17, 056002.	0.8	7
828	Verification of sortase for protein conjugation by single-molecule force spectroscopy and molecular dynamics simulations. <i>Chemical Communications</i> , 2020, 56, 3943-3946.	2.2	22
829	Entropic bonding of the type 1 pilus from experiment and simulation. <i>Royal Society Open Science</i> , 2020, 7, 200183.	1.1	0
830	Differences in stability and calcium sensitivity of the Ig domains in titin's N2A region. <i>Protein Science</i> , 2020, 29, 1160-1171.	3.1	10
831	A HaloTag-TEV genetic cassette for mechanical phenotyping of proteins from tissues. <i>Nature Communications</i> , 2020, 11, 2060.	5.8	42
832	Studying heat shock proteins through single-molecule mechanical manipulation. <i>Cell Stress and Chaperones</i> , 2020, 25, 615-628.	1.2	5
833	Exploiting a Mechanical Perturbation of a Titin Domain to Identify How Force Field Parameterization Affects Protein Refolding Pathways. <i>Journal of Chemical Theory and Computation</i> , 2020, 16, 3240-3252.	2.3	5
834	Interplay between Viscoelasticity and Force Rate Affects Sequential Unfolding in Polyproteins Pulled at Constant Velocity. <i>Macromolecules</i> , 2020, 53, 3021-3029.	2.2	6
835	Role of the copper ion in pseudoazurin during the mechanical unfolding process. <i>International Journal of Biological Macromolecules</i> , 2021, 166, 213-220.	3.6	3

#	ARTICLE	IF	CITATIONS
836	SpyTag/SpyCatcher tether as a fingerprint and force marker in single-molecule force spectroscopy experiments. <i>Nanoscale</i> , 2021, 13, 11262-11269.	2.8	14
837	Effects of Ionic Liquids on Metalloproteins. <i>Molecules</i> , 2021, 26, 514.	1.7	14
838	Thermal inactivation scaling applied for SARS-CoV-2. <i>Biophysical Journal</i> , 2021, 120, 1054-1059.	0.2	5
839	Type III secretion system effector proteins are mechanically labile. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	24
840	Modulation of a protein-folding landscape revealed by AFM-based force spectroscopy notwithstanding instrumental limitations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, e2015728118.	3.3	16
841	Long-Range Cooperative Disassembly and Aging During Adenovirus Uncoating. <i>Physical Review X</i> , 2021, 11, .	2.8	3
842	Interdomain linkers tailor the stability of immunoglobulin repeats in polyproteins. <i>Biochemical and Biophysical Research Communications</i> , 2021, 550, 43-48.	1.0	2
843	There Is Plenty of Room in The Folded Globular Proteins: Tandem Modular Elastomeric Proteins Offer New Opportunities in Engineering Protein-Based Biomaterials. <i>Advanced NanoBiomed Research</i> , 2021, 1, 2100028.	1.7	6
844	Reconstruction of mechanical unfolding and refolding pathways of proteins with atomic force spectroscopy and computer simulations. <i>Methods</i> , 2022, 197, 39-53.	1.9	6
845	Nanomechanical Phenotypes in Cardiac Myosin-Binding Protein C Mutants That Cause Hypertrophic Cardiomyopathy. <i>ACS Nano</i> , 2021, 15, 10203-10216.	7.3	16
846	Interaction of chloramphenicol with titin I27 probed using single-molecule force spectroscopy. <i>Journal of Biological Physics</i> , 2021, 47, 191-204.	0.7	1
847	Highly Dynamic Polynuclear Metal Cluster Revealed in a Single Metallothionein Molecule. <i>Research</i> , 2021, 2021, 9756945.	2.8	9
849	Microbial production of megadalton titin yields fibers with advantageous mechanical properties. <i>Nature Communications</i> , 2021, 12, 5182.	5.8	21
