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Models for the specific adhesion of cells to cells

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2303	Theoretical models for the specific adhesion of cells to cells or to surfaces. <b>1980</b> , 12, 566-567		13
2302	Cell to cell contacts mediating mating-type dependent recognition(s) during the preconjugant cell interactions of Oxytricha bifaria (ciliata, hypotrichida). <b>1980</b> , 211, 171-183		13
2301	Detection of platelet antibody using rosette technique with anti-IgG antibody-coated polyacrylamide gel: a preliminary report. <b>1980</b> , 39, 264-70		4
2300	General Concepts and Principles of Bacterial Adherence in Animals and Man. <b>1980</b> , 1-29		89
2299	Acylamines enhance the infection of a baculovirus of the armyworm, Pseudaletia unipuncta (Noctuidae, Lepidoptera). <b>1980</b> , 35, 265-268		12
2298	A systems approach to immunology. <b>1980</b> , 68, 964-990		61

2297	The biophysics of ligand-receptor interactions. <b>1980</b> , 13, 201-30	128
2296	Endocytosis of cell-cell junctions and spontaneous cell disaggregation in a cultured human ovarian adenocarcinoma. (COLO 316). <b>1981</b> , 13, 413-30	20
2295	The effect of cell size and receptor density on ligandreceptor reaction rate constants. 1981, 18, 507-11	67
2294	Interacting phospholipid bilayers: measured forces and induced structural changes. <b>1981</b> , 10, 277-314	451
2293	The role of bacterial surface structures in pathogenesis. <b>1981</b> , 8, 303-38	160
2292	Non-specific binding by macrophages: evaluation of the influence of medium-range electrostatic repulsion and short-range hydrophobic interaction. <b>1981</b> , 10, 35-43	15
2291	Dynamics of hormone receptors on cell membrane. <b>1981</b> , 366, 274-84	5
2290	Bacterial adherence: adhesin-receptor interactions mediating the attachment of bacteria to mucosal surface. <b>1981</b> , 143, 325-45	1246
2289	Specificity and plasticity of retinotectal connections: a computational model. <b>1981</b> , 1, 1369-87	76
2288	Intercellular recognition: quantitation of initial binding events. <b>1981</b> , 78, 4975-9	197
2287	Motion of polymorphonuclear leukocytes: theory of receptor redistribution and the frictional force on a moving cell. <b>1981</b> , 1, 205-35	16
2286	Adhesion and detachment of biological cellsin vitro. <b>1981</b> , 11, 65-137	43
2285	An ultrastructural search for lectin-binding sites on surfaces of spinach leaf organelles. <b>1981</b> , 152, 145-52	15
2284	The magnitude of signal amplification by ligand-induced receptor clustering. <b>1981</b> , 289, 322-3	52
2283	Energy Production Risks: What Perspective Should We Take?. <b>1981</b> , 1, 29-35	9
2282	Estimate of the sticking probability for cells in uniform shear flow with adhesion caused by specific bonds. <b>1981</b> , 3, 289-304	37
2281	Motion of particles adhering to the leading lamella of crawling cells. <b>1981</b> , 91, 528-36	62
2280	Adherence of Candida albicans to human vaginal epithelial cells: inhibition by amino sugars. <b>1982</b> , 50, 13-7	27

2279	Lymphocyte hybridomas. <b>1982</b> , 9, 59-84	11
2278	Binding of monoclonal antibody to protein antigen in fluid phase or bound to solid supports. <b>1982</b> , 55, 1-12	88
2277	Microbial exopolysaccharides their role in microbial adhesion in aqueous systems. <b>1983</b> , 10, 173-201	117
2276	A model system for studies of specific membrane interactions. <b>1982</b> , 21, 1274-9	9
2275	Physics of cell adhesion. <b>1982</b> , 12, 217-285	69
2274	Radiation effects on cell membranes. <b>1982</b> , 21, 1-18	33
2273	Calcium-dependent and calcium-independent adhesive mechanisms are present during initial binding events of neural retina cells. <b>1982</b> , 18, 469-78	14
2272	Free energy of the electrostatic interaction of cells with adjacent charged glycoprotein layer: a theoretical approach. <b>1982</b> , 98, 269-82	13
2271	471¶ Characterization of adhesiveness of different tissue culture cells and erythrocytes by two independent absolute methods. <b>1982</b> , 9, 207-217	2
2270	Cell-cell adhesion in the immune system. <b>1983</b> , 4, 237-40	36
2269	The biochemistry of cell-adhesion. <b>1983</b> , 13, 125-196	16
2268	A biophysical model for interaction of cells with a surface coat (glycocalyx). I. Electrostatic interaction profile. <b>1983</b> , 104, 231-48	10
2267	Adsorption of proteins in the processes of interaction of polymers with blood and model solutions. <b>1983</b> , 25, 523-555	5
2266	The role of non-immune IgG in controlling IgG-mediated effector functions. <b>1983</b> , 20, 1177-89	29
2265	Interactions of erythrocytes with bacteria under shear. <b>1983</b> , 416, 319-31	12
2264	Cellular adhesion: description, methodology and drug perturbation. <b>1983</b> , 21, 101-24	2
2264	Cellular adhesion: description, methodology and drug perturbation. <b>1983</b> , 21, 101-24  Cell surface receptors: physical chemistry and cellular regulation. <b>1983</b> , 84, 269-302	2

2261	Pneumococcal adherence to the buccal epithelial cells of cigarette smokers. 1983, 83, 23-7	55
2260	Adhesive multiplicity in the interaction of embryonic fibroblasts and myoblasts with extracellular matrices. <b>1984</b> , 99, 1398-404	67
2259	Modulation of cell adhesion during induction, histogenesis, and perinatal development of the nervous system. <b>1984</b> , 7, 339-77	306
2258	The measurement of specific cell: cell interactions by dual-parameter flow cytometry. <b>1984</b> , 5, 169-81	26
2257	Interaction between electromagnetic fields and cells: microelectrophoretic effect on ligands and surface receptors. <b>1984</b> , 5, 173-91	58
2256	Bioelectrochemistry of cell surfaces. <b>1984</b> , 15, 245-368	33
2255	Mechanical hypothesis of sperm penetration. <b>1984</b> , 45, 659-62	42
2254	Kinetics of rouleau formation. II. Reversible reactions. <b>1984</b> , 45, 805-24	25
2253	Cell adhesion. Competition between nonspecific repulsion and specific bonding. <b>1984</b> , 45, 1051-64	580
2252	Immobilisation of organelles and actin bundles in the cortical cytoplasm of the alga Chara corallina Klein ex. Wild. <b>1985</b> , 163, 1-8	19
2251	Ionic modulation of electrically induced fusion of mammalian cells. 1985, 86, 247-53	50
2250	Bacterial adherence. <b>1985</b> , 4, 257-61	13
2249	Use of cell affinity chromatography for separation of lymphocyte subpopulations. 1985, 27, 603-12	35
2248	Rapid formation of gap-junction-like structures induced by glycerol. <b>1985</b> , 213, 7-15	11
2247	Effect of Electromagnetic Fields on Two Calcium Dependent Biological Systems. <b>1985</b> , 4, 227-236	27
2246	Cell adhesion and the molecular processes of morphogenesis. <b>1985</b> , 54, 135-69	371
2245	Mobility and localization of proteins in excitable membranes. <b>1985</b> , 8, 369-406	62
2244	Detailed mechanics of membrane-membrane adhesion and separation. I. Continuum of molecular cross-bridges. <b>1985</b> , 48, 175-83	179

2243	On the adhesion of vesicles by cell adhesion molecules. <b>1985</b> , 48, 939-47		4
2242	Equilibrium in the protein-immobilized-ligand-soluble-ligand system: estimation of dissociation constants of protein-soluble-ligand complexes from binding-inhibition data. <b>1985</b> , 22, 125-33		9
2241	Equilibrium-driven mechanism for preferential adhesion between chick embryo cells. <b>1985</b> , 156, 164-74		1
2240	The Microcirculatory Society Eugene M. Landis Award lecture. The microrheology of human blood. <b>1986</b> , 31, 121-42		44
2239	Interaction forces between red cells agglutinated by antibody. I. Theoretical. <b>1986</b> , 50, 1109-16		48
2238	Interaction forces between red cells agglutinated by antibody. II. Measurement of hydrodynamic force of breakup. <b>1986</b> , 50, 1117-26		69
2237	Kinetic studies of Sendai virus-target membrane interactions: independent analysis of binding and fusion. <b>1986</b> , 25, 3971-6		20
2236	Frequency dependence of ultrasonic cleaning. <b>1986</b> , 24, 273-280		37
2235	Surface interactions with adsorbed macromolecules. <b>1986</b> , 111, 305-313		50
2234	Poiseuille flow method for measuring cell-to-cell adhesion. <b>1986</b> , 8, 119-30		8
2233	Specific cell-to-cell adhesion under flow conditions. <b>1986</b> , 8, 131-9		4
2232	Determination of binding strength and kinetics of binding initiation. A model study made on the adhesive properties of P388D1 macrophage-like cells. <b>1986</b> , 8, 141-60		36
2231	Determination of junction avidity of cytolytic T cell and target cell. <i>Science</i> , <b>1986</b> , 234, 1405-8	3	98
2230	Dynamics of lymphocyte-endothelial interactions in vivo. <i>Science</i> , <b>1986</b> , 231, 402-5	3	95
2229	Concanavalin A-agglutinability of membrane-skeleton-free vesicles and aged cellular remnants derived from human erythrocytes. Is the membrane skeleton required for agglutination?. <b>1987</b> , 241, 513-20		8
2228	Concanavalin A binding to human erythrocytes leads to alterations in properties of the membrane skeleton. <b>1987</b> , 241, 521-5		12
2227	The close approach of cells to surfaces. <b>1987</b> , 516, 502-12		5
2226	The role of multivalency in antibody mediated liposome targeting. <b>1987</b> , 145, 1205-10		19

2225	A dynamical model for receptor-mediated cell adhesion to surfaces. <b>1987</b> , 52, 475-87	231
2224	Microbial colonization of mucous membranes. <b>1987</b> , 5, 17-27	1
2223	A rate equation for blood platelet aggregation. <b>1987</b> , 129, 257-61	7
2222	Affinity Chromatography for Cell Separation: Mathematical Model and Experimental Analysis. <b>1987</b> , 3, 189-204	11
2221	Fatigue during stretch-shortening cycle exercises: changes in mechanical performance of human skeletal muscle. <b>1987</b> , 8, 71-8	77
2220	Mechanistic, functional and immunopharmacological implications of biochemical studies of antigen receptor-triggered cytolytic T-lymphocyte activation. <b>1988</b> , 103, 127-60	35
2219	Spatially periodic discrete contact regions in polylysine-induced erythrocyteMeast adhesion. <b>1988</b> , 13, 151-157	
2218	Spatially periodic discrete contact regions in polylysine-induced erythrocyte-yeast adhesion. <b>1988</b> , 13, 151-7	10
2217	Sperm thrusts and the problem of penetration. <b>1988</b> , 63, 79-105	27
2216	Mechanics of sperm-egg interaction at the zona pellucida. <b>1988</b> , 54, 643-54	59
2215	Interaction forces between red cells agglutinated by antibody. III. Micromanipulation. 1988, 53, 677-87	11
2214	Pathogenesis of contact lens induced bacterial corneal ulcers review and an hypothesis. <b>1988</b> , 71, 147-157	5
2213	In vivo determination of the force of leukocyte-endothelium adhesion in the mesenteric microvasculature of the cat. <b>1988</b> , 63, 658-68	66
2212	Aggregation of red cells in disease: some deductions and speculations based on results of "ARC" experiment on the space shuttle "Discovery" STS 51-C. <b>1988</b> , 25, 65-76	1
2211	Cell adhesion to fibronectin and tenascin: quantitative measurements of initial binding and subsequent strengthening response. <b>1989</b> , 109, 1795-805	365
2210	On the number and rate of formation of sperm-zona bonds in the mouse. <b>1989</b> , 24, 1-8	16
2209	A dynamical model for receptor-mediated cell adhesion to surfaces in viscous shear flow. <b>1989</b> , 14, 139-73	22
2208	Antibody-antigen mediated adsorption in the immunomagnetic cell isolation system. <b>1989</b> , 3, 257-260	2

ionic-strength modulation of electrically mammalian cells. <b>1989</b> , 179, 109-15	induced permeabilization and associated fusion of	95
Cellular interactions between 3T3 cells a cells: a model system for stromal-cell-me	and interleukin-3-dependent multipotent haemopoietic ediated haemopoiesis. <b>1989</b> , 139, 301-12	26
A simple model for the effects of receptor <b>1989</b> , 44, 1903-1914	or-mediated cellBubstratum adhesion on cell migration.	39
2204 Control of mixed microbial cultures via s	pecific cell adhesion. <b>1989</b> , 33, 638-49	5
Experiment on "Discovery" STS 51-C: agg hyperlipidaemia and other conditions. <b>19</b>	gregation of red cells and thrombocytes in heart disease, <b>989</b> , 9, 65-9	2
2202 Adhesion induced by mobile cross-bridge	es: steady state peeling of conjugated cell pairs. <b>1989</b> , 140, 1-17	7
Dynamics of complex formation between 29, 399-408	n thymocytes and thymic medullary epithelial cells. 1989,	9
Theoretical and experimental studies on 55, 479-87	cross-bridge migration during cell disaggregation. 1989,	63
2199 Rheological aspects of red blood cell ago	gregation. <b>1990</b> , 27, 309-25	21
2198 Particulate systems and polymers for in v	vitro and in vivo delivery of polynucleotides. <b>1990</b> , 5, 163-187	119
2197 Organ-preference of metastasis. The role	e of endothelial cell adhesion molecules. <b>1990</b> , 9, 175-89	158
The strength of non-covalent biological b	bonds and adhesions by multiple independent bonds. <b>1990</b> ,	12
2195 The effect of fluid shear stress upon cell	adhesion to fibronectin-treated surfaces. <b>1990</b> , 24, 1333-53	110
2194 Characterization of in vivo immunoliposo	ome targeting to pulmonary endothelium. <b>1990</b> , 79, 978-84	86
Implications of membrane interface stru 1990, 24, 101-111	ctural forces in electropermeabilization and electrofusion.	15
Implications of membrane interface stru <b>1990</b> , 299, 101-111	ctural forces in electropermeabilization and electrofusion.	
2191 Space Commercialization: Platforms and	Processing. 1990,	
Flow cytometric analysis and modeling o <b>1990</b> , 111, 2747-56	of cell-cell adhesive interactions: the neutrophil as a model.	48

#### (1991-1990)

2189	immunoliposomes. <b>1990</b> , 87, 5744-8	160
2188	Thermodynamics and Mechanics of Active Cell Motions. <b>1990</b> , 155-183	1
2187	Receptor-mediated adhesion phenomena. Model studies with the Radical-Flow Detachment Assay. <b>1990</b> , 58, 107-25	159
2186	Cell-cell conjugation. Transient analysis and experimental implications. <b>1990</b> , 58, 641-52	5
2185	Receptor-mediated cell attachment and detachment kinetics. I. Probabilistic model and analysis. <b>1990</b> , 58, 841-56	133
2184	Receptor-mediated cell attachment and detachment kinetics. II. Experimental model studies with the radial-flow detachment assay. <b>1990</b> , 58, 857-72	94
2183	General analysis of receptor-mediated viral attachment to cell surfaces. <b>1990</b> , 58, 1501-16	92
2182	Corneal pathophysiology with contact lens wear. <b>1990</b> , 35, 25-58	92
2181	Models for receptor-mediated cell phenomena: adhesion and migration. <b>1991</b> , 20, 387-414	41
2180	Relationship between the concanavalin A-agglutinability and deformability of human erythrocytes. <b>1991</b> , 1073, 341-6	3
2179	Mathematical model for the effects of adhesion and mechanics on cell migration speed. <b>1991</b> , 60, 15-37	471
2178	Detachment of agglutinin-bonded red blood cells. I. Forces to rupture molecular-point attachments. <b>1991</b> , 59, 838-48	267
2177	Detachment of agglutinin-bonded red blood cells. II. Mechanical energies to separate large contact areas. <b>1991</b> , 59, 849-60	53
2176	Monoclonal antibody against platelet thrombospondin decreases erythrocyte aggregation rate. <b>1991</b> , 28, 551-6	5
2175	Simulation of cell rolling and adhesion on surfaces in shear flow. Microvilli-coated hard spheres with adhesive springs. <b>1991</b> , 18, 145-82	6
2174	A thermodynamic and biomechanical theory of cell adhesion. Part I: General formulism. <b>1991</b> , 150, 27-50	12
2173	Preferential attachment of membrane glycoproteins to the cytoskeleton at the leading edge of lamella. <b>1991</b> , 114, 1029-36	81
2172	Physics of Complex-Biological Membranes and Cell Interfaces. <b>1991</b> , 255, 31	

2171	Influence of receptor lateral mobility on adhesion strengthening between membranes containing LFA-3 and CD2. <b>1991</b> , 115, 245-55	192
2170	Micromanipulation of adhesion of a Jurkat cell to a planar bilayer membrane containing lymphocyte function-associated antigen 3 molecules. <b>1992</b> , 116, 997-1006	63
2169	Simulation of cell rolling and adhesion on surfaces in shear flow: general results and analysis of selectin-mediated neutrophil adhesion. <b>1992</b> , 63, 35-57	450
2168	How do selectins mediate leukocyte rolling in venules?. <b>1992</b> , 63, 700-9	111
2167	Regulatory mechanisms in leukocyte adhesion: flexible receptors for sophisticated travelers. <b>1992</b> , 13, 224-30	232
2166	Evidence for lymphocyte chemotaxis toward monocytes during PHA-induced aggregation in vitro. <b>1992</b> , 20, 33-56	
2165	A numerical analysis of forces exerted by laminar flow on spreading cells in a parallel plate flow chamber assay. <b>1993</b> , 42, 963-73	63
2164	Effect of the conformation and orientation of adsorbed fibronectin on endothelial cell spreading and the strength of adhesion. <b>1993</b> , 27, 1103-13	195
2163	A stochastic model for adhesion-mediated cell random motility and haptotaxis. <b>1993</b> , 31, 563-600	118
2162	The role of induced virulence factors produced by Pasteurella haemolytica in the pathogenesis of bovine pneumonic pasteurellosis: review and hypotheses. <b>1993</b> , 149, 183-93	31
2161	A mathematical model of specific cell adhesion: Release of specifically adhering populations by soluble ligands. <b>1993</b> , 6, 381-404	
2160	An autoaggressive process against bystander tissues in HTLV-I-infected individuals: a possible pathomechanism of HAM/TSP. <b>1993</b> , 41, 542-7	88
2159	Heterogeneity and probabilistic binding contributions to receptor-mediated cell detachment kinetics. <b>1993</b> , 65, 243-52	28
2158	Interaction forces between red cells agglutinated by antibody. IV. Time and force dependence of break-up. <b>1993</b> , 65, 1318-34	65
2157	Relationship between receptor/ligand binding affinity and adhesion strength. <b>1993</b> , 65, 2191-200	161
2156	A theoretical analysis for the effect of focal contact formation on cell-substrate attachment strength. <b>1993</b> , 64, 936-59	128
2155	Cell-stopping numbers. <b>1993</b> , 64, 1653-4	1
2154	Granulocyte-endothelium initial adhesion. Analysis of transient binding events mediated by E-selectin in a laminar shear flow. <b>1993</b> , 64, 1922-33	161

2153	Endothelial cell adhesion in real time. Measurements in vitro by tandem scanning confocal image analysis. <b>1993</b> , 91, 2640-52	63
2152	Maximal migration of human smooth muscle cells on fibronectin and type IV collagen occurs at an intermediate attachment strength. <b>1993</b> , 122, 729-37	519
2151	New trends in biorheology. <b>1993</b> , 30, 305-22	1
2150	Poiseuille Medial Award lecture: from papermaking fibers to human blood cells. <b>1993</b> , 30, 165-90	6
2149	Target-Sensitive Liposomes. <b>1994</b> , 4, 397-412	6
2148	How important is the physicochemical interaction in the flocculation of yeast cells?. <b>1994</b> , 2, 165-171	14
2147	Focal contact assembly through cytoskeletal polymerization: steady state analysis. <b>1994</b> , 32, 677-704	20
2146	Kinetics of ligand binding to a cluster of membrane-associated receptors. <b>1994</b> , 23, 197-205	7
2145	Interactions between biosurfaces. <b>1994</b> , 49 Spec No, 341-86	12
2144	Bacterial adhesion to respiratory mucosa and its modulation by antibiotics at sub-inhibitory concentrations. <b>1994</b> , 30, 289-99	9
2143	Analysis of cell flux in the parallel plate flow chamber: implications for cell capture studies. <b>1994</b> , 67, 889-95	82
2142	Kinetics of cell detachment: peeling of discrete receptor clusters. <b>1994</b> , 67, 2522-34	72
2141	Flow-induced detachment of red blood cells adhering to surfaces by specific antigen-antibody bonds. <b>1994</b> , 66, 1222-30	18
2140	Receptor-mediated binding of IgE-sensitized rat basophilic leukemia cells to antigen-coated substrates under hydrodynamic flow. <b>1994</b> , 66, 1231-43	54
2139	Aggregation efficiency of activated normal or fixed platelets in a simple shear field: effect of shear and fibrinogen occupancy. <b>1994</b> , 66, 2190-201	39
2138	Transient intercellular adhesion: the importance of weak protein-protein interactions. <b>1994</b> , 19, 354-8	174
2137	Human cell-adhesion molecule CD2 binds CD58 (LFA-3) with a very low affinity and an extremely fast dissociation rate but does not bind CD48 or CD59. <b>1994</b> , 33, 10149-60	187
2136	Molecular analysis of antigen-independent adhesion forces between T and B lymphocytes. <b>1994</b> , 91, 3628-32	10

2135	Reversible unfolding of fibronectin type III and immunoglobulin domains provides the structural basis for stretch and elasticity of titin and fibronectin. <b>1994</b> , 91, 10114-8	263
2134	A model for the initial phase of cell/surface interactions based on ligand binding phenomena. <b>1995</b> , 311 ( Pt 3), 917-9	10
2133	Identifying bacterial receptor proteins and quantifying strength of interactions they mediate. <b>1995</b> , 253, 132-42	5
2132	Lifetime of the P-selectin-carbohydrate bond and its response to tensile force in hydrodynamic flow. <b>1995</b> , 374, 539-42	597
2131	Unbinding force of a single motor molecule of muscle measured using optical tweezers. <b>1995</b> , 377, 251-4	218
2130	Kinetics of cell detachment: effect of ligand density. <b>1995</b> , 23, 322-31	28
2129	Local unbinding of pinched membranes. <b>1995</b> , 75, 3356-3359	44
2128	Statistical mechanics of membrane adhesion by reversible molecular bonds. <b>1995</b> , 74, 3900-3903	45
2127	Measuring the lifetime of bonds made between surface-linked molecules. <b>1995</b> , 270, 26586-92	61
2126	Physical Actions in Biological Adhesion. <b>1995</b> , 723-754	15
2125	Structurefunction relationships in gap junctions. <b>1995</b> , 157, 315-73	90
2124	P-selectin must extend a sufficient length from the plasma membrane to mediate rolling of neutrophils. <b>1995</b> , 131, 1893-902	164
2123	Tyrosine phosphorylation and cytoskeletal tension regulate the release of fibroblast adhesions. <b>1995</b> , 131, 525-37	120
2122	The morphology of lipid membranes. <b>1995</b> , 5, 531-40	111
2121	Lens hygiene and care system contamination of asymptomatic rigid gas permeable lens wearers. <b>1995</b> , 22, 217-221	
2120	Neutral polymers elicit, and antibodies to spectrin, band 4.1 protein and cytoplasmic domain of band 3 protein inhibit the concanavalin A-mediated agglutination of human erythrocytes. <b>1995</b> , 1235, 10-20	4
2119	Molecular mechanisms determining the strength of receptor-mediated intermembrane adhesion. <b>1995</b> , 69, 1162-9	85
2118	A stochastic model of leukocyte rolling. <b>1995</b> , 69, 1309-20	44

## [1996-1995]

2117	interfaces. <b>1995</b> , 68, 2580-7	450
2116	Adhesion of Cells. <b>1995</b> , 755-803	2
2115	Kinetics and locus of failure of receptor-ligand-mediated adhesion between latex spheres. I. Protein-carbohydrate bond. <b>1996</b> , 71, 1102-14	35
2114	Kinetics and locus of failure of receptor-ligand-mediated adhesion between latex spheres. II. Protein-protein bond. <b>1996</b> , 71, 1115-22	27
2113	Effect of receptor-ligand affinity on the strength of endothelial cell adhesion. <b>1996</b> , 71, 2869-84	138
2112	Avidin-biotin interactions at vesicle surfaces: adsorption and binding, cross-bridge formation, and lateral interactions. <b>1996</b> , 70, 1391-401	110
2111	Strength and lifetime of the bond between actin and skeletal muscle alpha-actinin studied with an optical trapping technique. <b>1996</b> , 1290, 83-8	62
2110	Initiation of platelet adhesion by arrest onto fibrinogen or translocation on von Willebrand factor. <b>1996</b> , 84, 289-97	976
2109	Biological Adhesion at Interfaces. <b>1996</b> , 26, 651-691	91
2108	Clinical Hemorheology: Past, present and perspectives. <b>1996</b> , 16, 87-104	
2108	Clinical Hemorheology: Past, present and perspectives. <b>1996</b> , 16, 87-104  Detection and localization of individual antibody-antigen recognition events by atomic force microscopy. <b>1996</b> , 93, 3477-81	1018
	Detection and localization of individual antibody-antigen recognition events by atomic force	1018 73
2107	Detection and localization of individual antibody-antigen recognition events by atomic force microscopy. <b>1996</b> , 93, 3477-81  Determination of the lifetime and force dependence of interactions of single bonds between	
2107	Detection and localization of individual antibody-antigen recognition events by atomic force microscopy. 1996, 93, 3477-81  Determination of the lifetime and force dependence of interactions of single bonds between surface-attached CD2 and CD48 adhesion molecules. 1996, 93, 15114-8  Analysis of the immunomagnetic adhesion of the common acute lymphoblastic leukemia antigen-carrying cells. 1996, 81, 367-373	73
2107 2106 2105	Detection and localization of individual antibody-antigen recognition events by atomic force microscopy. 1996, 93, 3477-81  Determination of the lifetime and force dependence of interactions of single bonds between surface-attached CD2 and CD48 adhesion molecules. 1996, 93, 15114-8  Analysis of the immunomagnetic adhesion of the common acute lymphoblastic leukemia antigen-carrying cells. 1996, 81, 367-373	73
2107 2106 2105 2104	Detection and localization of individual antibody-antigen recognition events by atomic force microscopy. 1996, 93, 3477-81  Determination of the lifetime and force dependence of interactions of single bonds between surface-attached CD2 and CD48 adhesion molecules. 1996, 93, 15114-8  Analysis of the immunomagnetic adhesion of the common acute lymphoblastic leukemia antigen-carrying cells. 1996, 81, 367-373  Force: a new structural control parameter?. 1996, 4, 885-9  Critical centrifugal forces induce adhesion rupture or structural reorganization in cultured cells.	73 3 28
2107 2106 2105 2104 2103	Detection and localization of individual antibody-antigen recognition events by atomic force microscopy. 1996, 93, 3477-81  Determination of the lifetime and force dependence of interactions of single bonds between surface-attached CD2 and CD48 adhesion molecules. 1996, 93, 15114-8  Analysis of the immunomagnetic adhesion of the common acute lymphoblastic leukemia antigen-carrying cells. 1996, 81, 367-373  Force: a new structural control parameter?. 1996, 4, 885-9  Critical centrifugal forces induce adhesion rupture or structural reorganization in cultured cells. 1996, 33, 276-87  Progressive detachment of cells from surfaces: a consequence of heterogeneous ligand	73 3 28 39

2099	Cell-cell interactions. A physical approach. <b>1996</b> , 40, 153-157	4
2098	Steric stabilization and cell adhesion. <b>1996</b> , 7, 141-148	11
2097	Visualization of CD2 interaction with LFA-3 and determination of the two-dimensional dissociation constant for adhesion receptors in a contact area. <b>1996</b> , 132, 465-74	213
2096	Adhesion of Membranes via Anchored Stickers. <b>1996</b> , 77, 1652-1655	77
2095	Hybridoma screening for cell adhesion molecules using multiple parallel comparisons in conditions of flow. <b>1996</b> , 15, 43-7	4
2094	Profiles of locally adhering membranes. <b>1997</b> , 40, 225-230	6
2093	Nonlinear response of membranes to pinning sites. <b>1997</b> , 56, 1891-1899	19
2092	Fokker <b>P</b> lanck analysis of the Langevinlorentz equation: Application to ligand-receptor binding under electromagnetic exposure. <b>1997</b> , 82, 4669-4677	15
2091	CD80 (B7-1) binds both CD28 and CTLA-4 with a low affinity and very fast kinetics. 1997, 185, 393-403	402
2090	Adhesive bond dynamics in contacts between T lymphocytes and glass-supported planar bilayers reconstituted with the immunoglobulin-related adhesion molecule CD58. <b>1997</b> , 272, 15782-8	58
2089	The kinetics of L-selectin tethers and the mechanics of selectin-mediated rolling. <b>1997</b> , 138, 1169-80	318
2088	A dynamic model for receptor-mediated specific adhesion of bacteria under uniform shear flow. <b>1997</b> , 11, 227-252	5
2087	Rolling and transient tethering of leukocytes on antibodies reveal specializations of selectins. <b>1997</b> , 94, 3172-7	106
2086	Comparison of the Mechanical Properties of Normal and Transformed Fibroblasts. <b>1997</b> , 34, 309-326	59
2085	Measurements of attractive forces between proteins and end-grafted poly(ethylene glycol) chains. <b>1997</b> , 94, 8399-404	245
2084	Cell Adhesion Strength Increases Linearly with Adsorbed Fibronectin Surface Density. <b>1997</b> , 3, 197-206	39
2083	Molecular Level Characterization of Microenvironmental Influences on the Properties of Immobilized Proteins. <b>1997</b> , 13, 6746-6754	34
2082	Adhesion-induced domain formation by interplay of long-range repulsion and short-range attraction force: a model membrane study. <b>1997</b> , 73, 245-57	161

2081	Heterogeneity of epidermal growth factor binding kinetics on individual cells. <b>1997</b> , 73, 1089-102		18
2080	Reconstructing potential energy functions from simulated force-induced unbinding processes. <b>1997</b> , 73, 1281-7		130
2079	A model for the kinetics of homotypic cellular aggregation under static conditions. <b>1997</b> , 72, 51-64		19
2078	Dynamic strength of molecular adhesion bonds. <b>1997</b> , 72, 1541-55		2064
2077	Direct measurement of a tethered ligand-receptor interaction potential. <i>Science</i> , <b>1997</b> , 275, 820-2	3.3	226
2076	Reversible unfolding of individual titin immunoglobulin domains by AFM. <i>Science</i> , <b>1997</b> , 276, 1109-12 33	3.3	2635
2075	Scanning force microscopy of the interaction events between a single molecule of heavy meromyosin and actin. <b>1997</b> , 234, 178-82		62
2074	Accelerative sliding of myosin-coated glass-beads under suspended condition from actin paracrystal. <b>1997</b> , 237, 427-31		8
2073	Molecular and functional analysis of cadherin-based adherens junctions. <b>1997</b> , 13, 119-46		690
2072	The same but different: the biology of Theileria sporozoite entry into bovine cells. <b>1997</b> , 27, 457-74		44
2071	Les liaisons dangereuses: adhesion molecules do it statistically. <b>1997</b> , 94, 375-6		20
2070	Affinity cell separations: problems and prospects. <b>1997</b> , 15, 249-255		22
2069	Image enhancement of the in vivo leukocyte-endothelium contact zone using optical sectioning microscopy. <b>1997</b> , 25, 521-35		6
2068	Flexible membranes with anchored polymers. <b>1997</b> , 128, 255-264		48
2067	Disaggregation of Particles with Biospecific Interactions in Shear Flow. <b>1997</b> , 188, 251-256		3
2066	A Dynamic Model for the Attachment of a Brownian Particle Mediated by Discrete Macromolecular Bonds. <b>1997</b> , 190, 142-51		11
2065	The mechanical stability of immunoglobulin and fibronectin III domains in the muscle protein titin measured by atomic force microscopy. <b>1998</b> , 75, 3008-14		284
2064	The molecular elasticity of the extracellular matrix protein tenascin. <b>1998</b> , 393, 181-5		759

2063	Modifying the mechanical property and shear threshold of L-selectin adhesion independently of equilibrium properties. <b>1998</b> , 392, 930-3	67
2062	Calcium oscillations increase the efficiency and specificity of gene expression. <b>1998</b> , 392, 933-6	1649
2061	The ability of ocular bacteria to bind to fibronectin. <b>1998</b> , 81, 81-87	4
2060	CD2 and the nature of protein interactions mediating cell-cell recognition. <b>1998</b> , 163, 217-36	133
2059	Effect of substrate anchoring on the mechanical strength of Langmuir <b>B</b> lodgett bilayers. <b>1998</b> , 327-329, 772-777	5
2058	Cell-substrate separation: effect of applied force and temperature. <b>1998</b> , 27, 9-17	31
2057	Density of lectin-like receptors in the FLO1 phenotype of Saccharomyces cerevisiae. <b>1998</b> , 26, 279-82	20
2056	Estimation of maximal affinities between T-cell receptors and MHC/peptide complexes. <b>1998</b> , 35, 65-71	9
2055	Kinetics of interaction of HLA-C ligands with natural killer cell inhibitory receptors. <b>1998</b> , 9, 337-44	100
2054	Vesicle-vesicle adhesion by mobile lock-and-key molecules: Debye-Hilkel theory and Monte Carlo simulation. <b>1998</b> , 57, 964-977	25
2053	Studying receptor-mediated cell adhesion at the single molecule level. <b>1998</b> , 5, 375-95	25
2052	Interaction between soluble P-selectin and soluble P-selectin glycoprotein ligand 1: equilibrium binding analysis. <b>1998</b> , 37, 16472-80	33
2051	Rate-Dependent Adhesion between Opposed Perfluoropoly(alkyl ether) Layers: Dependence on Chain-End Functionality and Chain Length. <b>1998</b> , 102, 6056-6063	30
2050	In vitro side-view imaging technique and analysis of human T-leukemic cell adhesion to ICAM-1 in shear flow. <b>1998</b> , 55, 124-37	47
2049	Adhesion forces of lipids in a phospholipid membrane studied by molecular dynamics simulations. <b>1998</b> , 74, 931-43	181
2048	Measuring two-dimensional receptor-ligand binding kinetics by micropipette. <b>1998</b> , 75, 1553-72	348
2047	Energy of adhesion of human T cells to adsorption layers of monoclonal antibodies measured by a film trapping technique. <b>1998</b> , 75, 545-56	15
2046	Kinetics of adhesion of IgE-sensitized rat basophilic leukemia cells to surface-immobilized antigen in Couette flow. <b>1998</b> , 75, 2597-611	36

2045	Determining force dependence of two-dimensional receptor-ligand binding affinity by centrifugation. <b>1998</b> , 74, 492-513	130
2044	Flow resistance and drag forces due to multiple adherent leukocytes in postcapillary vessels. <b>1998</b> , 74, 3292-301	28
2043	Simulations of the adhesion between molecularly bonded surfaces in direct force measurements. <b>1998</b> , 108, 7783-7794	22
2042	Elastically Coupled Two-Level Systems as a Model for Biopolymer Extensibility. <b>1998</b> , 81, 4764-4767	407
2041	Force required to break alpha5beta1 integrin-fibronectin bonds in intact adherent cells is sensitive to integrin activation state. <b>1998</b> , 273, 10988-93	111
2040	The kinetics and shear threshold of transient and rolling interactions of L-selectin with its ligand on leukocytes. <b>1998</b> , 95, 11631-6	105
2039	Static and dynamic lengths of neutrophil microvilli. <b>1998</b> , 95, 6797-802	216
2038	The role of charged residues mediating low affinity protein-protein recognition at the cell surface by CD2. <b>1998</b> , 95, 5490-4	73
2037	Tyrosine replacement in P-selectin glycoprotein ligand-1 affects distinct kinetic and mechanical properties of bonds with P- and L-selectin. <b>1999</b> , 96, 13771-6	125
2036	Biomechanical Properties of Fibroblasts. <b>1999</b> , 24, 22-26	6
2035	Steered Molecular Dynamics. <b>1999</b> , 39-65	156
2034	An automatic braking system that stabilizes leukocyte rolling by an increase in selectin bond number with shear. <b>1999</b> , 144, 185-200	189
2033	Statistical Breakage of Single Protein A-IgG Bonds Reveals Crossover from Spontaneous to Force-Induced Bond Dissociation. <b>1999</b> , 83, 652-655	56
2032	Stretching single-domain proteins: phase diagram and kinetics of force-induced unfolding. <b>1999</b> , 96, 6166-70	97
2031	Adhesive properties of the isolated amino-terminal domain of platelet glycoprotein Ibalpha in a flow field. <b>1999</b> , 96, 7837-42	43
2030	Biomechanics, one molecule at a time. <b>1999</b> , 274, 14517-20	23
2029	An equilibrium model of endothelial cell adhesion via integrin-dependent and integrin-independent ligands. <b>1999</b> , 20, 2395-403	36
2028	Integrin-fibronectin interactions at the cell-material interface: initial integrin binding and signaling. <b>1999</b> , 20, 2427-33	186

2027	Selectin-carbohydrate interactions in shear flow. <b>1999</b> , 3, 659-64	29
2026	Adhesion mapping of chemically modified and poly(ethylene oxide)-grafted glass surfaces. <b>1999</b> , 154, 53-64	16
2025	Feasibility of measuring antigen-antibody interaction forces using a scanning force microscope. <b>1999</b> , 15, 37-55	9
2024	Direct force measurements of the streptavidin-biotin interaction. <b>1999</b> , 16, 45-55	146
2023	Looking inside molecular bonds at biological interfaces with dynamic force spectroscopy. <b>1999</b> , 82, 83-97	122
2022	Energy landscapes of receptor-ligand bonds explored with dynamic force spectroscopy. <b>1999</b> , 397, 50-3	1490
2021	Mechanics of leukocyte deformation and adhesion to endothelium in shear flow. <b>1999</b> , 27, 298-312	130
2020	Kinetic model for integrin-mediated adhesion release during cell migration. <b>1999</b> , 27, 219-35	45
2019	Leukocyte adhesion: High-speed cells with ABS. <b>1999</b> , 9, R419-22	12
2018	The study of protein mechanics with the atomic force microscope. <b>1999</b> , 24, 379-84	269
2017	Ligand-receptor interactions. <b>1999</b> , 62, 921-968	166
2016	Flow-induced interactions in the circulation. <b>1999,</b> 1-62	4
2015	Cell Separation. <b>1999</b> , 215-243	1
2014	Single-molecule biomechanics with optical methods. <i>Science</i> , <b>1999</b> , 283, 1689-95	546
2013	Chapter 11. Molecular interactions of biomembranes. <b>1999</b> , 95, 373	4
2012	Mechanical and chemical unfolding of a single protein: a comparison. <b>1999</b> , 96, 3694-9	900
2011	TCR binding to peptide-MHC stabilizes a flexible recognition interface. <b>1999</b> , 10, 357-65	273
2010	DNA helicases displace streptavidin from biotin-labeled oligonucleotides. <b>1999</b> , 38, 5164-71	117