850	Exploration of Metal-Ligand Coordination Bonds in Proteins by Single-molecule Force Spectroscopy. <i>Chemistry Letters</i> , 2021, 50, 1667-1675.	0.7	8
851	Quantifying molecular- to cellular-level forces in living cells. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 483001.	1.3	5
852	Revealing the Underestimated Anticancer Effect of Azurin by Mechanical Unfolding. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 4809-4818.	2.6	2
853	Stretching Single Molecules Along Unbinding and Unfolding Pathways with the Scanning Force Microscope. <i>Chemistry - A European Journal</i> , 2000, 6, 4249-4255.	1.7	24
855	Interaction Forces with Carbohydrates Measured by Atomic Force Microscopy. <i>Topics in Current Chemistry</i> , 2002, , 115-132.	4.0	13

#	ARTICLE	IF	CITATIONS
856	Protein Folding. , 2007, , 303-343.		7
857	Protein Mechanics at the Single-Molecule Level. , 2009, , 7026-7051.		6
858	Characterization of Protein-Protein Interactions Using Atomic Force Microscopy. , 2007, , 39-77.		6
859	The Dynamical Response of Proteins Under Force. , 2008, , 205-249.		1
860	Force Spectroscopy of Polymers: Beyond Single Chain Mechanics. , 2007, , 525-535.		2
861	Adaptations in Titin's Spring Elements in Normal and Cardiomyopathic Hearts. Advances in Experimental Medicine and Biology, 2003, 538, 517-531.	0.8	6
862	Single-Molecule Methods. , 2013, , 257-288.		2
863	Extensibility in the Titin Molecule and its Relation to Muscle Elasticity. Advances in Experimental Medicine and Biology, 2000, 481, 163-178.	0.8	10
864	Unfolding Forces of Titin and Fibronectin Domains Directly Measured by AFM. Advances in Experimental Medicine and Biology, 2000, 481, 129-141.	0.8	71
865	Computer Modeling of Force-Induced Titin Domain Unfolding. Advances in Experimental Medicine and Biology, 2000, 481, 143-162.	0.8	18
866	Structure-Based, In Silico Approaches for the Development of Novel cAMP FRET Reporters. Methods in Molecular Biology, 2015, 1294, 41-58.	0.4	3
867	Work Fluctuations, Transient Violations of the Second Law and Free-Energy Recovery Methods: Perspectives in Theory and Experiments. , 2004, , 193-226.		8
868	Modelling the Unfolding Pathway of Biomolecules: Theoretical Approach and Experimental Prospect. Springer Proceedings in Mathematics and Statistics, 2018, , 137-151.	0.1	1
869	Surface Forces and Nanorheology of Molecularly Thin Films. , 2007, , 859-924.		10
870	Single-Molecule Studies on Cells and Membranes Using the Atomic Force Microscope. Nanoscience and Technology, 2007, , 101-125.	1.5	1
871	Surface Forces and Nanorheology of Molecularly Thin Films. , 2010, , 857-922.		10
872	Force-Clamp Spectroscopy of Single Proteins. Springer Series in Chemical Physics, 2010, , 317-335.	0.2	6
873	Force-Extension and Force-Clamp AFM Spectroscopies in Investigating Mechanochemical Reactions and Mechanical Properties of Single Biomolecules. Nanoscience and Technology, 2010, , 395-423.	1.5	4

#	ARTICLE	IF	CITATIONS
874	Surface Forces and Nanorheology of Molecularly Thin Films. , 2011, , 107-202.		22
875	Atomic Force Microscopy to Study Intermolecular Forces and Bonds Associated with Bacteria. Advances in Experimental Medicine and Biology, 2011, 715, 285-299.	0.8	15
876	Mechanical response of single filamin A (ABP-280) molecules and its role in the actin cytoskeleton. , 2003, , 525-534.		14
877	Stretching fibronectin. , 2003, , 575-580.		1
878	Titin as a modular spring: emerging mechanisms for elasticity control by titin in cardiac physiology and pathophysiology. , 2003, , 457-471.		15