## (2000-1999)

2009	and membrane. <b>1999</b> , 77, 587-96	66
2008	A direct comparison of selectin-mediated transient, adhesive events using high temporal resolution. <b>1999</b> , 77, 3371-83	173
2007	Reflection interference contrast microscopy combined with scanning force microscopy verifies the nature of protein-ligand interaction force measurements. <b>1999</b> , 76, 500-8	23
2006	Probabilistic modeling of shear-induced formation and breakage of doublets cross-linked by receptor-ligand bonds. <b>1999</b> , 76, 1112-28	55
2005	The forward rate of binding of surface-tethered reactants: effect of relative motion between two surfaces. <b>1999</b> , 76, 1280-92	164
2004	Strength of a weak bond connecting flexible polymer chains. <b>1999</b> , 76, 2439-47	382
2003	Rate-Dependent Fracture at Adhesive Interface. <b>1999</b> , 103, 6562-6566	87
2002	Dynamic force spectroscopy of single DNA molecules. <b>1999</b> , 96, 11277-82	507
2001	Force-Induced Dissociation of Single Protein AlgG Bonds 1999, 15, 7316-7324	30
2000	The tetraspanin CD9 influences the adhesion, spreading, and pericellular fibronectin matrix assembly of Chinese hamster ovary cells on human plasma fibronectin. <b>1999</b> , 251, 356-71	37
1999	Single molecule force spectroscopy of spectrin repeats: low unfolding forces in helix bundles. <b>1999</b> , 286, 553-61	482
1998	Photonic technology applied to immuno-hemo-rheology. <b>2000</b> , 3923, 122	
1998 1997	Photonic technology applied to immuno-hemo-rheology. 2000, 3923, 122  A probabilistic model for ligand-cytoskeleton transmembrane adhesion: predicting the behavior of microspheres on the surface of migrating cells. 2000, 204, 381-92	11
	A probabilistic model for ligand-cytoskeleton transmembrane adhesion: predicting the behavior of	11 51
1997	A probabilistic model for ligand-cytoskeleton transmembrane adhesion: predicting the behavior of microspheres on the surface of migrating cells. <b>2000</b> , 204, 381-92  Kraftspektroskopie an molekularen Systemen Œinzelmolekßpektroskopie an Polymeren und	
1997 1996	A probabilistic model for ligand-cytoskeleton transmembrane adhesion: predicting the behavior of microspheres on the surface of migrating cells. <b>2000</b> , 204, 381-92  Kraftspektroskopie an molekularen Systemen Œinzelmolekßpektroskopie an Polymeren und Biomoleklen. <b>2000</b> , 112, 3346-3374	51
1997 1996 1995	A probabilistic model for ligand-cytoskeleton transmembrane adhesion: predicting the behavior of microspheres on the surface of migrating cells. 2000, 204, 381-92  Kraftspektroskopie an molekularen Systemen Œinzelmolekßpektroskopie an Polymeren und Biomolekæn. 2000, 112, 3346-3374  . 2000, 6, 4249-4255  Force Spectroscopy of Molecular Systems-Single Molecule Spectroscopy of Polymers and	51 9

1991	Kinetics and mechanics of cell adhesion. <b>2000</b> , 33, 23-33	148
1990	Biomechanics of cell rolling: shear flow, cell-surface adhesion, and cell deformability. 2000, 33, 35-43	188
1989	Living cells in opto-electrical cages. <b>2000</b> , 19, 402-409	22
1988	Stretching single molecules into novel conformations using the atomic force microscope. <b>2000</b> , 7, 719-24	258
1987	Discrete interactions in cell adhesion measured by single-molecule force spectroscopy. <b>2000</b> , 2, 313-7	486
1986	Short-term binding of fibroblasts to fibronectin: optical tweezers experiments and probabilistic analysis. <b>2000</b> , 29, 398-408	133
1985	Dynamics of adhesive rupture between fibroblasts and fibronectin: microplate manipulations and deterministic model. <b>2000</b> , 29, 409-19	13
1984	Sequential binding of CD11a/CD18 and CD11b/CD18 defines neutrophil capture and stable adhesion to intercellular adhesion molecule <b>1</b> . <b>2000</b> , 95, 911-920	113
1983	Effect of Environmental Conditions on the Flocculation of Saccharomyces Cerevisiae. <b>2000</b> , 58, 108-116	47
1982	Cell Affinity Chromatography. <b>2000</b> , 61, 667-702	
1981	A model for individual and collective cell movement in Dictyostelium discoideum. <b>2000</b> , 97, 10448-53	195
1980	The state diagram for cell adhesion under flow: leukocyte rolling and firm adhesion. <b>2000</b> , 97, 11262-7	219
1979	Dynamic force spectroscopy of molecular adhesion bonds. <b>2000</b> , 84, 6126-9	145
1978	Affinity imaging of red blood cells using an atomic force microscope. <b>2000</b> , 48, 719-24	185
1977	Cadherin interaction probed by atomic force microscopy. <b>2000</b> , 97, 4005-10	451
1976	The membrane anchor influences ligand binding two-dimensional kinetic rates and three-dimensional affinity of FcgammaRIII (CD16). <b>2000</b> , 275, 10235-46	49
1975	An activated L-selectin mutant with conserved equilibrium binding properties but enhanced ligand recognition under shear flow. <b>2000</b> , 275, 18682-91	40
1974	Direct observation of membrane tethers formed during neutrophil attachment to platelets or P-selectin under physiological flow. <b>2000</b> , 149, 719-30	211

#### (2000-2000)

1973	spectroscopy. <b>2000</b> , 97, 10802-7	55
1972	Dynamic strengths of molecular anchoring and material cohesion in fluid biomembranes. <b>2000</b> , 12, A315-A320	68
1971	Interaction of von Willebrand factor domain A1 with platelet glycoprotein Ibalpha-(1-289). Slow intrinsic binding kinetics mediate rapid platelet adhesion. <b>2000</b> , 275, 7539-46	84
1970	High-resolution structure of hair-cell tip links. <b>2000</b> , 97, 13336-41	219
1969	Engineering the processive run length of the kinesin motor. <b>2000</b> , 151, 1093-100	227
1968	Differences in zero-force and force-driven kinetics of ligand dissociation from beta-galactoside-specific proteins (plant and animal lectins, immunoglobulin G) monitored by plasmon resonance and dynamic single molecule force microscopy. <b>2000</b> , 383, 157-70	107
1967	Force probe measurements of antibody-antigen interactions. <b>2000</b> , 20, 329-40	24
1966	Noncovalent interactions: a challenge for experiment and theory. <b>2000</b> , 100, 143-68	1403
1965	Measuring the forces that control protein interactions. <b>2000</b> , 29, 1-26	377
1964	Bioengineering models of cell signaling. <b>2000</b> , 2, 31-53	104
1963	Characterization of single actomyosin rigor bonds: load dependence of lifetime and mechanical properties. <b>2000</b> , 79, 962-74	101
1962	Model energy landscapes and the force-induced dissociation of ligand-receptor bonds. <b>2000</b> , 79, 1206-12	153
1961	Concurrent binding to multiple ligands: kinetic rates of CD16b for membrane-bound IgG1 and IgG2. <b>2000</b> , 79, 1858-66	33
1960	Adhesive dynamics simulations of sialyl-Lewis(x)/E-selectin-mediated rolling in a cell-free system. <b>2000</b> , 79, 1891-902	75
1959	Biomolecular interactions measured by atomic force microscopy. <b>2000</b> , 79, 3267-81	202
1958	Time and force dependence of the rupture of glycoprotein IIb-IIIa-fibrinogen bonds between latex spheres. <b>2000</b> , 78, 1195-206	57
1957	Cross-linking of cell surface receptors enhances cooperativity of molecular adhesion. <b>2000</b> , 78, 2814-20	161
1956	Molecular analyses of the interactions between human NK receptors and their HLA ligands. <b>2000</b> , 61, 28-38	39

1955	Cell mechanics: mechanical response, cell adhesion, and molecular deformation. <b>2000</b> , 2, 189-226	306
1954	Single molecular force spectroscopy of modular proteins in the nervous system. <b>2000</b> , 27, 435-46	48
1953	Rupture of multiple parallel molecular bonds under dynamic loading. <b>2000</b> , 84, 2750-3	210
1952	Stress-induced structural transitions in DNA and proteins. <b>2000</b> , 29, 523-43	85
1951	Interfacial Rate Processes in Adhesion and Friction. <b>2000</b> , 104, 4018-4030	144
1950	Energy landscape of streptavidin-biotin complexes measured by atomic force microscopy. <b>2000</b> , 39, 10219-23	247
1949	The mechanical strength of a covalent bond calculated by density functional theory. <b>2000</b> , 112, 7307-7312	274
1948	Leukocyte rolling in rat mesentery venules: distribution of adhesion bonds and the effects of cytoactive agents. <b>2001</b> , 29, 360-72	6
1947	Kinetic measurements of cell surface E-selectin/carbohydrate ligand interactions. 2001, 29, 935-46	53
1946	Synthetic CellsBelf-Assembling Polymer Membranes and Bioadhesive Colloids. 2001, 31, 387-404	44
1945	Probing the relation between forcelifetimeand chemistry in single molecular bonds. <b>2001</b> , 30, 105-28	1093
1944	Origin of Friction Derived from Rupture Dynamics. <b>2001</b> , 17, 6045-6047	20
1943	Identification of self through two-dimensional chemistry and synapses. <b>2001</b> , 17, 133-57	118
1942	Intermolecular forces in biology. <b>2001</b> , 34, 105-267	530
1941	Guinea pig fertilin exhibits restricted lateral mobility in epididymal sperm and becomes freely diffusing during capacitation. <b>2001</b> , 236, 502-9	26
1940	Forces and energetics of hapten-antibody dissociation: a biased molecular dynamics simulation study. <b>2001</b> , 314, 589-605	45
1939	Diffusion of microspheres in shear flow near a wall: use to measure binding rates between attached molecules. <b>2001</b> , 81, 25-42	61
1938	Multiparticle adhesive dynamics. Interactions between stably rolling cells. <b>2001</b> , 81, 799-813	112

# (2001-2001)

1937	Molecular dynamics force probe simulations of antibody/antigen unbinding: entropic control and nonadditivity of unbinding forces. <b>2001</b> , 81, 1295-313	65
1936	The "sticky chain": a kinetic model for the deformation of biological macromolecules. 2001, 81, 1897-906	19
1935	Kinetics of membrane adhesion mediated by ligand-receptor interaction studied with a biomimetic system. <b>2001</b> , 81, 2743-51	122
1934	Link between the enzymatic kinetics and mechanical behavior in an actomyosin motor. <b>2001</b> , 80, 379-97	23
1933	Correlating the kinetics of cytokine-induced E-selectin adhesion and expression on endothelial cells. <b>2001</b> , 80, 656-67	20
1932	A microcantilever device to assess the effect of force on the lifetime of selectin-carbohydrate bonds. <b>2001</b> , 80, 668-82	147
1931	Mechanical fatigue in repetitively stretched single molecules of titin. <b>2001</b> , 80, 852-63	78
1930	Effect of contact time and force on monocyte adhesion to vascular endothelium. <b>2001</b> , 80, 1722-32	65
1929	Nonlinear flow affects hydrodynamic forces and neutrophil adhesion rates in cone-plate viscometers. <b>2001</b> , 80, 2631-48	23
1928	Detection and characterization of single biomolecules at surfaces. <b>2001</b> , 82, 25-35	10
1927	Molecular competition for NKG2D: H60 and RAE1 compete unequally for NKG2D with dominance of H60. <b>2001</b> , 15, 201-11	100
1926	Kinetic and mechanical basis of rolling through an integrin and novel Ca2+-dependent rolling and Mg2+-dependent firm adhesion modalities for the alpha 4 beta 7-MAdCAM-1 interaction. <b>2001</b> , 40, 13972-9	40
1925	Hydrodynamic Collisions Suppress Fluctuations in the Rolling Velocity of Adhesive Blood Cells. <b>2001</b> , 17, 4139-4143	29
1924	The role of endocytic l1 trafficking in polarized adhesion and migration of nerve growth cones. <b>2001</b> , 21, 9194-203	103
1923	Force-induced melting of a short DNA double helix. <b>2001</b> , 30, 53-62	69
1922	Force spectroscopy on single passive biomolecules and single biomolecular bonds. <b>2001</b> , 346, 343-385	108
1921	A three-dimensional model of cell movement in multicellular systems. <b>2001</b> , 17, 835-852	77
1920	Modeling of orthokinetic flocculation of Saccharomyces cerevisiae. <b>2001</b> , 94, 47-58	15

1919	Semi-automatized processing of AFM force-spectroscopy data. <b>2001</b> , 87, 67-78	22
1918	Recognition force microscopy/spectroscopy of ion channels: applications to the skeletal muscle Ca2+ release channel (RYR1). <b>2001</b> , 86, 129-37	35
1917	Effect of contact time and inhibitor concentration on the affinity mediated adsorption of cells to surfaces. <b>2001</b> , 29, 28-33	8
1916	Molecular Recognition and Adhesion of Individual DNA Strands Studied by Dynamic Force Microscopy. <b>2001</b> , 2, 75-78	28
1915	Energy landscapes of ligand-receptor couples probed by dynamic force spectroscopy. <b>2001</b> , 2, 577-9	12
1914	Combined laser tweezers and dielectric field cage for the analysis of receptor-ligand interactions on single cells. <b>2001</b> , 22, 272-82	39
1913	Adhesion Forces between LewisX Determinant Antigens as Measured by Atomic Force Microscopy. <b>2001</b> , 113, 3142-3145	10
1912	Adhesion Forces between Lewis(X) Determinant Antigens as Measured by Atomic Force Microscopy. <b>2001</b> , 40, 3052-5	107
1911	Force and focal adhesion assembly: a close relationship studied using elastic micropatterned substrates. <b>2001</b> , 3, 466-72	1695
1910	Molecular properties in cell adhesion: a physical and engineering perspective. <b>2001</b> , 19, 310-6	82
1910 1909		8 <sub>2</sub>
1909		
1909 1908	Single molecule measurements of titin elasticity. <b>2001</b> , 77, 1-44	58
1909 1908 1907	Single molecule measurements of titin elasticity. <b>2001</b> , 77, 1-44  Controlling duration of contact between T cells and antigen-presenting cells. <b>2001</b> , 249, 73-84	58
1909 1908 1907	Single molecule measurements of titin elasticity. <b>2001</b> , 77, 1-44  Controlling duration of contact between T cells and antigen-presenting cells. <b>2001</b> , 249, 73-84  Steered molecular dynamics and mechanical functions of proteins. <b>2001</b> , 11, 224-30	58 2 789
1909 1908 1907	Single molecule measurements of titin elasticity. 2001, 77, 1-44  Controlling duration of contact between T cells and antigen-presenting cells. 2001, 249, 73-84  Steered molecular dynamics and mechanical functions of proteins. 2001, 11, 224-30  Atomic force microscopy of macromolecular interactions. 2001, 11, 567-72  The role of endocytosis in regulating L1-mediated adhesion. 2001, 276, 1285-90	58 2 789 33
1909 1908 1907 1906	Single molecule measurements of titin elasticity. 2001, 77, 1-44  Controlling duration of contact between T cells and antigen-presenting cells. 2001, 249, 73-84  Steered molecular dynamics and mechanical functions of proteins. 2001, 11, 224-30  Atomic force microscopy of macromolecular interactions. 2001, 11, 567-72  The role of endocytosis in regulating L1-mediated adhesion. 2001, 276, 1285-90  Dimerization of a selectin and its ligand stabilizes cell rolling and enhances tether strength in shear	58 2 789 33 48

1901	A response calculus for immobilized T cell receptor ligands. <b>2001</b> , 276, 49125-32	25
1900	Selectin receptor-ligand bonds: Formation limited by shear rate and dissociation governed by the Bell model. <b>2001</b> , 98, 950-5	157
1899	Chemically distinct transition states govern rapid dissociation of single L-selectin bonds under force. <b>2001</b> , 98, 3784-9	198
1898	Multiparticle adhesive dynamics: hydrodynamic recruitment of rolling leukocytes. <b>2001</b> , 98, 14919-24	126
1897	Reliability theory for receptorligand bond dissociation. 2001, 114, 7483-7496	41
1896	Simulating the dynamic strength of molecular interactions. <b>2001</b> , 114, 3208-3214	17
1895	Adhesion-induced phase behavior of multicomponent membranes. <b>2001</b> , 64, 011903	62
1894	Peeling process in living cell movement under shear flow. <b>2002</b> , 89, 108101	33
1893	Dynamic force spectroscopy to probe adhesion strength of living cells. <b>2002</b> , 89, 028101	57
1892	A two-state kinetic model for the unfolding of single molecules by mechanical force. <b>2002</b> , 99, 13544-8	94
1891	Intercellular transfer of antigen-presenting cell determinants onto T cells: molecular mechanisms and biological significance. <b>2002</b> , 16, 477-86	89
1890	A simple method for probing the mechanical unfolding pathway of proteins in detail. <b>2002</b> , 99, 12143-8	84
1889	A finite element model of cell deformation during magnetic bead twisting. <b>2002</b> , 93, 1429-36	173
1888	Distinct molecular and cellular contributions to stabilizing selectin-mediated rolling under flow. <b>2002</b> , 158, 787-99	132
1887	Force history dependence of reverse-rates of P-selectin interacting with PSGL-1.	
1886	Adhesion strength of various mammalian cell lines, Part II: Effect of polystyrene, glass and ageing on various mammalian cell lines. <b>2002</b> , 17, 129-139	
1885	Reverse Engineering: Learning from Proteins How to Enhance the Performance of Synthetic Nanosystems. <b>2002</b> , 27, 972-978	12
1884	Dynamic strength of adhesion molecules: Role of rebinding and self-consistent rates. <b>2002</b> , 58, 792-798	70

Selectin-like kinetics and biomechanics promote rapid platelet adhesion in flow: the GPIb/spl alpha/-vWF tether bond.

1882	Forced unfolding of single proteins. <b>2002</b> , 68, 311-35	1
1881	Pull-out mechanical measurement of tissue-substrate adhesive strength: endothelial cell monolayer sheet formed on a thermoresponsive gelatin layer. <b>2002</b> , 13, 81-94	8
1880	Simulation of Cell Adhesion to Bioreactive Surfaces in Shear: The Effect of Cell Size. <b>2002</b> , 41, 486-493	12
1879	Chair-boat transitions in single polysaccharide molecules observed with force-ramp AFM. <b>2002</b> , 99, 4278-83	132
1878	Molecular mechanics of cardiac titin's PEVK and N2B spring elements. <b>2002</b> , 277, 11549-58	113
1877	Homotypic interactions of soluble and immobilized osteopontin. <b>2002</b> , 30, 840-50	29
1876	Molecular recognition studies using the atomic force microscope. <b>2002</b> , 68, 115-39	25
1875	Single-molecule force measurements. <b>2002</b> , 68, 301-9	24
1874	The effect of DLVO and hydrophobic energies on the aggregation of particles in solution.	
1873	Bacterial adhesion to target cells enhanced by shear force. <b>2002</b> , 109, 913-23	460
1872	The role of surface science in bioengineered materials. <b>2002</b> , 500, 61-83	379
1871	The mechanical hierarchies of fibronectin observed with single-molecule AFM. <b>2002</b> , 319, 433-47	333
1870	Differential segregation in a cell-cell contact interface: the dynamics of the immunological synapse. <b>2002</b> , 83, 1784-96	92
1869	Real-time measurement of spontaneous antigen-antibody dissociation. <b>2002</b> , 83, 1965-73	36
1868	Plastic deformation of protein monolayers. <b>2002</b> , 83, 2211-8	14
1867	Force spectroscopy of the leukocyte function-associated antigen-1/intercellular adhesion molecule-1 interaction. <b>2002</b> , 83, 2270-9	255
1866	Selectin-like kinetics and biomechanics promote rapid platelet adhesion in flow: the GPIb(alpha)-vWF tether bond. <b>2002</b> , 83, 194-205	154

1865	The effect of core destabilization on the mechanical resistance of I27. <b>2002</b> , 83, 458-72	118
1864	Multi-bead-and-spring model to interpret protein detachment studied by AFM force spectroscopy. <b>2002</b> , 83, 706-22	10
1863	Temperature dependence of unbinding forces between complementary DNA strands. 2002, 82, 517-21	101
1862	Comparison of PSGL-1 microbead and neutrophil rolling: microvillus elongation stabilizes P-selectin bond clusters. <b>2002</b> , 82, 1835-47	139
1861	Shear flow-induced detachment kinetics of Dictyostelium discoideum cells from solid substrate. <b>2002</b> , 82, 2383-95	74
1860	Single molecule recognition of protein binding epitopes in brush border membranes by force microscopy. <b>2002</b> , 82, 2767-74	65
1859	Dissecting streptavidin-biotin interaction with a laminar flow chamber. <b>2002</b> , 82, 3214-23	81
1858	The interaction properties of costimulatory molecules revisited. <b>2002</b> , 17, 201-10	477
1857	Cellular fluid mechanics. 2002, 34, 211-32	73
1856	Probabilistic Modeling of Platelet Aggregation: Effects of Activation Time and Receptor Occupancy. <b>2002</b> , 219, 33-53	14
1855	Probing Single Icam-1/Lfa-1 Interaction under External Force. <b>2002</b> , 2, 41-42	
1854	Transmembrane cooperative linkage in cellular adhesion. <b>2002</b> , 81, 161-8	16
1853	Single molecule fluorescence and force microscopy. <b>2002</b> , 37, 1495-511	4
1852	Probabilistic Modeling of Platelet Aggregation: Effects of Activation Time and Receptor Occupancy. <b>2002</b> , 219, 33-53	10
1851	Invited Review Nano-mechanics of proteins with possible applications. <b>2002</b> , 31, 43-62	6
1850	Surface attachment of ligands and receptors for molecular recognition force microscopy. <b>2002</b> , 23, 115-123	63
1849	Environmental influences on signal transduction through membranes: a retrospective mini-review. <b>2003</b> , 100, 519-34	38
1848	Detachment strategies for affinity-adsorbed cells. <b>2002</b> , 31, 153-160	18

1847	Reverse engineering of the giant muscle protein titin. <b>2002</b> , 418, 998-1002	440
1846	Mechanics of biomolecules. <b>2002</b> , 50, 2237-2274	81
1845	Mechanical Properties of a Single-Headed Processive Motor, Inner-Arm Dynein Subspecies-c of ChlamydomonasStudied at the Single Molecule Level. <b>2002</b> , 28, 335-45	14
1844	Dictyostelium discoideum adhesion and motility under shear flow: experimental and theoretical approaches. <b>2002</b> , 23, 651-8	9
1843	Leukocyte adhesion dynamics in shear flow. <b>2002</b> , 30, 315-32	67
1842	Measuring receptor/ligand interaction at the single-bond level: experimental and interpretative issues. <b>2002</b> , 30, 305-14	73
1841	Quantification of varying adhesion levels in chondrocytes using the cytodetacher. <b>2002</b> , 30, 703-12	18
1840	Integrin activation by divalent ions affects neutrophil homotypic adhesion. <b>2002</b> , 30, 1002-11	16
1839	Fast dissociation kinetics between individual E-cadherin fragments revealed by flow chamber analysis. <b>2002</b> , 21, 2537-46	72
1838	Rearrangement of integrins in avidity regulation by leukocytes. <b>2002</b> , 26, 199-206	22
1837	Extraction of membrane proteins from a living cell surface using the atomic force microscope and covalent crosslinkers. <b>2003</b> , 39, 101-17	36
1836	Toward mechanical manipulations of cell membranes and membrane proteins using an atomic force microscope: an invited review. <b>2003</b> , 39, 257-77	32
1835	The mechanism of axon growth: what we have learned from the cell adhesion molecule L1. <b>2003</b> , 28, 219-28	47
1834	Unfolding pathways of native bacteriorhodopsin depend on temperature. <b>2003</b> , 22, 5220-9	100
1833	Single-molecule folding. <b>2003</b> , 13, 88-97	207
1832	Protein-protein unbinding induced by force: single-molecule studies. <b>2003</b> , 13, 227-35	119
1831	Nonspecific interaction forces at water-membrane interface by forced molecular dynamics simulations. <b>2003</b> , 24, 328-39	3
1830	Fluid shear contributions to bacteria cell detachment initiated by a monoclonal antibody. <b>2003</b> , 83, 65-74	23

# (2003-2003)

1829	Monte Carlo simulation of biospecific interactions between cells and surfaces. <b>2003</b> , 58, 4465-4474	4
1828	Force mode atomic force microscopy as a tool for protein folding studies. <b>2003</b> , 479, 87-105	106
1827	Cooperative adhesion of ligand-receptor bonds. <b>2003</b> , 104, 271-8	67
1826	Molecular interaction studies of hemostasis: fibrinogen ligand-human platelet receptor interactions. <b>2003</b> , 97, 341-52	32
1825	Modified tips: molecules to cells. <b>2003</b> , 6, 22-29	6
1824	Direct observation of catch bonds involving cell-adhesion molecules. <b>2003</b> , 423, 190-3	757
1823	Folding at the speed limit. 2003, 423, 193-7	363
1822	Single-Molecule Force Spectroscopy of Isolated and Aggregated Fibronectin Proteins on Negatively Charged Surfaces in Aqueous Liquids. <b>2003</b> , 19, 9566-9572	55
1821	Unfolding mechanics of multiple OspA substructures investigated with single molecule force spectroscopy. <b>2003</b> , 333, 993-1002	37
1820	The elasticity of single kettin molecules using a two-bead laser-tweezers assay. <b>2003</b> , 535, 55-60	39
1819	Mechanics and structure of titin oligomers explored with atomic force microscopy. 2003, 1604, 105-14	54
1818	Kinetics from nonequilibrium single-molecule pulling experiments. <b>2003</b> , 85, 5-15	393
1817	Red blood cells initiate leukocyte rolling in postcapillary expansions: a lattice Boltzmann analysis. <b>2003</b> , 85, 208-22	126
1816	Computational modeling of cell adhesion and movement using a continuum-kinetics approach. <b>2003</b> , 85, 2273-86	117
1816 1815		117 79
	2003, 85, 2273-86  Pathway shifts and thermal softening in temperature-coupled forced unfolding of spectrin	<u> </u>
1815	2003, 85, 2273-86  Pathway shifts and thermal softening in temperature-coupled forced unfolding of spectrin domains. 2003, 85, 3286-93  Kinetics of GPIbalpha-vWF-A1 tether bond under flow: effect of GPIbalpha mutations on the	79

1811	Motion of an adhesive gel in a swelling gradient: a mechanism for cell locomotion. 2003, 90, 168102	50
1810	Exploring Reaction Pathways of Single-Molecule Interactions through the Manipulation and Tracking of a Potential-Confined Microsphere in Three Dimensions. <b>2003</b> , 790, 1	
1809	Avidity enhancement of L-selectin bonds by flow: shear-promoted rotation of leukocytes turn labile bonds into functional tethers. <b>2003</b> , 163, 649-59	45
1808	Dynamic single-molecule force spectroscopy: bond rupture analysis with variable spacer length. <b>2003</b> , 15, S1709-S1723	115
1807	Dynamics of the interaction between a fibronectin molecule and a living bacterium under mechanical force. <b>2003</b> , 100, 13292-7	99
1806	Leukocyte adhesion: an exquisite balance of hydrodynamic and molecular forces. <b>2003</b> , 18, 186-90	6
1805	Unzipping kinetics of double-stranded DNA in a nanopore. <b>2003</b> , 90, 238101	247
1804	Dynamic force spectroscopy: optimized data analysis. <b>2003</b> , 68, 045103	30
1803	Theoretical studies of the mechanical unfolding of the muscle protein titin: Bridging the time-scale gap between simulation and experiment. <b>2003</b> , 119, 9260-9268	76
1802	Beyond the conventional description of dynamic force spectroscopy of adhesion bonds. <b>2003</b> , 100, 11378-81	233
	Beyond the conventional description of dynamic force spectroscopy of adhesion bonds. <b>2003</b> , 100, 11378-81  Hybrid Biological Nanomachines. <b>2003</b> , 505-540	233
		233
1801	Hybrid Biological Nanomachines. <b>2003</b> , 505-540  Dynamic simulations of inflammatory cell recruitment: the state diagram for cell adhesion	18
1801 1800	Hybrid Biological Nanomachines. 2003, 505-540  Dynamic simulations of inflammatory cell recruitment: the state diagram for cell adhesion mediated by two receptors.	
1801 1800 1799	Hybrid Biological Nanomachines. 2003, 505-540  Dynamic simulations of inflammatory cell recruitment: the state diagram for cell adhesion mediated by two receptors.  Thermally activated lubrication with alkanes: The effect of chain length. 2003, 61, 268-274	18
1801 1800 1799 1798	Hybrid Biological Nanomachines. 2003, 505-540  Dynamic simulations of inflammatory cell recruitment: the state diagram for cell adhesion mediated by two receptors.  Thermally activated lubrication with alkanes: The effect of chain length. 2003, 61, 268-274  Effects of a pulling force on the shape of a bound vesicle. 2003, 64, 281-287	18
1801 1800 1799 1798	Hybrid Biological Nanomachines. 2003, 505-540  Dynamic simulations of inflammatory cell recruitment: the state diagram for cell adhesion mediated by two receptors.  Thermally activated lubrication with alkanes: The effect of chain length. 2003, 61, 268-274  Effects of a pulling force on the shape of a bound vesicle. 2003, 64, 281-287  Irreversible vs. reversible bridging: When is kinetics relevant for adhesion?. 2003, 62, 876-882	18 32 20

1793	Unfolding dynamics of proteins under applied force. <b>2003</b> , 361, 713-28; discussion 728-30	24
1792	Biological Single Molecule Applications and Advanced Biosensing. <b>2003</b> , 241-263	3
1791	Measuring and visualizing single molecular interactions in biology. <b>2003</b> , 31, 1052-7	30
1790	Alterations in the intrinsic properties of the GPIbalpha-VWF tether bond define the kinetics of the platelet-type von Willebrand disease mutation, Gly233Val. <b>2003</b> , 102, 152-60	53
1789	Detection and characterization of cellular immune responses using peptide-MHC microarrays. <b>2003</b> , 1, E65	111
1788	[The concept of catch bonds for molecular interactions]. <b>2003</b> , 19, 1175-9	
1787	Trans-bonded pairs of E-cadherin exhibit a remarkable hierarchy of mechanical strengths. <b>2004</b> , 101, 16472-7	110
1786	Cell mechanosensitivity controls the anisotropy of focal adhesions. <b>2004</b> , 101, 12520-5	179
1785	Stability of adhesion clusters under constant force. <b>2004</b> , 92, 108102	145
1784	Stochastic dynamics of adhesion clusters under shared constant force and with rebinding. <b>2004</b> , 121, 8997-9017	85
1783	Influence of tether dynamics on forced Kramers escape from a kinetic trap. <b>2004</b> , 70, 031102	13
1782	Hidden dynamics of vesicle adhesion induced by specific stickers. <b>2004</b> , 93, 228101	55
1781	Periodic adhesive fingers between contacting cells. <b>2004</b> , 93, 108102	22
1780	Kinetic measurement of ribosome motor stalling force. <b>2004</b> , 85, 4789-4791	9
1779	Bio-specific recognition and applications: from molecular to colloidal scales. <b>2004</b> , 16, R469-R480	12
1778	Adhesion clusters under shared linear loading: A stochastic analysis. <b>2004</b> , 66, 603-609	35
1777	Distinct kinetic and mechanical properties govern selectin-leukocyte interactions. <b>2004</b> , 117, 2503-11	100
1776	Catch bonds govern adhesion through L-selectin at threshold shear. <b>2004</b> , 166, 913-23	177

1775	Low force decelerates L-selectin dissociation from P-selectin glycoprotein ligand-1 and endoglycan. <b>2004</b> , 279, 2291-8	195
1774	Chemistry on a single protein, vascular cell adhesion molecule-1, during forced unfolding. <b>2004</b> , 279, 45865-74	46
1773	Forces between Minerals and Biological Surfaces in Aqueous Solution. <b>2004</b> , 82, 1-54	14
1772	Mechanical switching and coupling between two dissociation pathways in a P-selectin adhesion bond. <b>2004</b> , 101, 11281-6	266
1771	The unfolding kinetics of ubiquitin captured with single-molecule force-clamp techniques. <b>2004</b> , 101, 7299-304	291
1770	L-selectin-mediated leukocyte tethering in shear flow is controlled by multiple contacts and cytoskeletal anchorage facilitating fast rebinding events. <b>2004</b> , 101, 6940-5	29
1769	A Stochastic Process Algebra Approach to Simulation of Autoreactive Lymphocyte Recruitment. <b>2004</b> , 80, 273-288	27
1768	Direct quantification of the modulation of interaction between cell- or surface-bound LFA-1 and ICAM-1. <b>2004</b> , 76, 594-602	16
1767	Dynamics of Protein Extraction and Extension by Force Spectroscopy and Molecular Dynamics Simulation. <b>2004</b> ,	
1766	Shear-dependent 'stick-and-roll' adhesion of type 1 fimbriated Escherichia coli. <b>2004</b> , 53, 1545-57	195
1766 1765	Shear-dependent 'stick-and-roll' adhesion of type 1 fimbriated Escherichia coli. <b>2004</b> , 53, 1545-57  Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted CD4+'superior' T cells from a patient with immune thrombocytopenic purpura. <b>2004</b> , 2, 348-50	195
1765	Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted	
1765	Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted CD4+'superior' T cells from a patient with immune thrombocytopenic purpura. <b>2004</b> , 2, 348-50  A new heterozygous mutation in gamma fibrinogen gene leading to 326 Cys>Ser substitution in fibrinogen CEdoba is associated with defective polymerization and familial	3
1765 1764 1763	Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted CD4+'superior' T cells from a patient with immune thrombocytopenic purpura. <b>2004</b> , 2, 348-50  A new heterozygous mutation in gamma fibrinogen gene leading to 326 Cys>Ser substitution in fibrinogen Cfdoba is associated with defective polymerization and familial hypodysfibrinogenemia. <b>2004</b> , 2, 352-4  The effect of a pneumatic tube transport system on PFA-100 trade mark closure time and whole	3
1765 1764 1763 1762	Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted CD4+'superior' T cells from a patient with immune thrombocytopenic purpura. <b>2004</b> , 2, 348-50  A new heterozygous mutation in gamma fibrinogen gene leading to 326 Cys>Ser substitution in fibrinogen CEdoba is associated with defective polymerization and familial hypodysfibrinogenemia. <b>2004</b> , 2, 352-4  The effect of a pneumatic tube transport system on PFA-100 trade mark closure time and whole blood platelet aggregation. <b>2004</b> , 2, 354-6	3 8 44
1765 1764 1763 1762	Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted CD4+'superior' T cells from a patient with immune thrombocytopenic purpura. 2004, 2, 348-50  A new heterozygous mutation in gamma fibrinogen gene leading to 326 Cys>Ser substitution in fibrinogen CEdoba is associated with defective polymerization and familial hypodysfibrinogenemia. 2004, 2, 352-4  The effect of a pneumatic tube transport system on PFA-100 trade mark closure time and whole blood platelet aggregation. 2004, 2, 354-6  Methods that increase FVIII recovery in cryoprecipitate. 2004, 2, 356-7  High-titer inhibitor development in hemophilia A: lack of product specificity. 2004, 2, 358-9	3 8 44 1
1765 1764 1763 1762	Identification of an epitope on glycoprotein IIb-IIIa that is recognized by HLA-DRB1*0405-restricted CD4+'superior' T cells from a patient with immune thrombocytopenic purpura. 2004, 2, 348-50  A new heterozygous mutation in gamma fibrinogen gene leading to 326 Cys>Ser substitution in fibrinogen Cfdoba is associated with defective polymerization and familial hypodysfibrinogenemia. 2004, 2, 352-4  The effect of a pneumatic tube transport system on PFA-100 trade mark closure time and whole blood platelet aggregation. 2004, 2, 354-6  Methods that increase FVIII recovery in cryoprecipitate. 2004, 2, 356-7  High-titer inhibitor development in hemophilia A: lack of product specificity. 2004, 2, 358-9  Risk of venous thromboembolism during pregnancy in homozygous carriers of the factor V Leiden	3 8 44 1 6

1757	Potential role of D-dimer to rule in pulmonary embolism: a rebuttal. <b>2004</b> , 2, 367-8; author reply 369-70	4
1756	Potential role of d-dimer to rule in pulmonary embolism: reply to a rebuttal. <b>2004</b> , 2, 369-370	1
	Rebuttal to: clinical manifestations of the prothrombin G20210A mutation in children. <b>2004</b> , 2, 370-1; author reply 371-2	
	Reply to rebuttal of: Clinical manifestations of the prothrombin G20210A mutation in children. <b>2004</b> , 2, 371-372	
1753	Measuring the binding strength of single ligandfleceptor pairs on cells: rebuttal. <b>2004</b> , 2, 372-374	23
1752	Vitamin K antagonists and cancer: reply to rebuttal. <b>2004</b> , 2, 378-379	7
イフロイ	Assessment of three chromogenic and one clotting assays for the measurement of synthetic pentasaccharide fondaparinux (Arixtra) anti-Xa activity. <b>2004</b> , 2, 346-8	35
	Serum levels of interleukin-10 are inversely related to future events in patients with acute myocardial infarction. <b>2004</b> , 2, 350-2	17
	The prevalence of factor V G1691A but not of prothrombin G20210A and methylenetetrahydrofolate reductase C677T is remarkably low in French Basques. <b>2004</b> , 2, 361-2	13
1748	The relationship between adherence and quality of treatment with vitamin K antagonists. <b>2004</b> , 2, 362-3	2
	Effect of bezafibrate on plasma homocysteine concentration in men with lower extremity arterial disease. <b>2004</b> , 2, 364-5	10
1746	Measuring the binding strength of single ligandEeceptor pairs on cells: reply to a rebuttal. <b>2004</b> , 2, 374-377	22
1745	Vitamin K antagonists and cancer: rebuttal. <b>2004</b> , 2, 377-8; author reply 378-9	23
1744	Probing the energy landscape of the membrane protein bacteriorhodopsin. <b>2004</b> , 12, 871-9	74
1743	Computational approaches for modeling regulatory cellular networks. <b>2004</b> , 14, 661-9	52
1742	Bubble-induced detachment of affinity-adsorbed erythrocytes. <b>2004</b> , 40, 145-9	14
1741	Adhesion of microfabricated particles on vascular endothelium: a parametric analysis. <b>2004</b> , 32, 793-802	42
1740	Force and Compliance Measurements on Living Cells Using Atomic Force Microscopy (AFM). <b>2004</b> , 6, 1-9	106