879	Cardiac titin: molecular basis of elasticity and cellular contribution to elastic and viscous stiffness components in myocardium. , 2003, , 483-497.		2
880	Mechanical design of proteins studied by single-molecule force spectroscopy and protein engineering. , 2001, , 63-91.		4
881	Single molecule measurements of titin elasticity. , 2001, , 1-44.		1
882	DNA Binding Induces a Nanomechanical Switch in the RRM1 Domain of TDP-43. Journal of Physical Chemistry Letters, 2018, 9, 3800-3807.	2.1	8
883	Free-energy landscapes of membrane co-translocational protein unfolding. Communications Biology, 2020, 3, 160.	2.0	13
884	Stepwise unfolding of titin under force-clamp atomic force microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 468-72.	3.3	199
885	Synonymous codon substitutions perturb cotranslational protein folding in vivo and impair cell fitness. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3528-3534.	3.3	134
886	Biological physics by high-speed atomic force microscopy. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190604.	1.6	21
889	Measuring Protein Mechanics by Atomic Force Microscopy: Figure 1.. Cold Spring Harbor Protocols, 2007, 2007, pdb.prot4901.	0.2	5
890	Unfolding Ubiquitin by force: water mediated H-bond destabilization. Universitas Scientiarum, 2013, 17, 273.	0.2	1
891	RNA STRUCTURE: Pulling on Hair(pins). Science, 2001, 292, 653-654.	6.0	21
892	Thermodynamics and Kinetics from Single-Molecule Force Spectroscopy. , 2008, , 139-180.		4
893	Tests of the Structure-Based Models of Proteins. Acta Physica Polonica A, 2009, 115, 441-445.	0.2	8

#	ARTICLE	IF	CITATIONS
894	Computing Average Passive Forces in Sarcomeres in Length-Ramp Simulations. PLoS Computational Biology, 2016, 12, e1004904.	1.5	2
895	An Improved Strategy for Generating Forces in Steered Molecular Dynamics: The Mechanical Unfolding of Titin, e2lip3 and Ubiquitin. PLoS ONE, 2010, 5, e13068.	1.1	11
896	Variation in the Mechanical Unfolding Pathway of p53DBD Induced by Interaction with p53 N-Terminal Region or DNA. PLoS ONE, 2012, 7, e49003.	1.1	4
897	A Force-Based, Parallel Assay for the Quantification of Protein-DNA Interactions. PLoS ONE, 2014, 9, e89626.	1.1	13
898	Ca ²⁺ Binding Enhanced Mechanical Stability of an Archaeal Crystallin. PLoS ONE, 2014, 9, e94513.	1.1	12
899	Multiple Unfolding Intermediates Obtained by Molecular Dynamic Simulations under Stretching for Immunoglobulin-Binding Domain of Protein G. The Open Biochemistry Journal, 2009, 3, 66-77.	0.3	8
900	Mechanical Stability of a Small, Highly-Luminescent Engineered Protein NanoLuc. International Journal of Molecular Sciences, 2021, 22, 55.	1.8	9
901	Unique insight into protein-DNA interactions from single molecule atomic force microscopy. AIMS Biophysics, 2018, 5, 194-216.	0.3	6
902	Transforming <i>de novo</i> protein $\hat{\pm}_{3D}$ into a mechanically stable protein by zinc binding. Chemical Communications, 2021, 57, 11489-11492.	2.2	7
903	Single-Molecule Force Spectroscopy Studies of Missense Titin Mutations That Are Likely Causing Cardiomyopathy. Langmuir, 2021, 37, 12128-12137.	1.6	6
904	Protein Unfolding: Denaturant vs. Force. Biomedicines, 2021, 9, 1395.	1.4	5
905	Nanomechanics of Surface Immobilized Protein Molecules.. Hyomen Kagaku, 2001, 22, 620-626.	0.0	1
906	Unfolding of titin domains studied by molecular dynamics simulations. , 2003, , 513-521.		1