1739	Effects of contact-induced membrane stiffening on platelet adhesion. <b>2004</b> , 2, 157-67	8
1738	Forced extension of P-selectin construct using steered molecular dynamics. <b>2004</b> , 49, 10-17	4
1737	How linear molecules resist to shear: the origin of nanoscale friction. <b>2004</b> , 47, 15-20	1
1736	The deformation of an adherent leukocyte under steady shear flow: a numerical study. <b>2004</b> , 37, 1079-85	20
1735	Kinetic analysis of the attachment of a biological particle to a surface by macromolecular binding. <b>2004</b> , 226, 237-50	9
1734	Probing molecular interaction between concanavalin A and mannose ligands by means of SFM. <b>2004</b> , 33, 644-50	18
1733	Single molecular mechanics of a cholesterol-bearing pullulan nanogel at the hydrophobic interfaces. <b>2004</b> , 25, 2911-8	67
1732	Analysis of force curves obtained on the live cell membrane using chemically modified AFM probes. <b>2004</b> , 100, 187-95	55
1731	The role of binder mobility in spontaneous adhesive contact and implications for cell adhesion. <b>2004</b> , 52, 2455-2472	100
~ <b>=</b> 00		
1730	A continuum model of motility in ameboid cells. <b>2004</b> , 66, 167-93	120
1730	A continuum model of motility in ameboid cells. <b>2004</b> , 66, 167-93  Force spectroscopy of covalent bond rupture versus protein extraction. <b>2004</b> , 238, 47-50	3
1729		
1729	Force spectroscopy of covalent bond rupture versus protein extraction. <b>2004</b> , 238, 47-50	3
1729 1728 1727	Force spectroscopy of covalent bond rupture versus protein extraction. <b>2004</b> , 238, 47-50  Nucleic acid transport through carbon nanotube membranes. <b>2004</b> , 101, 12177-82	3
1729 1728 1727	Force spectroscopy of covalent bond rupture versus protein extraction. <b>2004</b> , 238, 47-50  Nucleic acid transport through carbon nanotube membranes. <b>2004</b> , 101, 12177-82  Exploring the energy landscape of GFP by single-molecule mechanical experiments. <b>2004</b> , 101, 16192-7	3 153 288
1729 1728 1727 1726	Force spectroscopy of covalent bond rupture versus protein extraction. 2004, 238, 47-50  Nucleic acid transport through carbon nanotube membranes. 2004, 101, 12177-82  Exploring the energy landscape of GFP by single-molecule mechanical experiments. 2004, 101, 16192-7  The role of polymer spacers in specific adhesion. 2004, 120, 6229-37	3 153 288 23
1729 1728 1727 1726	Force spectroscopy of covalent bond rupture versus protein extraction. 2004, 238, 47-50  Nucleic acid transport through carbon nanotube membranes. 2004, 101, 12177-82  Exploring the energy landscape of GFP by single-molecule mechanical experiments. 2004, 101, 16192-7  The role of polymer spacers in specific adhesion. 2004, 120, 6229-37  Differential actin binding along the PEVK domain of skeletal muscle titin. 2004, 117, 5781-9  Transport features, reaction kinetics and receptor biomechanics controlling selectin and integrin	3 153 288 23 55

# (2004-2004)

1721	Brownian adhesive dynamics (BRAD) for simulating the receptor-mediated binding of viruses. <b>2004</b> , 86, 3359-72	30
1720	Neutrophil adhesive contact dependence on impingement force. <b>2004</b> , 87, 4237-45	30
1719	Dependence of DNA polymerase replication rate on external forces: a model based on molecular dynamics simulations. <b>2004</b> , 87, 1478-97	29
1718	A semianalytic model of leukocyte rolling. <b>2004</b> , 87, 2919-30	43
1717	Visualization and mechanical manipulations of individual fibrin fibers suggest that fiber cross section has fractal dimension 1.3. <b>2004</b> , 87, 4226-36	71
1716	Reversible mechanical unfolding of single ubiquitin molecules. <b>2004</b> , 87, 3995-4006	79
1715	Pattern formation during T-cell adhesion. <b>2004</b> , 87, 3665-78	99
1714	Molecular basis for the dynamic strength of the integrin alpha4beta1/VCAM-1 interaction. <b>2004</b> , 87, 3470-8	92
1713	Nanopore unzipping of individual DNA hairpin molecules. <b>2004</b> , 87, 3205-12	247
1712	LexA-DNA bond strength by single molecule force spectroscopy. <b>2004</b> , 87, 2683-90	82
1711	Mechanical processes in biochemistry. <b>2004</b> , 73, 705-48	625
1710	Simulation of the mechanical unfolding of ubiquitin: probing different unfolding reaction coordinates by changing the pulling geometry. <b>2004</b> , 121, 4826-32	69
1709	MODELING AND SIMULATION OF BIOMATERIALS. <b>2004</b> , 34, 279-314	35
1708	Mathematical modelling of skeletal repair. <b>2004</b> , 313, 825-33	29
1707	Atomic force microscopy: mechanical unfolding of proteins. <b>2004</b> , 34, 100-11	62
1706	A 3D numerical study of the effect of channel height on leukocyte deformation and adhesion in parallel-plate flow chambers. <b>2004</b> , 68, 188-202	61
1705	Friction through dynamical formation and rupture of molecular bonds. <b>2004</b> , 92, 135503	166
1704	Deformation mechanism of leukocyte adhering to vascular surface under steady shear flow. <b>2004</b> , 47, 165-74	3

1703	CELLMATERIAL INTERACTIONS. 2004, 29, 7-46	19
1702	The molecular mechanics of P- and L-selectin lectin domains binding to PSGL-1. <b>2004</b> , 86, 544-54	74
1701	Specific recognition of macroscopic objects by the cell surface: evidence for a receptor density threshold revealed by micrometric particle binding characteristics. <b>2004</b> , 86, 3291-303	12
1700	Theoretical analysis of dynamic force spectroscopy experiments on ligand-receptor complexes. <b>2004</b> , 112, 13-23	39
1699	MOLECULAR MECHANISMS OF CELL ADHESION: NEW PERSPECTIVES FROM SURFACE FORCE MEASUREMENTS. <b>2004</b> , 80, 409-432	2
1698	Separation of breast cancer cells from peripherally circulating blood using antibodies fixed in microchannels. <b>2004</b> ,	2
1697	Periodically driven stochastic un- and refolding transitions of biopolymers. <b>2004</b> , 68, 746-752	7
1696	Characterization of platelet adhesion under flow using microscopic image sequence analysis. <b>2005</b> , 28, 678-85	3
1695	Using a Laminar Flow System to Explain Shear-Enhanced Bacterial Adhesion. 2005, 751	1
1694	Scanning probe microscopy hpplications for the study of soft materials. 2005, 161-213	2
1693	Polymerization of fibrin: specificity, strength, and stability of knob-hole interactions studied at the single-molecule level. <b>2005</b> , 106, 2944-51	99
1692	Computational mechanics modelling of cellsubstrate contact during cyclic substrate deformation. <b>2005</b> , 53, 2597-2637	34
1691	Probing bacterial interactions: integrated approaches combining atomic force microscopy, electron microscopy and biophysical techniques. <b>2005</b> , 36, 293-320	72
1690	Viscoelastic behavior of organic materials: consequences of a logarithmic dependence of force on strain rate. <b>2005</b> , 38, 1451-8	14
1689	A model for the stability and creep of organic materials. <b>2005</b> , 38, 1459-67	10
1688	Force measurements with the atomic force microscope: Technique, interpretation and applications. <b>2005</b> , 59, 1-152	2599
1687	Mapping enzymatic functionalities of mannuronan C-5 epimerases and their modular units by dynamic force spectroscopy. <b>2005</b> , 340, 2782-95	15
1686	Activated dynamics of semiflexible polymers on structured substrates. <b>2005</b> , 16, 319-40	12

# (2005-2005)

Force spectroscopy of single multidomain biopolymers: a master equation approach. <b>2005</b> , 18, 1-13	7
1684 Visualizing and manipulating individual protein molecules. <b>2005</b> , 26, R119-53	35
The snake venom protein botrocetin acts as a biological brace to promote dysfunctional platelet aggregation. <b>2005</b> , 12, 152-9	79
1682 Leukocyte adhesion: what's the catch?. <b>2005</b> , 15, R96-9	28
1681 Supramolecular chemistry at the single-molecule level. <b>2005</b> , 44, 484-8	65
Single-molecule experiments in synthetic biology: an approach to the affinity ranking of DNA-binding peptides. <b>2005</b> , 44, 3921-4	46
1679 Supramolekulare Chemie mit einzelnen Moleklen. <b>2005</b> , 117, 489-492	9
Einzelmoleklexperimente in der synthetischen Biologie lein Ansatz fil das Affinitesranking DNA-bindender Peptide. <b>2005</b> , 117, 3989-3993	3
1677 Molecular dynamics simulation of peeling a DNA molecule on substrate. <b>2005</b> , 21, 249-256	36
1676 A model for CD2/CD58-mediated adhesion strengthening. <b>2005</b> , 33, 483-93	11
1675 The cell: fundamental unit of developmental systems. <b>2005</b> , 6-23	
1674 Fertilization: generating one living dynamical system from two. <b>2005</b> , 223-247	
1673 Cell states: stability, oscillation, differentiation. <b>2005</b> , 51-76	
$_{1672}$ Pattern formation: segmentation, axes, and asymmetry. <b>2005</b> , 155-187	
1671 Evolution of developmental mechanisms. <b>2005</b> , 248-272	
1670 Introduction: Biology and physics. <b>2005</b> , 1-5	
1669 Cleavage and blastula formation. <b>2005</b> , 24-50	1
1668 Cell adhesion, compartmentalization, and lumen formation. <b>2005</b> , 77-98	

1667	Epithelial morphogenesis: gastrulation and neurulation. <b>2005</b> , 99-130	
1666	Mesenchymal morphogenesis. <b>2005</b> , 131-154	
1665	Organogenesis. <b>2005</b> , 188-222	
1664	Glossary. <b>2005</b> , 273-290	
1663	References. <b>2005</b> , 291-326	
1662	Modeling receptor-mediated endocytosis via mechanics of cell adhesion. <b>2005</b> , 901, 1	1
1661	Single-molecule analysis of human immunodeficiency virus type 1 gp120-receptor interactions in living cells. <b>2005</b> , 79, 14748-55	64
1660	Reversible mechanical unzipping of amyloid beta-fibrils. <b>2005</b> , 280, 8464-70	72
1659	Issues concerning the use of assays of cell adhesion to biomaterials. <b>2005</b> , 745-762	
1658	Maximum likelihood estimation of multiple-bond kinetics from single-molecule pulling experiments.	
1657	Mechanics of receptor-mediated endocytosis. <b>2005</b> , 102, 9469-74	952
1656	Scaling in force spectroscopy of macromolecules. <b>2005</b> , 72, 011918	17
1655	Topography of the free-energy landscape probed via mechanical unfolding of proteins. <b>2005</b> , 122, 234915	59
1654	Computer simulations of the translocation and unfolding of a protein pulled mechanically through a pore. <b>2005</b> , 123, 124903	61
1653	Adhesion effects on contact opening dynamics in micromachined switches. <b>2005</b> , 97, 103535	33
1652	Probing protein-protein interactions by dynamic force correlation spectroscopy. <b>2005</b> , 95, 168302	19
1651	Friction force microscopy as an alternative method to probe molecular interactions. <b>2005</b> , 123, 014702	13

Theoretical studies of the kinetics of mechanical unfolding of cross-linked polymer chains and their implications for single-molecule pulling experiments. **2005**, 71, 021904

1649	Effective adhesion strength of specifically bound vesicles. <b>2005</b> , 71, 061902	42
1648	Distinctive features of the biological catch bond in the jump-ramp force regime predicted by the two-pathway model. <b>2005</b> , 72, 010903	35
1647	Theoretical determination of the strength of soft noncovalent molecular bonds. <b>2005</b> , 71, 010901	19
1646	Molecular mechanics and dynamics of leukocyte recruitment during inflammation. <b>2005</b> , 7, 151-85	213
1645	A theoretical framework for quantitative analysis of the molecular basis of costimulation. <b>2005</b> , 175, 1575-85	42
1644	Dynamic force spectroscopy of parallel individual Mucin1-antibody bonds. <b>2005</b> , 102, 16638-43	152
1643	Single molecule adhesion measurements reveal two homophilic neural cell adhesion molecule bonds with mechanically distinct properties. <b>2005</b> , 280, 41037-46	33
1642	Dynamics of unbinding of cell adhesion molecules: transition from catch to slip bonds. <b>2005</b> , 102, 1835-9	125
1641	A force-dependent state controls the coordination of processive myosin V. <b>2005</b> , 102, 13873-8	155
1640	Protein Forced Unfolding and Its Effects on the Finite Deformation Stress-Strain Behavior of Biomacromolecular Solids. <b>2005</b> , 874, 1	3
1639	The Effect of Tethering on the Chemical Kinetics of Single Bonds. <b>2005</b> , 899, 1	
1638	Measurements of the Forces in Protein Interactions with Atomic Force Microscopy. <b>2005</b> , 2, 55-81	27
1637	Cellular cross-linking of peptide modified hydrogels. <b>2005</b> , 127, 220-8	47
1636	Integrin dimerization and ligand organization: key components in integrin clustering for cell adhesion. <b>2005</b> , 11, 865-76	34
1635	Growth and shape stability of a biological membrane adhesion complex in the diffusion-mediated regime. <b>2005</b> , 102, 3213-8	79
1634	Force microscopy studies of fibronectin adsorption and subsequent cellular adhesion to substrates with well-defined surface chemistries. <b>2005</b> , 21, 4096-107	47
1633	Quantifying adhesion bond parameters to distinguish interactions of hydrophilic and hydrophobic blocks of polystyrene-poly-2-vinylpyridine with a silicon nitride surface. <b>2005</b> , 127, 4136-7	9
1632	Cooperative cargo transport by several molecular motors. <b>2005</b> , 102, 17284-9	297

1631	Repetitive pulling catalyzes co-translocational unfolding of barnase during import through a mitochondrial pore. <b>2005</b> , 350, 1017-34	48
1630	Temperature softening of a protein in single-molecule experiments. <b>2005</b> , 354, 497-503	108
1629	Thermodynamic and kinetic aspects of RNA pulling experiments. <b>2005</b> , 88, 3224-42	66
1628	Dynamic force spectroscopy of glycoprotein Ib-IX and von Willebrand factor. <b>2005</b> , 88, 4391-401	34
1627	Force history dependence of receptor-ligand dissociation. <b>2005</b> , 88, 1458-66	106
1626	A 3-D computational model predicts that cell deformation affects selectin-mediated leukocyte rolling. <b>2005</b> , 88, 96-104	179
1625	Nano- to microscale dynamics of P-selectin detachment from leukocyte interfaces. I. Membrane separation from the cytoskeleton. <b>2005</b> , 88, 2288-98	113
1624	Nano- to microscale dynamics of P-selectin detachment from leukocyte interfaces. II. Tether flow terminated by P-selectin dissociation from PSGL-1. <b>2005</b> , 88, 2299-308	70
1623	Change of the unbinding mechanism upon a mutation: a molecular dynamics study of an antibody-hapten complex. <b>2005</b> , 14, 2499-514	18
1622	Chemical force microscopy: probing chemical origin of interfacial forces and adhesion. <b>2005</b> , 19, 313-364	59
	Chemical force microscopy: probing chemical origin of interfacial forces and adhesion. <b>2005</b> , 19, 313-364  Force-dependent stepping kinetics of myosin-V. <b>2005</b> , 88, 4402-10	59 129
1621	Force-dependent stepping kinetics of myosin-V. <b>2005</b> , 88, 4402-10  Effect of microvillus deformability on leukocyte adhesion explored using adhesive dynamics	129
1621 1620	Force-dependent stepping kinetics of myosin-V. <b>2005</b> , 88, 4402-10  Effect of microvillus deformability on leukocyte adhesion explored using adhesive dynamics simulations. <b>2005</b> , 89, 187-200  I-domain of lymphocyte function-associated antigen-1 mediates rolling of polystyrene particles on	129 72
1621 1620 1619	Force-dependent stepping kinetics of myosin-V. <b>2005</b> , 88, 4402-10  Effect of microvillus deformability on leukocyte adhesion explored using adhesive dynamics simulations. <b>2005</b> , 89, 187-200  I-domain of lymphocyte function-associated antigen-1 mediates rolling of polystyrene particles on ICAM-1 under flow. <b>2005</b> , 89, 3577-88	129 72 34
1621 1620 1619 1618	Force-dependent stepping kinetics of myosin-V. 2005, 88, 4402-10  Effect of microvillus deformability on leukocyte adhesion explored using adhesive dynamics simulations. 2005, 89, 187-200  I-domain of lymphocyte function-associated antigen-1 mediates rolling of polystyrene particles on ICAM-1 under flow. 2005, 89, 3577-88  Mechanically unfolding the small, topologically simple protein L. 2005, 89, 506-19  Multiple-bond kinetics from single-molecule pulling experiments: evidence for multiple NCAM	129 72 34 139
1621 1620 1619 1618	Force-dependent stepping kinetics of myosin-V. 2005, 88, 4402-10  Effect of microvillus deformability on leukocyte adhesion explored using adhesive dynamics simulations. 2005, 89, 187-200  I-domain of lymphocyte function-associated antigen-1 mediates rolling of polystyrene particles on ICAM-1 under flow. 2005, 89, 3577-88  Mechanically unfolding the small, topologically simple protein L. 2005, 89, 506-19  Multiple-bond kinetics from single-molecule pulling experiments: evidence for multiple NCAM bonds. 2005, 89, 3434-45  Unfolding and extraction of a transmembrane alpha-helical peptide: dynamic force spectroscopy	129 72 34 139 33

## (2006-2005)

1613	spectroscopy. <b>2005</b> , 89, 2783-91	74
1612	Force measurement of specific antibody-antigen interactions in pH-varied liquid environments.	
1611	Three-dimensional numerical simulation of receptor-mediated leukocyte adhesion to surfaces: Effects of cell deformability and viscoelasticity. <b>2005</b> , 17, 031505	84
1610	Forced Kramers escape in single-molecule pulling experiments. <b>2005</b> , 123, 91102	27
1609	Protein-Ligand Interactions. 2005,	31
1608	Dynamic competition between catch and slip bonds in selectins bound to ligands. <b>2006</b> , 110, 26403-12	20
1607	Optimized biorecognition of cytochrome c 551 and azurin immobilized on thiol-terminated monolayers assembled on Au(111) substrates. <b>2006</b> , 110, 14574-80	34
1606	Mechanics of Biomacromolecular Networks Containing Folded Domains. <b>2006</b> , 128, 509-518	28
1605	DYNAMICS OF PLATELET AGGREGATION AND ADHESION TO REACTIVE SURFACES UNDER FLOW. <b>2006</b> , 267-294	1
1604	Condensation transition in DNA-polyaminoamide dendrimer fibers studied using optical tweezers. <b>2006</b> , 96, 118301	55
1603	Unbinding strength between C-terminal segment of AtMAP65-1 and microtubule studied with dual-optical tweezers. <b>2006</b> ,	
1602	Mechanical unfolding revisited through a simple but realistic model. <b>2006</b> , 124, 154909	52
1601	Internal protein dynamics shifts the distance to the mechanical transition state. <b>2006</b> , 74, 061912	14
1600	Mechanism and dynamics of cadherin adhesion. <b>2006</b> , 8, 259-87	161
1599	Bacterial ghosts as a novel advanced targeting system for drug and DNA delivery. <b>2006</b> , 3, 11-22	40
1598	A coarse-grained model for force-induced protein deformation and kinetics. <b>2006</b> , 90, 2686-97	14
1597	Antagonist-induced deadhesion of specifically adhered vesicles. <b>2006</b> , 90, 1064-80	29
1596	Catch-bond model derived from allostery explains force-activated bacterial adhesion. <b>2006</b> , 90, 753-64	141