907	Intermolecular and Intramolecular Interactions. Nanoscience and Technology, 2006, , 131-158.	1.5	0
908	Inside Story of a Protein Molecule as Reported by Fracture Mechanics. Seibutsu Butsuri, 2007, 47, 241-247.	0.0	0
909	SDynamic Force Spectroscopy with the Atomic Force Microscope. , 2008, , 143-161.		1
910	Single-Molecule Microscopy and Force Spectroscopy of Membrane Proteins. Springer Series in Biophysics, 2008, , 279-311.	0.4	0
911	Probing Single Membrane Proteins by Atomic Force Microscopy. , 2009, , 449-485.		0

#	ARTICLE	IF	CITATIONS
913	Single-Molecule Studies on Cells and Membranes Using the Atomic Force Microscope. , 2010, , 479-503.		0
914	Nanomanipulation of Biological Macromolecules by AFM. , 2011, , 129-165.		0
915	Single-Molecule Methods to Study Cell Adhesion Molecules. Methods in Molecular Biology, 2011, 757, 139-155.	0.4	0
916	Mechanics of Proteins and Tailored Mechanics of Engineered Proteins. , 2011, , 47-82.		0
917	Enzyme Catalysis at the Single-Molecule Level. , 2012, , 149-168.		0
918	Biophysics of Titin in Cardiac Health and Disease. Biological and Medical Physics Series, 2013, , 201-223.	0.3	0
920	Protein Mechanics at the Single-Molecule Level. , 2015, , 1-36.		0
925	Mechanostability of Virus Capsids and Their Proteins in Structure-Based Coarse-Grained Models. Springer Series on Bio- and Neurosystems, 2019, , 307-330.	0.2	0
929	Enzymatic Construction of Protein Polymer/Polyprotein Using OaAEP1 and TEV Protease. Bio-protocol, 2020, 10, e3596.	0.2	0
931	Structure and Mechanical Stabilities of the Three-Way Junction Motifs in Prohead RNA. Journal of Physical Chemistry B, 2021, 125, 12125-12134.	1.2	2
932	Interfering with the Folding of Group A Streptococcal pili Proteins. Methods in Molecular Biology, 2020, 2136, 347-364.	0.4	0
933	Enzymatic Protein-Protein Conjugation through Internal Site Verified at the Single-Molecule Level. Journal of Physical Chemistry Letters, 2021, 12, 10914-10919.	2.1	9
934	Rational Design of Protein-Specific Folding Modifiers. Journal of the American Chemical Society, 2021, 143, 18766-18776.	6.6	6
936	Quantifying and controlling bond multivalency for advanced nanoparticle targeting to cells. Nano Convergence, 2021, 8, 38.	6.3	16
937	Hyphal tips actively develop strong adhesion with nutrient-bearing silicate to promote mineral weathering and nutrient acquisition. Geochimica Et Cosmochimica Acta, 2022, 318, 55-69.	1.6	3
938	Instantaneous splicing and excision of inteins to synthesize polyproteins on a substrate with tunable linkers. Soft Matter, 2022, 18, 602-608.	1.2	1
939	Molecular mechanisms for the humic acid-enhanced formation of the ordered secondary structure of a conserved catalytic domain in phytase. Physical Chemistry Chemical Physics, 2022, , .	1.3	1
940	RNA editing of Filamin A regulates cellular adhesion, migration and mechanical properties. FEBS Journal, 2022, 289, 4580-4601.	2.2	17

#	ARTICLE	IF	CITATIONS
941	Recent Advances and Emerging Challenges in the Molecular Modeling of Mechanobiological Processes. <i>Journal of Physical Chemistry B</i> , 2022, 126, 1365-1374.	1.2	14
942	Force probe molecular dynamics simulations. <i>Methods in Molecular Biology</i> , 2005, 305, 493-515.	0.4	33
943	Direct observation of chaperone-modulated talin mechanics with single-molecule resolution. <i>Communications Biology</i> , 2022, 5, 307.	2.0	6