1595	Force generation in single conventional actomyosin complexes under high dynamic load. <b>2006</b> , 90, 1295-307	135
1594	Lifetime measurements reveal kinetic differences between homophilic cadherin bonds. <b>2006</b> , 90, 1385-95	71
1593	Adhesive dynamics simulation of neutrophil arrest with deterministic activation. <b>2006</b> , 91, 1145-55	31
1592	A sticky chain model of the elongation and unfolding of Escherichia coli P pili under stress. <b>2006</b> , 90, 1521-34	46
1591	Theoretical analysis of single-molecule force spectroscopy experiments: heterogeneity of chemical bonds. <b>2006</b> , 90, 3851-64	64
1590	Single-molecule unfolding force distributions reveal a funnel-shaped energy landscape. <b>2006</b> , 90, L33-5	107
1589	Forced-unfolding and force-quench refolding of RNA hairpins. <b>2006</b> , 90, 3410-27	87
1588	The role of flexible tethers in multiple ligand-receptor bond formation between curved surfaces. <b>2006</b> , 91, 1675-87	53
1587	Strength of multiple parallel biological bonds. <b>2006</b> , 90, 4686-91	85
1586	Spreading of neutrophils: from activation to migration. <b>2006</b> , 91, 4638-48	51
1585	Kinesin's biased stepping mechanism: amplification of neck linker zippering. <b>2006</b> , 91, 2416-26	29
	Kinesin's biased stepping mechanism: amplification of neck linker zippering. <b>2006</b> , 91, 2416-26  Dynamic force spectroscopy of E. coli P pili. <b>2006</b> , 91, 2717-25	29 54
1584	Dynamic force spectroscopy of E. coli P pili. <b>2006</b> , 91, 2717-25  Sequential unfolding of individual helices of bacterioopsin observed in molecular dynamics	54
1584	Dynamic force spectroscopy of E. coli P pili. <b>2006</b> , 91, 2717-25  Sequential unfolding of individual helices of bacterioopsin observed in molecular dynamics simulations of extraction from the purple membrane. <b>2006</b> , 91, 3276-84  The mechanical properties of E. coli type 1 pili measured by atomic force microscopy techniques. <b>2006</b> , 91, 3848-56	54 13
1584 1583 1582 1581	Dynamic force spectroscopy of E. coli P pili. 2006, 91, 2717-25  Sequential unfolding of individual helices of bacterioopsin observed in molecular dynamics simulations of extraction from the purple membrane. 2006, 91, 3276-84  The mechanical properties of E. coli type 1 pili measured by atomic force microscopy techniques. 2006, 91, 3848-56	54 13 125
1584 1583 1582 1581	Dynamic force spectroscopy of E. coli P pili. 2006, 91, 2717-25  Sequential unfolding of individual helices of bacterioopsin observed in molecular dynamics simulations of extraction from the purple membrane. 2006, 91, 3276-84  The mechanical properties of E. coli type 1 pili measured by atomic force microscopy techniques. 2006, 91, 3848-56  Bistability of cell-matrix adhesions resulting from nonlinear receptor-ligand dynamics. 2006, 91, L60-2	<ul><li>54</li><li>13</li><li>125</li><li>54</li></ul>

1577 Measurement of current-induced local heating in a single molecule junction. <b>2006</b> , 6, 1240-4	199
1576 Force spectroscopy of LFA-1 and its ligands, ICAM-1 and ICAM-2. <b>2006</b> , 7, 3188-95	90
1575 Mechanisms of Cellular Avidity Regulation in CD2-CD58-Mediated T Cell Adhesion. <b>2006</b> , 1, 649-58	39
Activation of individual alphaIIbbeta3 integrin molecules by disruption of transmembrane domain interactions in the absence of clustering. <b>2006</b> , 45, 4957-64	20
1573 A simple microscopic model for the dynamics of adhesive failure. <b>2006</b> , 22, 163-8	3
1572 Molecular bond formation between surfaces: anchoring and shearing effects. <b>2006</b> , 22, 127-33	5
1571 Dynamic force spectroscopy of the digoxigenin-antibody complex. <b>2006</b> , 580, 505-9	119
1570 Force profiles of protein pulling with or without cytoskeletal links studied by AFM. <b>2006</b> , 348, 238-4	4 43
1569 Intrinsic rates and activation free energies from single-molecule pulling experiments. <b>2006</b> , 96, 1081	101 616
Rheology and Dynamics of Associative Polymers in Shear and Extension: Theory and Experiments. <b>2006</b> , 39, 1981-1999	197
Probing intercellular interactions between vascular endothelial cadherin pairs at single-molecule resolution and in living cells. <b>2006</b> , 358, 665-74	46
1566 Rolling adhesion of alphaL I domain mutants decorrelated from binding affinity. <b>2006</b> , 360, 37-44	7
Single molecule force spectroscopy reveals a weakly populated microstate of the FnIII domains of tenascin. <b>2006</b> , 361, 372-81	15
$_{1564}$ Imaging and detecting molecular interactions of single transmembrane proteins. <b>2006</b> , 27, 546-61	38
AFM analysis of interaction forces between bio-molecules using ligand-functionalized polymers. <b>2006</b> , 4, 149-154	6
1562 DYNAMICS OF THE NEUTROPHIL SURFACE DURING EMIGRATION FROM BLOOD. <b>2006</b> , 123-142	
1561 USE OF HYDRODYNAMIC SHEAR STRESS TO ANALYZE CELL ADHESION. <b>2006</b> , 51-80	1
1560 . <b>2006</b> ,	10

1559 Microscopy, Scanning Force. **2006**,

1558 Cell Surface Interactions. <b>2006</b> ,	2
1557 Dynamic Force Microscopy and Spectroscopy. <b>2006</b> , 143-164	
1556 Technique for determination of the number of PapA units in an E. Coli P pilus. <b>2006</b> ,	0
Determination of thermodynamics and kinetics of RNA reactions by force. <b>2006</b> , 39, 325-60	69
1554 Chapter 4 Membrane Adhesion and Domain Formation. <b>2006</b> , 63-127	13
Dynamic adhesion of T lymphocytes to endothelial cells revealed by atomic force microscopy. <b>200</b> 231, 1306-12	<b>6</b> , 62
1552 Polymer-tethered ligandEeceptor interactions between surfaces. <b>2006</b> , 44, 2621-2637	12
Supported membranes as biofunctional interfaces and smart biosensor platforms. <b>2006</b> , 203, 3452	2-3462 39
1550 Computer simulations of protein translocation. <b>2006</b> , 243, 2038-2047	21
1549 Probing drug-cell interactions. <b>2006</b> , 1, 18-25	25
Detection and localization of single molecular recognition events using atomic force microscopy. <b>2006</b> , 3, 347-55	859
Suppression of binding events via external perturbation with emphasis on QCM. <b>2006</b> , 424, 214-2	17 4
Quantifying the effects of contact duration, loading rate, and approach velocity on P-selectin <b>P</b> SGL-1 interactions using AFM. <b>2006</b> , 47, 2539-2547	24
The unfolding and folding dynamics of TNfnALL probed by single molecule forceEmp spectroscopy. <b>2006</b> , 47, 2548-2554	19
1544 Quantification of the number of EP3 receptors on a living CHO cell surface by the AFM. <b>2006</b> , 106,	, 652-62 <sub>42</sub>
Rhizobial Surface Biopolymers and their Interaction with Lectin Measured by Atomic Force Microscopy. <b>2006</b> , 22, 565-570	6
1542 Two-dimensional model of vesicle adhesion on curved substrates. <b>2006</b> , 22, 529-535	29

# (2006-2006)

1541	Focal adhesions as mechanosensors: the two-spring model. <b>2006</b> , 83, 225-32	134
1540	Integrin activationthe importance of a positive feedback. <b>2006</b> , 68, 945-56	19
1539	Deformable gas-filled microbubbles targeted to P-selectin. <b>2006</b> , 114, 288-99	110
1538	Nonmechanical protein can have significant mechanical stability. <b>2006</b> , 45, 642-5	92
1537	Force meets chemistry: analysis of mechanochemical conversion in focal adhesions using fluorescence recovery after photobleaching. <b>2006</b> , 97, 1175-83	49
1536	Nonmechanical Protein Can Have Significant Mechanical Stability. <b>2006</b> , 118, 658-661	10
1535	Intermolecular Forces of Leukocyte Adhesion Molecules. 159-168	
1534	Single molecule studies of protein folding using atomic force microscopy. <b>2007</b> , 350, 139-67	11
1533	Myosin-V is a mechanical ratchet. <b>2006</b> , 103, 8680-5	118
1532	DISSECTING INDIVIDUAL LIGANDRECEPTOR BONDS WITH A LAMINAR FLOW CHAMBER. <b>2006</b> , 01, 231-257	7
1531	Single-molecule force spectroscopy: Heterogeneity of chemical bonds. <b>2006</b> , 73, 628-634	6
1530	Differential analysis of biomolecular rupture forces. <b>2006</b> , 18, S581-S599	13
1529	Interactions between cargo-carrying biomolecular shuttles. <b>2006</b> , 17, 349-354	27
0	A 1 1   1 - 5 1     1	
1528	A toy model of polymer stretching. <b>2006</b> , 125, 084908	3
1527	Dynamic strength of molecularly bonded surfaces. <b>2006</b> , 125, 194702	21
1527		
1527	Dynamic strength of molecularly bonded surfaces. <b>2006</b> , 125, 194702	21

1523 Protein Folding Protocols. 2006,

1522	Protein Nanomechanics las Studied by AFM Single-Molecule Force Spectroscopy. <b>2006</b> , 163-245	20
1521	Hsp70 chaperones accelerate protein translocation and the unfolding of stable protein aggregates by entropic pulling. <b>2006</b> , 103, 6166-71	184
1520	Force-dependent chemical kinetics of disulfide bond reduction observed with single-molecule techniques. <b>2006</b> , 103, 7222-7	273
1519	Mechanics of actomyosin bonds in different nucleotide states are tuned to muscle contraction. <b>2006</b> , 103, 9844-9	201
1518	Flow-enhanced adhesion regulated by a selectin interdomain hinge. <b>2006</b> , 174, 1107-17	123
1517	COOPERATIVE TRANSPORT BY SMALL TEAMS OF MOLECULAR MOTORS. <b>2006</b> , 01, 353-361	3
1516	Regulation of N-cadherin dynamics at neuronal contacts by ligand binding and cytoskeletal coupling. <b>2006</b> , 17, 862-75	64
1515	Elevated shear stress protects Escherichia coli cells adhering to surfaces via catch bonds from detachment by soluble inhibitors. <b>2006</b> , 72, 3005-10	50
1514	For catch bonds, it all hinges on the interdomain region. <b>2006</b> , 174, 911-3	22
1513	Modeling Receptor-Ligand Mediated Adhesion in Nanoindentation of Cells. <b>2006</b> , 975, 1	
1512	Single-molecule analysis of cadherin-mediated cell-cell adhesion. <b>2006</b> , 119, 66-74	179
1511	Detachment of affinity-captured bioparticles by elastic deformation of a macroporous hydrogel. <b>2006</b> , 103, 849-54	89
1510	T cells like a firm molecular handshake. <b>2006</b> , 103, 4335-6	14
1509	Direct measurement of the full, sequence-dependent folding landscape of a nucleic acid. <i>Science</i> , <b>2006</b> , 314, 1001-4	298
1508	Breaking bonds in the atomic force microscope: theory and analysis. <b>2006</b> , 74, 031909	38
1507	Evaluation of synthetic linear motor-molecule actuation energetics. <b>2006</b> , 103, 8583-8	81
1506	Force-induced desorption and unzipping of semiflexible polymers. <b>2006</b> , 97, 058302	30

# (2007-2006)

1505	Force modulating dynamic disorder: a physical model of catch-slip bond transitions in receptor-ligand forced dissociation experiments. <b>2006</b> , 74, 051904	14
1504	Modified atomic force microscope for high-rate dynamic force spectroscopy. <b>2006</b> , 88, 263109	15
1503	Hybrid simulations of stochastic reaction-diffusion processes for modeling intracellular signaling pathways. <b>2006</b> , 74, 051910	32
1502	Force-induced deformations and stability of biological bonds. <b>2006</b> , 73, 050902	44
1501	Energy barrier scalings in driven systems. <b>2006</b> , 73, 061106	49
1500	Dynamic disorder in receptor-ligand forced dissociation experiments. <b>2006</b> , 73, 010901	12
1499	Unusual mechanical stability of a minimal RNA kissing complex. <b>2006</b> , 103, 15847-52	61
1498	Multiple stepwise refolding of immunoglobulin domain I27 upon force quench depends on initial conditions. <b>2006</b> , 103, 93-8	45
1497	Free energy for protein folding from nonequilibrium simulations using the Jarzynski equality. <b>2006</b> , 125, 204910	40
1496	Molecular flexibility can influence the stimulatory ability of receptor-ligand interactions at cell-cell junctions. <b>2006</b> , 103, 4416-21	43
1495	Characterization of actomyosin bond properties in intact skeletal muscle by force spectroscopy. <b>2007</b> , 104, 9284-9	23
1494	Specific bonds between an iron oxide surface and outer membrane cytochromes MtrC and OmcA from Shewanella oneidensis MR-1. <b>2007</b> , 189, 4944-52	110
1493	Distinct kinetic and mechanical properties govern ALCAM-mediated interactions as shown by single-molecule force spectroscopy. <b>2007</b> , 120, 3965-76	33
1492	Mathematical modeling of cell adhesion in shear flow: application to targeted drug delivery in inflammation and cancer metastasis. <b>2007</b> , 13, 1511-26	26
1491	Axis-dependent anisotropy in protein unfolding from integrated nonequilibrium single-molecule experiments, analysis, and simulation. <b>2007</b> , 104, 20799-804	25
1490	A reversibility parameter for a Markovian stepper. <b>2007</b> , 78, 50002	2
1489	How molecular motors shape the flagellar beat. <b>2007</b> , 1, 192-208	227
1488	Dynamic force spectroscopy of a single condensed DNA. <b>2007</b> , 79, 58001	12

1487 The Sliding Rebinding Mechanism for Catch Bonds\*. 2007, 46, 5528-5535

1486	Kinetics of MicrotubuleAtMAP65-1 Bond Studied with Dual-Optical Tweezers. 2007, 46, 7514-7518	7
1485	Measuring the energy landscape roughness and the transition state location of biomolecules using single molecule mechanical unfolding experiments. <b>2007</b> , 19, 113101	72
1484	Optimal evaluation of single-molecule force spectroscopy experiments. <b>2007</b> , 76, 052901	15
1483	Fragility and mechanosensing in a thermalized cytoskeleton model with forced protein unfolding. <b>2007</b> , 76, 051906	11
1482	Cross-linker unbinding and self-similarity in bundled cytoskeletal networks. <b>2007</b> , 99, 158105	57
1481	Lifetime of ligand-receptor clusters under external force. <b>2007</b> , 76, 061905	7
1480	Universal laws in the force-induced unraveling of biological bonds. <b>2007</b> , 75, 011905	8
1479	Bell's expression and the generalized Garg form for forced dissociation of a biomolecular complex. <b>2007</b> , 98, 088304	47
1478	Steady-state helices of the actin homolog MreB inside bacteria: dynamics without motors. <b>2007</b> , 76, 031916	8
1477	How stiff and thin can an engineered extracellular matrix be? Modeling molecular forces at the cell-matrix interface. <b>2007</b> , 2007, 6419-21	1
1476	Geometric confinement governs the rupture strength of H-bond assemblies at a critical length scale. <b>2007</b> , 1061, 1	O
1475	Revealing early steps of alpha2beta1 integrin-mediated adhesion to collagen type I by using single-cell force spectroscopy. <b>2007</b> , 18, 1634-44	165
1474	Chemomechanical mapping of ligand-receptor binding kinetics on cells. <b>2007</b> , 104, 9609-14	93
1473	Cadherins, RhoA, and Rac1 are differentially required for stretch-mediated proliferation in endothelial versus smooth muscle cells. <b>2007</b> , 101, e44-52	102
1472	Real-time control of the energy landscape by force directs the folding of RNA molecules. <b>2007</b> , 104, 7039-44	69
1471	Hierarchies, multiple energy barriers, and robustness govern the fracture mechanics of alpha-helical and beta-sheet protein domains. <b>2007</b> , 104, 16410-5	155
1470	Affinity and kinetic analysis of Fcgamma receptor IIIa (CD16a) binding to IgG ligands. <b>2007</b> , 282, 6210-21	44

1469	Electromagnetophoretic force measurement of a single binding interaction between lectin and yeast cell surfaces. <b>2007</b> , 23, 121-6		16
1468	Pulling and Pushing Protein Molecules by AFM. <b>2007</b> , 3, 17-29		25
1467	Forces and bond dynamics in cell adhesion. <i>Science</i> , <b>2007</b> , 316, 1148-53	33.3	406
1466	Molecular force spectroscopy of homophilic nectin-1 interactions. <b>2007</b> , 362, 886-92		6
1465	Single-molecule dynamic force spectroscopy of the fibronectin-heparin interaction. <b>2007</b> , 364, 595-600		9
1464	Force-induced bidirectional stepping of cytoplasmic dynein. <b>2007</b> , 131, 952-65		298
1463	Nanotribological Perspectives in Tissue Engineering. 2007, 677-708		
1462	Probing Interactions within the synaptic DNA-Sfil complex by AFM force spectroscopy. <b>2007</b> , 365, 1407-	16	50
1461	Role of multiple bonds between the single cell adhesion molecules, nectin and cadherin, revealed by high sensitive force measurements. <b>2007</b> , 367, 996-1006		41
1460	Intestinal LI-cadherin acts as a Ca2+-dependent adhesion switch. <b>2007</b> , 370, 220-30		32
1459	Dissecting subsecond cadherin bound states reveals an efficient way for cells to achieve ultrafast probing of their environment. <b>2007</b> , 581, 1841-6		17
1458	Secondary structure, mechanical stability, and location of transition state of proteins. <b>2007</b> , 93, 2644-54		45
1457	FlowInduced chain scission in dilute polymer solutions: Algorithm development and results for scission dynamics in elongational flow. <b>2007</b> , 51, 1223-1251		16
1456	Subcellular Proteomics. 2007,		1
1455	A model system to study the insertion of cholesterol into a phospholipid monolayer. <b>2007</b> , 111, 379-86		15
1454	Vesicles as a model for controlled (de-)adhesion of cells: a thermodynamic approach. <b>2007</b> , 3, 275-289		43
1453	Single-molecule force spectroscopy study of interaction between transforming growth factor beta1 and its receptor in living cells. <b>2007</b> , 111, 13619-25		47
1452	Correction of systematic errors in single-molecule force spectroscopy with polymeric tethers by atomic force microscopy. <b>2007</b> , 111, 1963-74		92

1451	Influences of linkage stiffness on rupture rate in single-molecule pulling experiments. <b>2007</b> , 111, 6493-500	3
1450	The Role of Glycocalyx in Nanocarrier-Cell Adhesion Investigated Using a Thermodynamic Model and Monte Carlo Simulations. <b>2007</b> , 111, 15848-15856	38
1449	Influence of Brownian motion on blood platelet flow behavior and adhesive dynamics near a planar wall. <b>2007</b> , 23, 6321-8	30
1448	Steady-State Multiplicity in Receptor-Mediated Colloidal Adhesion. 2007, 111, 2008-2016	1
1447	Functional metalloproteins integrated with conductive substrates: detecting single molecules and sensing individual recognition events. <b>2007</b> , 111, 5062-75	37
1446	Polymer-tethered ligand-receptor interactions between surfaces II. <b>2007</b> , 23, 13024-39	17
1445	Intercalation interactions between dsDNA and acridine studied by single molecule force spectroscopy. <b>2007</b> , 23, 9140-2	38
1444	An information theoretical approach for molecular communication. 2007,	50
1443	Simultaneous tether extraction contributes to neutrophil rolling stabilization: a model study. <b>2007</b> , 92, 418-29	21
1442	Adhesive dynamics simulations of the shear threshold effect for leukocytes. <b>2007</b> , 92, 787-97	70
1441	Refolding upon force quench and pathways of mechanical and thermal unfolding of ubiquitin. <b>2007</b> , 92, 547-61	43
1440	Force unfolding kinetics of RNA using optical tweezers. II. Modeling experiments. <b>2007</b> , 92, 3010-21	63
1439	A structure-based sliding-rebinding mechanism for catch bonds. <b>2007</b> , 92, 1471-85	96
1438	Mutation of a conserved glycine in the SH1-SH2 helix affects the load-dependent kinetics of myosin. <b>2007</b> , 92, 1623-31	47
1437	Energy landscape of chelated uranyl: antibody interactions by dynamic force spectroscopy. <b>2007</b> , 93, 645-54	40
1436	Dwell-time distribution analysis of polyprotein unfolding using force-clamp spectroscopy. <b>2007</b> , 92, 2896-903	58
1435	Predicting the rupture probabilities of molecular bonds in series. <b>2007</b> , 93, 1215-23	30
1434	Extracting kinetics from single-molecule force spectroscopy: nanopore unzipping of DNA hairpins. <b>2007</b> , 92, 4188-95	160

## (2007-2007)

1433	pathways of I27 and ubiquitin. <b>2007</b> , 93, 2436-46	118
1432	B-S transition in short oligonucleotides. <b>2007</b> , 93, 2400-9	69
1431	Interaction forces between F-actin and titin PEVK domain measured with optical tweezers. <b>2007</b> , 93, 2102-9	83
1430	Simultaneous tether extraction from endothelial cells and leukocytes: observation, mechanics, and significance. <b>2007</b> , 93, 4041-52	26
1429	The biomechanical properties of E. coli pili for urinary tract attachment reflect the host environment. <b>2007</b> , 93, 3008-14	52
1428	Affinity-matured recombinant antibody fragments analyzed by single-molecule force spectroscopy. <b>2007</b> , 93, 3583-90	66
1427	Direct observation of active protein folding using lock-in force spectroscopy. <b>2007</b> , 93, 3989-98	84
1426	Using force to probe single-molecule receptor-cytoskeletal anchoring beneath the surface of a living cell. <b>2007</b> , 83, 373-96	20
1425	A 3-D Deformable Ellipsoidal Cell Model with Cell Adhesion and Signaling. <b>2007</b> , 271-299	1
1424	A hybrid polymer gel with controlled rates of cross-link rupture and self-repair. <b>2007</b> , 4, 373-80	122
1423	Cell Adhesion: A surprising cohesive force. <b>2007</b> ,	
1422	Effects of mixing intensity on cell seeding and proliferation in three-dimensional fibrous matrices. <b>2007</b> , 96, 371-80	18
1421	Microparticle adhesive dynamics and rolling mediated by selectin-specific antibodies under flow. <b>2007</b> , 96, 596-607	21
1420	Feeling the force of supramolecular bonds in polymers. <b>2007</b> , 46, 3794-6	15
1419	Direkte Messung supramolekularer Bindungskr <b>f</b> te in Polymeren. <b>2007</b> , 119, 3868-3870	3
1418	Interrogation of single synthetic polymer chains and polysaccharides by AFM-based force spectroscopy. <b>2007</b> , 8, 2290-307	107
1417	Theoretical and experimental approaches of bacteria-biomaterial interactions. 2007, 38, 983-994	14
1416	What is the biological relevance of the specific bond properties revealed by single-molecule studies?. <b>2007</b> , 20, 432-47	39

1415	Cell dynamic adhesion and elastic properties probed with cylindrical atomic force microscopy cantilever tips. <b>2007</b> , 20, 459-66	35
1414	Energy landscape roughness of the streptavidin-biotin interaction. <b>2007</b> , 20, 495-501	76
1413	On molecular recognition of an uranyl chelate by monoclonal antibodies. <b>2007</b> , 20, 508-15	7
1412	Past, present and future of atomic force microscopy in life sciences and medicine. <b>2007</b> , 20, 418-31	134
1411	Force-clamp spectroscopy with a small dithering of AFM tip, and its application to explore the energy landscape of single avidin-biotin complex. <b>2007</b> , 107, 882-6	9
1410	Colloidal properties and specific interactions of bacterial surfaces. <b>2007</b> , 12, 263-270	39
1409	Effect of roughness on particle adhesion in aqueous solutions: a study of Saccharomyces cerevisiae and a silica particle. <b>2007</b> , 55, 44-50	11
1408	Kinetic model of receptor-mediated adhesion of cells to a functionalized supported lipid bilayer. <b>2007</b> , 448, 268-272	
1407	Bidirectional control unifying view of the structure and function of proteins. 2007, 8, 650-660	1
1406	Forced detachment of a vesicle in adhesive contact with a substrate. <b>2007</b> , 44, 1927-1938	33
1405	The role of specific and non-specific interactions in receptor-mediated endocytosis of nanoparticles. <b>2007</b> , 28, 2915-22	209
1404	Atomic force microscopy: determination of unbinding force, off rate and energy barrier for protein-ligand interaction. <b>2007</b> , 38, 446-61	183
1403	Simulations of the spreading of a vesicle on a substrate surface mediated by receptor Igand binding. <b>2007</b> , 55, 1166-1181	29
1402	Model of integrin-mediated cell adhesion strengthening. <b>2007</b> , 40, 1301-9	44
1401	Interaction of micrometer-scale particles with nanotextured surfaces in shear flow. 2007, 308, 20-9	77
1400	Fracture mechanics of protein materials. <b>2007</b> , 10, 46-58	189
1399	Molecule by molecule, the physics and chemistry of life: SMB 2007. 2007, 3, 193-7	4
1398	Intercellular transfer of cell-surface proteins is common and can affect many stages of an immune response. <b>2007</b> , 7, 238-43	217

1397	Probing the chemistry of thioredoxin catalysis with force. <b>2007</b> , 450, 124-7	224
1396	Membranous structures transfer cell surface proteins across NK cell immune synapses. <b>2007</b> , 8, 1190-204	36
1395	Interaction between single molecules of Mac-1 and ICAM-1 in living cells: an atomic force microscopy study. <b>2007</b> , 313, 3497-504	35
1394	Energy landscape of aptamer/protein complexes studied by single-molecule force spectroscopy. <b>2007</b> , 2, 284-9	38
1393	Impact of receptor-ligand distance on adhesion cluster stability. <b>2007</b> , 22, 123-37	52
1392	Stochastic resonance for adhesion of membranes with active stickers. <b>2007</b> , 22, 97-106	7
1391	Studying integrin-mediated cell adhesion at the single-molecule level using AFM force spectroscopy. <b>2007</b> , 2007, pl5	63
1390	Imaging and force spectroscopy on desmoglein 1 using atomic force microscopy reveal multivalent Ca(2+)-dependent, low-affinity trans-interaction. <b>2007</b> , 216, 83-92	24
1389	Mechanics of the hysteretic large strain behavior of mussel byssus threads. <b>2007</b> , 42, 8943-8956	27
1388	Superelasticity, energy dissipation and strain hardening of vimentin coiled-coil intermediate filaments: atomistic and continuum studies. <b>2007</b> , 42, 8771-8787	55
1387	Nano- and micromechanical properties of hierarchical biological materials and tissues. <b>2007</b> , 42, 8765-8770	24
1386	The adhesion between a microvillus-bearing cell and a ligand-coated substrate: a Monte Carlo study. <b>2007</b> , 35, 397-407	18
1385	IL-8 response of cyclically stretching alveolar epithelial cells exposed to non-fibrous particles. <b>2007</b> , 35, 582-94	5
1384	The mechanism of pattern formation in the developing Drosophila retina. <b>2007</b> , 50, 120-4	2
1383	Fluorescent resonance energy transfer: A tool for probing molecular cell-biomaterial interactions in three dimensions. <b>2007</b> , 28, 2424-37	73
1382	Dynamic response of glucagon/anti-glucagon pairs to pulling velocity and pH studied by atomic force microscopy. <b>2007</b> , 22, 1013-9	12
1381	The interplay between chemistry and mechanics in the transduction of a mechanical signal into a biochemical function. <b>2007</b> , 4, 157-188	17
1380	An integrated methodology for data processing in dynamic force spectroscopy of ligand-receptor binding. <b>2007</b> , 107, 887-94	19

1379	An immersed boundary framework for modelling the growth of individual cells: an application to the early tumour development. <b>2007</b> , 247, 186-204	124
1378	Motility States of Molecular Motors Engaged in a Stochastic Tug-of-War. <b>2008</b> , 133, 1059-1081	51
1377	Modeling of the elongation and retraction of Escherichia coli P pili under strain by Monte Carlo simulations. <b>2008</b> , 37, 381-91	22
1376	Optical tweezers to study single protein A/immunoglobulin G interactions at varying conditions. <b>2008</b> , 37, 927-34	14
1375	Effects of the Tumor-Leukocyte Microenvironment on Melanoma-Neutrophil Adhesion to the Endothelium in a Shear Flow. <b>2008</b> , 1, 189-200	21
1374	A Multi-Scale Mechanistic Model for Actin-Propelled Bacteria. 2008, 1, 110-121	12
1373	A Nanospring Named Erythrocyte. The Biomembrane Force Probe. <b>2008</b> , 1, 263-275	27
1372	Studying Molecular Interactions at the Single Bond Level with a Laminar Flow Chamber. <b>2008</b> , 1, 247-262	15
1371	Optical Tweezers and Fluorescence Recovery After Photo-Bleaching to Measure Molecular Interactions at the Cell Surface. <b>2008</b> , 1, 301-311	4
1370	Atomic Force Microscopy: A Versatile Tool for Studying Cell Morphology, Adhesion and Mechanics. <b>2008</b> , 1, 289-300	83
1369	Blood cell interactions and segregation in flow. <b>2008</b> , 36, 534-44	63
1368	Hydrodynamic shear rate regulates melanoma-leukocyte aggregation, melanoma adhesion to the endothelium, and subsequent extravasation. <b>2008</b> , 36, 661-71	67
1367	Pulling single molecules of titin by AFMrecent advances and physiological implications. 2008, 456, 101-15	84
1366	Recent progress in AFM molecular recognition studies. <b>2008</b> , 456, 237-45	81
1365	The force field picture of molecular shape response. <b>2008</b> , 108, 1930-1938	8
1364	Probing the interaction between p53 and the bacterial protein azurin by single molecule force spectroscopy. <b>2008</b> , 21, 63-70	52
1363	A comparative molecular force spectroscopy study of homophilic JAM-A interactions and JAM-A interactions with reovirus attachment protein sigma1. <b>2008</b> , 21, 210-6	4
1362	From valleys to ridges: exploring the dynamic energy landscape of single membrane proteins. <b>2008</b> , 9, 954-66	37

### (2008-2008)

1361	A single-molecule perspective on the role of solvent hydrogen bonds in protein folding and chemical reactions. <b>2008</b> , 9, 2836-47	37
1360	Force spectroscopy of the fibrin(ogen)-fibrinogen interaction. <b>2008</b> , 89, 292-301	7
1359	DNA-coated AFM cantilevers for the investigation of cell adhesion and the patterning of live cells. <b>2008</b> , 47, 8473-7	53
1358	A bond for a lifetime: employing membrane nanotubes from living cells to determine receptor-ligand kinetics. <b>2008</b> , 47, 9775-7	64
1357	Mechanical Engineering of Elastomeric Proteins: Toward Designing New Protein Building Blocks for Biomaterials. <b>2008</b> , 18, 2643-2657	37
1356	DNA-Coated AFM Cantilevers for the Investigation of Cell Adhesion and the Patterning of Live Cells. <b>2008</b> , 120, 8601-8605	15
1355	A Bond for a Lifetime: Employing Membrane Nanotubes from Living Cells to Determine Receptor Ligand Kinetics. <b>2008</b> , 120, 9921-9923	5
1354	Sticky chain model for shear response of red blood cells. <b>2008</b> , 41, 2349-52	
1353	Theoretical and computational hierarchical nanomechanics of protein materials: Deformation and fracture. <b>2008</b> , 53, 1101-1241	144
1352	A 3-D model used to explore how cell adhesion and stiffness affect cell sorting and movement in multicellular systems. <b>2008</b> , 254, 1-13	38
1351	Clustering instability in adhesive contact between elastic solids via diffusive molecular bonds. <b>2008</b> , 56, 251-266	25
1350	A bio-mechanical model for coupling cell contractility with focal adhesion formation. <b>2008</b> , 56, 1484-1510	120
1349	Design maps for nanoparticles targeting the diseased microvasculature. <b>2008</b> , 29, 377-84	146
1348	Immersed-boundary-type models of intravascular platelet aggregation. <b>2008</b> , 197, 2087-2104	102
1347	Simulation and prediction of endothelial cell adhesion modulated by molecular engineering. <b>2008</b> , 197, 2340-2352	12
1346	Distribution of olfactory marker protein on a tissue section of vomeronasal organ measured by AFM. <b>2008</b> , 61, 311-4	4
1345	3D computational modeling and simulation of leukocyte rolling adhesion and deformation. <b>2008</b> , 38, 738-53	53
1344	Refined procedure of evaluating experimental single-molecule force spectroscopy data. <b>2008</b> , 77, 031912	29

1343	Microscopic mechanics of biomolecules in living cells. 2008, 15, 339-362	9
1342	Cell detachment model for an antibody-based microfluidic cancer screening system. <b>2006</b> , 22, 1426-33	22
1341	Design of hollow fiber modules for uniform shear elution affinity cell separation. <b>1997</b> , 21, 107-15	24
1340	Staphylococcus aureus SigB activity promotes a strong fibronectin-bacterium interaction which may sustain host tissue colonization by small-colony variants isolated from cystic fibrosis patients. <b>2008</b> , 70, 1540-55	43
1339	Probing effects of pH change on dynamic response of Claudin-2 mediated adhesion using single molecule force spectroscopy. <b>2008</b> , 314, 2643-51	14
1338	Beyond induced-fit receptor-ligand interactions: structural changes that can significantly extend bond lifetimes. <b>2008</b> , 16, 1047-58	19
1337	Chapter 15: Live-cell single-molecule force spectroscopy. <b>2008</b> , 89, 411-32	16
1336	Chromatography of living cells using supermacroporous hydrogels, cryogels. <b>2007</b> , 106, 101-27	10
1335	Catch bonds in adhesion. <b>2008</b> , 10, 39-57	145
1334	Mechanical regulation of cell adhesion. <b>2008</b> , 4, 1373-1387	23
1333	Supramolecular Control of Mechanical Properties in Single Molecules, Interfaces, and Macroscopic Materials. 37-62	
		174
	Materials. 37-62	174 85
1332	Myosin I can act as a molecular force sensor. <i>Science</i> , <b>2008</b> , 321, 133-6  Propagation of mechanical stress through the actin cytoskeleton toward focal adhesions: model	
1332	Myosin I can act as a molecular force sensor. <i>Science</i> , <b>2008</b> , 321, 133-6  Propagation of mechanical stress through the actin cytoskeleton toward focal adhesions: model and experiment. <b>2008</b> , 94, 1470-82	85
1332 1331 1330	Materials. 37-62  Myosin I can act as a molecular force sensor. <i>Science</i> , <b>2008</b> , 321, 133-6  Propagation of mechanical stress through the actin cytoskeleton toward focal adhesions: model and experiment. <b>2008</b> , 94, 1470-82  A structural, kinetic model of soft tissue thermomechanics. <b>2008</b> , 94, 717-25  Extending Bell's model: how force transducer stiffness alters measured unbinding forces and	8 <sub>5</sub>
1332 1331 1330 1329	Myosin I can act as a molecular force sensor. <i>Science</i> , <b>2008</b> , 321, 133-6  Propagation of mechanical stress through the actin cytoskeleton toward focal adhesions: model and experiment. <b>2008</b> , 94, 1470-82  A structural, kinetic model of soft tissue thermomechanics. <b>2008</b> , 94, 717-25  Extending Bell's model: how force transducer stiffness alters measured unbinding forces and kinetics of molecular complexes. <b>2008</b> , 94, 2621-30	85 9 72

1325	Adhesive dynamics simulation of neutrophil arrest with stochastic activation. <b>2008</b> , 95, 1716-28	17
1324	Cytoskeletal bundle mechanics. <b>2008</b> , 94, 2955-64	122
1323	Comparative energy measurements in single molecule interactions. <b>2008</b> , 95, 419-25	20
1322	Direct observation of markovian behavior of the mechanical unfolding of individual proteins. <b>2008</b> , 95, 782-8	50
1321	Platelet adhesive dynamics. Part II: high shear-induced transient aggregation via GPIbalpha-vWF-GPIbalpha bridging. <b>2008</b> , 95, 2556-74	67
1320	Stability of adhesion clusters and cell reorientation under lateral cyclic tension. <b>2008</b> , 95, 4034-44	57
1319	Role of extracellular glutamic acids in the stability and energy landscape of bacteriorhodopsin. <b>2008</b> , 95, 3407-18	19
1318	Tethering forces of secretory granules measured with optical tweezers. <b>2008</b> , 95, 4972-8	3
1317	Effects of multiple-bond ruptures on kinetic parameters extracted from force spectroscopy measurements: revisiting biotin-streptavidin interactions. <b>2008</b> , 95, 3964-76	59
1316	Low spring constant regulates P-selectin-PSGL-1 bond rupture. <b>2008</b> , 95, 5439-48	36
1315	Single-molecule pulling experiments: when the stiffness of the pulling device matters. <b>2008</b> , 95, L42-4	23
1314	Deciphering the energy landscape of the interaction uranyl-DCP with antibodies using dynamic force spectroscopy. <b>2008</b> , 95, L63-5	6
1313	The effects of macromolecular crowding on the mechanical stability of protein molecules. <b>2008</b> , 17, 2156-66	56
1312	Estimating kinetic and thermodynamic parameters from single molecule enzyme-inhibitor interactions. <b>2008</b> , 24, 11556-61	16
1311	Highly efficient circulating tumor cell isolation from whole blood and label-free enumeration using polymer-based microfluidics with an integrated conductivity sensor. <b>2008</b> , 130, 8633-41	425
1310	Collagen. 2008,	294
1309	Traction dynamics of filopodia on compliant substrates. <i>Science</i> , <b>2008</b> , 322, 1687-91 33.3	559
1308	Probing the dynamics of protein-protein interactions at neuronal contacts by optical imaging. <b>2008</b> , 108, 1565-87	54