944	Stretching and Rupturing Single Covalent and Associating Macromolecules by AFM-Based Single-Molecule Force Spectroscopy. , 0, , 403-427.		0
946	Contribution of hydrophobic interactions to protein mechanical stability. <i>Computational and Structural Biotechnology Journal</i> , 2022, 20, 1946-1956.	1.9	13
947	Connecting conformational stiffness of the protein with energy landscape by a single experiment. <i>Nanoscale</i> , 2022, 14, 7659-7673.	2.8	8
948	Using steered molecular dynamic tension for assessing quality of computational protein structure models. <i>Journal of Computational Chemistry</i> , 2022, , .	1.5	0
950	Observing Dynamic States of Single-Molecule DNA and Proteins Using Atomic Force Microscope. , 2022, , 97-110.		0
951	Measuring (biological) materials mechanics with atomic force microscopy. 3. Mechanical unfolding of biopolymers. <i>Microscopy Research and Technique</i> , 2022, , .	1.2	1
953	Direct Measurements of the Cobalt-Thiolate Bonds Strength in Rubredoxin by Single-Molecule Force Spectroscopy. <i>ChemBioChem</i> , 2022, , .	1.3	3
954	Templated folding of the RTX domain of the bacterial toxin adenylate cyclase revealed by single molecule force spectroscopy. <i>Nature Communications</i> , 2022, 13, 2784.	5.8	5
956	Molecular interpretation of single-molecule force spectroscopy experiments with computational approaches. <i>Chemical Communications</i> , 2022, 58, 7110-7119.	2.2	5
957	Histidine-Specific Bioconjugation for Single-Molecule Force Spectroscopy. <i>ACS Nano</i> , 2022, 16, 15440-15449.	7.3	13
958	Free-energy landscape of two-state protein acylphosphatase with large contact order revealed by force-dependent folding and unfolding dynamics. <i>Physical Review E</i> , 2022, 106, .	0.8	3
959	Interdomain Linker Effect on the Mechanical Stability of Ig Domains in Titin. <i>International Journal of Molecular Sciences</i> , 2022, 23, 9836.	1.8	2
960	Evidence of Orientation-Dependent Early States of Prion Protein Misfolded Structures from Single Molecule Force Spectroscopy. <i>Biology</i> , 2022, 11, 1358.	1.3	2
961	Mechanical modeling of strain rate-dependent behavior of shear-stiffening gel. <i>International Journal of Mechanics and Materials in Design</i> , 2023, 19, 3-16.	1.7	1
962	Direct and Simultaneous Measurement of the Stiffness and Internal Friction of a Single Folded Protein. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 9473-9479.	2.1	4

#	ARTICLE	IF	CITATIONS
963	The role of single-protein elasticity in mechanobiology. Nature Reviews Materials, 2023, 8, 10-24.	23.3	9
964	Ensemble Force Spectroscopy of a G-Quadruplex Cluster on a Single-Molecule Platform. Biomacromolecules, 2022, 23, 4795-4803.	2.6	2
965	Mechanical Unfolding and Refolding of NanoLuc via Single-Molecule Force Spectroscopy and Computer Simulations. Biomacromolecules, 2022, 23, 5164-5178.	2.6	1
966	Force Probe Molecular Dynamics Simulations. Methods in Molecular Biology, 2005, , 493-515.	0.4	36
967	Compliant mechanical response of the ultrafast folding protein EnHD under force. Communications Physics, 2023, 6, .	2.0	0
968	Emulating Titin by a Multidomain DNA Structure. ACS Macro Letters, 2023, 12, 59-64.	2.3	3
970	Application of Thermal Noise Analysis to Viscoelasticity Measurements of Single Polymer Chains using AFM with High-Tip Cantilever. E-Journal of Surface Science and Nanotechnology, 2023, , .	0.1	0
972	Two-Molecule Force Spectroscopy on Proteins. ACS Nano, 0, , .	7.3	2