1307	Elastic bond network model for protein unfolding mechanics. <b>2008</b> , 100, 098101	69
1306	Methods in cell separation for biomedical application: cryogels as a new tool. <b>2008</b> , 3, 034008	54
1305	Single-molecular-level study of claudin-1-mediated adhesion. <b>2008</b> , 24, 490-5	20
1304	Methods in cell separations. <b>2007</b> , 106, 1-18	28
1303	The load dependence of rate constants. <b>2008</b> , 128, 215101	26
1302	Nanobiomechanics of proteins and biomembrane. <b>2008</b> , 363, 2163-71	16
1301	How do chemical denaturants affect the mechanical folding and unfolding of proteins?. 2008, 375, 316-24	54
1300	Examining the dynamic energy landscape of an antiporter upon inhibitor binding. <b>2008</b> , 375, 1258-66	28
1299	Heterotypic trans-interaction of LI- and E-cadherin and their localization in plasmalemmal microdomains. <b>2008</b> , 378, 44-54	23
1298	Configurational entropy modulates the mechanical stability of protein GB1. 2008, 379, 871-80	36
1297	Kinetics of adhesion mediated by extracellular loops of claudin-2 as revealed by single-molecule force spectroscopy. <b>2008</b> , 381, 681-91	24
1296	alpha-Synuclein misfolding: single molecule AFM force spectroscopy study. <b>2008</b> , 384, 992-1001	65
1295	Interactions of blood cell constituents: experimental investigation and computational modeling by discrete particle dynamics algorithm. <b>2008</b> , 75, 279-84	22
1294	Tracking single molecules in the live cell plasma membrane-Do's and Don't's. <b>2008</b> , 46, 131-40	147
1293	Molecular form follows function: (un)snaring the SNAREs. 2008, 31, 435-43	28
1292	Force-based analysis of multidimensional energy landscapes: application of dynamic force spectroscopy and steered molecular dynamics simulations to an antibody fragment-peptide complex. <b>2008</b> , 381, 1253-66	42
1291	Catch-bond mechanism of force-enhanced adhesion: counterintuitive, elusive, but widespread?. <b>2008</b> , 4, 314-23	126
1290	Integrin-mediated signalling through the MAP-kinase pathway. <b>2008</b> , 2, 8-15	83

### (2008-2008)

1289	conformational state and spatial segregation. <b>2008</b> , 2, 256-72		27
1288	Geometric confinement governs the rupture strength of H-bond assemblies at a critical length scale. <b>2008</b> , 8, 743-8		183
1287	Single-molecule cut-and-paste surface assembly. <i>Science</i> , <b>2008</b> , 319, 594-6	33.3	225
1286	Spreading of bio-adhesive vesicles on DNA carpets. <b>2008</b> , 4, 828-832		15
1285	Universality in cell mechanics. <b>2008</b> , 4, 1750		102
1284	A hybrid computational model for phagocyte transmigration. <b>2008</b> , 2008,		1
1283	Bond tilting and sliding friction in a model of cell adhesion. 2008, 464, 447-467		20
1282	Quantifying the relation between bond number and myoblast proliferation. <b>2008</b> , 139, 53-70; discussion 105-28, 419-20		18
1281	A study of Particle Swarm Optimization on leukocyte adhesion molecules and control strategies for smart prosthetic hand. <b>2008</b> ,		3
1280	Physical interpretation of the maximum receptor-ligand bond spacing to ensure cell adhesion in ligand-coated substrates. <b>2008</b> , 24, 5644-6		11
1279	Complexity of "A-a" knob-hole fibrin interaction revealed by atomic force spectroscopy. <b>2008</b> , 24, 4979-	88	38
1278	New dynamical window onto the landscape for forced protein unfolding. <b>2008</b> , 101, 248104		8
1277	Bayesian analysis of folding and unfolding time series of single-forced RNAs. 2008, 112, 13680-3		2
1276	A Simple and Practical Spreadsheet-Based Method to Extract Single-Molecule Dissociation Kinetics from Variable Loading-Rate Force Spectroscopy Data. <b>2008</b> , 112, 19163-19167		13
1275	Single-molecule force spectroscopy measurements of bond elongation during a bimolecular reaction. <b>2008</b> , 130, 6479-87		119
1274	Dynamics of protein-protein encounter: a Langevin equation approach with reaction patches. <b>2008</b> , 129, 155106		33
1273	Roles of cell and microvillus deformation and receptor-ligand binding kinetics in cell rolling. <b>2008</b> , 295, H1439-50		38
1272	Translocation of a knotted polypeptide through a pore. <b>2008</b> , 129, 121107		59

1271	Lifetime and strength of adhesive molecular bond clusters between elastic media. <b>2008</b> , 24, 1262-70	88
1270	Adsorption characteristics of P(3HB) depolymerase as evaluated by surface plasmon resonance and atomic force microscopy. <b>2008</b> , 9, 3201-7	10
1269	Anomalously increased lifetimes of biological complexes at zero force due to the protein-water interface. <b>2008</b> , 112, 11440-5	6
1268	Pairwise interactions between linear alkanes in water measured by AFM force spectroscopy. <b>2008</b> , 130, 10008-18	26
1267	Nanomechanical control of cell rolling in two dimensions through surface patterning of receptors. <b>2008</b> , 8, 1153-8	47
1266	Load and Pi control flux through the branched kinetic cycle of myosin V. <b>2008</b> , 283, 17477-84	54
1265	Dynamic force spectroscopy on multiple bonds: Experiments and model. 2008, 81, 48001	30
1264	Affinity adsorption of cells to surfaces and strategies for cell detachment. <b>2007</b> , 106, 75-99	
1263	On Channel Capacity and Error Compensation in Molecular Communication. 2008, 59-80	62
1262	Kinetic model for lamellipodal actin-integrin 'clutch' dynamics. <b>2008</b> , 2, 95-105	34
1261	Modeling and simulation of chemomechanics at the cell-matrix interface. <b>2008</b> , 2, 83-94	11
1260	Tribology in biology. <b>2008</b> , 2, 200-212	17
1259	Nanomechanical strength mechanisms of hierarchical biological materials and tissues. <b>2008</b> , 11, 595-607	24
1258	Multiple receptors involved in human rhinovirus attachment to live cells. 2008, 105, 17778-83	120
1257	Load-dependent ADP binding to myosins V and VI: implications for subunit coordination and function. <b>2008</b> , 105, 7714-9	83
1256	FimH forms catch bonds that are enhanced by mechanical force due to allosteric regulation. <b>2008</b> , 283, 11596-605	160
1255	Mechanical biochemistry of proteins one molecule at a time. <b>2008</b> , 283, 6617-21	82
1254	The receptor deformation model of TCR triggering. <b>2008</b> , 22, 1002-8	67

1253	Selectin catch-slip kinetics encode shear threshold adhesive behavior of rolling leukocytes. <b>2008</b> , 105, 20716-21	53
1252	Chapter 23: Stochastic modeling methods in cell biology. <b>2008</b> , 89, 601-21	7
1251	New force replica exchange method and protein folding pathways probed by force-clamp technique. <b>2008</b> , 128, 045103	29
1250	New method for deciphering free energy landscape of three-state proteins. <b>2008</b> , 129, 105102	9
1249	Surface-anchored monomeric agonist pMHCs alone trigger TCR with high sensitivity. 2008, 6, e43	90
1248	Effect of temperature on cross-bridge properties in intact frog muscle fibers. <b>2008</b> , 294, C1113-7	20
1247	Two-dimensional kinetics of beta 2-integrin and ICAM-1 bindings between neutrophils and melanoma cells in a shear flow. <b>2008</b> , 294, C743-53	36
1246	Nonmuscle myosin heavy chain IIA mediates integrin LFA-1 de-adhesion during T lymphocyte migration. <b>2008</b> , 205, 195-205	119
1245	Theory, analysis, and interpretation of single-molecule force spectroscopy experiments. <b>2008</b> , 105, 15755-60	490
1244	Vertebrate membrane proteins: structure, function, and insights from biophysical approaches. <b>2008</b> , 60, 43-78	83
1243	Biophysical properties of cadherin bonds do not predict cell sorting. <b>2008</b> , 283, 28454-63	53
1242	Fibrogenic fibroblasts increase intercellular adhesion strength by reinforcing individual OB-cadherin bonds. <b>2008</b> , 121, 877-86	60
1241	Detection and localization of single LysM-peptidoglycan interactions. 2008, 190, 7079-86	36
1240	Entropic and energetic elasticity in controlling catch-to-slip bonds in cell-adhesion molecules. <b>2008</b> , 1132, 1	
1239	Interaction of cationic surfactants with DNA: a single-molecule study. 2008, 36, 1443-9	59
1238	Monitoring early fusion dynamics of human immunodeficiency virus type 1 at single-molecule resolution. <b>2008</b> , 82, 7022-33	44
1237	A new atomic force microscope force ramp technique using digital force feedback control reveals mechanically weak protein unfolding events. <b>2008</b> , 19, 495704	2
1236	Hollow-fibre affinity cell separation. <b>2007</b> , 106, 129-50	

1235	Nucleation of membrane adhesions. <b>2008</b> , 77, 021906	22
1234	Optimum size of a molecular bond cluster in adhesion. <b>2008</b> , 78, 021909	22
1233	Computational analysis of adhesion force in the indentation of cells using atomic force microscopy. <b>2008</b> , 77, 021912	12
1232	Two-pathway four-state kinetic model of thioredoxin-catalyzed reduction of single forced disulfide bonds. <b>2008</b> , 77, 050903	4
1231	Biophysics in reverse: Using blood cells to accurately calibrate force-microscopy cantilevers. <b>2008</b> , 92, 153902	7
1230	Dynamics of specific vesicle-substrate adhesion: from local events to global dynamics. 2008, 101, 208103	55
1229	Dynamic states of cells adhering in shear flow: from slipping to rolling. <b>2008</b> , 77, 041904	59
1228	Forced dissociation of a biomolecular complex under periodic and correlated random forcing. <b>2008</b> , 128, 084708	9
1227	Entropic-elasticity-controlled dissociation and energetic-elasticity-controlled rupture induce catch-to-slip bonds in cell-adhesion molecules. <b>2008</b> , 77, 031910	10
1226	Statistics of forced thermally activated escape events out of a metastable state: most probable escape force and escape-force moments. <b>2008</b> , 78, 011118	5
1225	Harris, Song, and Kiang Reply:. <b>2008</b> , 100,	2
1224	Single cell mechanics: stress stiffening and kinematic hardening. <b>2008</b> , 100, 238102	48
1223	Mechanical properties of an adsorbed elastic polymer in contact with a rigid membrane. <b>2008</b> , 78, 051802	7
1222	Strength limit of entropic elasticity in beta-sheet protein domains. 2008, 78, 061913	32
1221	Analyzing single-bond experiments: influence of the shape of the energy landscape and universal law between the width, depth, and force spectrum of the bond. <b>2008</b> , 77, 026108	30
1220	Near-Equilibrium Chemical Force Microscopy. <b>2008</b> , 112, 4986-4990	45
1219	Unified model of dynamic forced barrier crossing in single molecules. <b>2008</b> , 100, 138302	55

1217	Dynamic force spectroscopy: Analysis of reversible bond-breaking dynamics. <b>2008</b> , 129, 084904	33
1216	Computational analysis of the interaction between ligand-receptor pairs. <b>2008</b> , 14, 588-92	4
1215	Constitutive Modeling of the Stress-Stretch Behavior of Two-Dimensional Triangulated Macromolecular Networks Containing Folded Domains. <b>2008</b> , 75,	7
1214	. 2008,	16
1213	Probing Biomolecular Interactions Using Nanopore Force Spectroscopy. 2009,	2
1212	Allosteric role of the large-scale domain opening in biological catch-binding. <b>2009</b> , 79, 051913	19
1211	Computational modeling for cell spreading on a substrate mediated by specific interactions, long-range recruiting interactions, and diffusion of binders. <b>2009</b> , 79, 061907	19
<b>121</b> 0	Theoretical study of the competition between cell-cell and cell-matrix adhesions. <b>2009</b> , 80, 011921	20
1209	Velocity convergence of free energy surfaces from single-molecule measurements using Jarzynski's equality. <b>2009</b> , 79, 041912	13
1208	Single ricin detection by atomic force microscopy chemomechanical mapping. <b>2009</b> , 95, 043103	16
1207	Maximum likelihood estimation of protein kinetic parameters under weak assumptions from unfolding force spectroscopy experiments. <b>2009</b> , 80, 061916	8
1206	Jamming proteins with slipknots and their free energy landscape. <b>2009</b> , 103, 268103	37
1205	Mechanics model for actin-based motility. <b>2009</b> , 79, 021916	21
1204	Endocytosis is required for E-cadherin redistribution at mature adherens junctions. <b>2009</b> , 106, 7010-5	127
1203	Substrate binding tunes conformational flexibility and kinetic stability of an amino acid antiporter. <b>2009</b> , 284, 18651-63	29
1202	Plasma membrane fluidity affects transient immobilization of oxidized phospholipids in endocytotic sites for subsequent uptake. <b>2009</b> , 284, 2258-65	21
1201	Desmocollin 3-mediated binding is crucial for keratinocyte cohesion and is impaired in pemphigus. <b>2009</b> , 284, 30556-64	83
1200	ROBUSTNESS-STRENGTH PERFORMANCE OF HIERARCHICAL ALPHA-HELICAL PROTEIN FILAMENTS. <b>2009</b> , 01, 85-112	32

1199	Ligand-dependent equilibrium fluctuations of single calmodulin molecules. <i>Science</i> , <b>2009</b> , 323, 633-7 33.3	185
1198	Refolding dynamics of stretched biopolymers upon force quench. <b>2009</b> , 106, 20288-93	38
1197	Osmolyte-induced separation of the mechanical folding phases of ubiquitin. <b>2009</b> , 106, 10540-5	42
1196	Loss of alpha-catenin decreases the strength of single E-cadherin bonds between human cancer cells. <b>2009</b> , 284, 18252-9	49
1195	Chapter 10 Transmigratory Cups and Invadosome-Like Protrusions: New Aspects of Diapedesis. <b>2009</b> , 64, 297-333	3
1194	Force spectroscopy of a single artificial biomolecule bond: the Kramers' high-barrier limit holds close to the critical force. <b>2009</b> , 130, 051103	6
1193	Dynamic force spectroscopy of DNA hairpins: I. Force kinetics and free energy landscapes. <b>2009</b> , 2009, P02060	36
1192	A multi-timescale strength model of alpha-helical protein domains. <b>2009</b> , 21, 035111	16
1191	Nanomechanical properties of vimentin intermediate filament dimers. <b>2009</b> , 20, 425101	49
1190	Investigation of SNARE-Mediated Membrane Fusion Mechanism Using Atomic Force Microscopy. <b>2009</b> , 48, 8JA03-8JA0310	3
1189	Enhancement of the processivity of kinesin-transported cargo by myosin V. <b>2009</b> , 87, 28002	13
1188	Self-organization of dynein motors generates meiotic nuclear oscillations. <b>2009</b> , 7, e1000087	103
1187	Nano-motion dynamics are determined by surface-tethered selectin mechanokinetics and bond formation. <b>2009</b> , 5, e1000612	8
1186	Force-clamp spectroscopy of reversible bond breakage. <b>2009</b> , 130, 041101	6
1185	Multipili attachment of bacteria with helixlike pili exposed to stress. <b>2009</b> , 130, 235102	16
1184	Positive feedback regulation results in spatial clustering and fast spreading of active signaling molecules on a cell membrane. <b>2009</b> , 130, 245102	27
1183	Kramers-like turnover in load-dependent activated dynamics. <b>2009</b> , 131, 024110	3
1182	Stochastic simulations of cargo transport by processive molecular motors. <b>2009</b> , 131, 245107	43

## (2010-2009)

1181	Self-recognition and Ca2+-dependent carbohydrate-carbohydrate cell adhesion provide clues to the cambrian explosion. <b>2009</b> , 26, 2551-61	29
1180	Experimental and computational characterization of biological liquid crystals: a review of single-molecule bioassays. <b>2009</b> , 10, 4009-32	15
1179	Integrin clustering is driven by mechanical resistance from the glycocalyx and the substrate. <b>2009</b> , 5, e1000604	176
1178	Chapter 7 Biophysical Regulation of Selectin[ligand Interactions Under Flow. <b>2009</b> , 64, 195-220	1
1177	Geometry- and velocity-constrained cohesive zones and mixed-mode fracture/adhesion energy of interfaces with periodic cohesive interactions. <b>2009</b> , 465, 1043-1053	11
1176	Demonstration of catch bonds between an integrin and its ligand. <b>2009</b> , 185, 1275-84	479
1175	Characterizing the resistance generated by a molecular bond as it is forcibly separated. <b>2009</b> , 106, 8818-23	75
1174	Rupture Mechanics of Vimentin Intermediate Filament Tetramers. 2009, 135, 422-433	3
1173	Study of inhibition effect of herceptin on interaction between heregulin and erbB receptors HER3/HER2 by single-molecule force spectroscopy. <b>2009</b> , 315, 2847-55	38
1172	The processivity of kinesin-2 motors suggests diminished front-head gating. <b>2009</b> , 19, 442-7	58
1171	Conformational changes and signaling in cell and matrix physics. <b>2009</b> , 19, R781-9	69
1170	Understanding Covalent Mechanochemistry. <b>2009</b> , 121, 4254-4257	43
1169	Cell Surface Manipulations with AFM. <b>2009</b> , 11, 42-45	
1168	Characterization of the biomechanical properties of T4 pili expressed by Streptococcus pneumoniaea comparison between helix-like and open coil-like pili. <b>2009</b> , 10, 1533-40	20
1167	Highly efficient capture and enumeration of low abundance prostate cancer cells using prostate-specific membrane antigen aptamers immobilized to a polymeric microfluidic device. <b>2009</b> , 30, 3289-300	145
1166	Mesoscopic model for mechanical characterization of biological protein materials. <b>2009</b> , 30, 873-80	20
1165	Mg2+ modulates integrin-extracellular matrix interaction in vascular smooth muscle cells studied by atomic force microscopy. <b>2010</b> , 23, 316-21	11
1164	Interaction of p53 with Mdm2 and azurin as studied by atomic force spectroscopy. <b>2010</b> , 23, 343-51	21

1163	Understanding covalent mechanochemistry. <b>2009</b> , 48, 4190-3	194
1162	Single-molecule pair studies of the interactions of the alpha-GalNAc (Tn-antigen) form of porcine submaxillary mucin with soybean agglutinin. <b>2009</b> , 91, 719-28	24
1161	Application of multiphase computational fluid dynamics to analyze monocyte adhesion. <b>2009</b> , 37, 1516-33	12
1160	Mechanics of forced unfolding of proteins. <b>2009</b> , 5, 1855-63	19
1159	Adhesion of a blood platelet to injured tissue. <b>2009</b> , 33, 695-703	6
1158	Cytoskeletal Deformation at High Strains and the Role of Cross-link Unfolding or Unbinding. <b>2009</b> , 2, 28-38	19
1157	Deformation Model for Thioredoxin Catalysis of Disulfide Bond Dissociation by Force. <b>2009</b> , 2, 255-263	4
1156	Dynamics of Microvillus Extension and Tether Formation in Rolling Leukocytes. <b>2009</b> , 2, 207-217	21
1155	Computational Analysis of a Cross-linked Actin-like Network. <b>2009</b> , 49, 91-104	73
1154	Molecular Mechanics of Stutter Defects in Vimentin Intermediate Filaments. <b>2009</b> , 49, 79-89	9
1153	Early stages for Parkinson's development: alpha-synuclein misfolding and aggregation. 2009, 4, 10-6	54
1152	Physical properties of the specific PapG-galabiose binding in E. coli P pili-mediated adhesion. <b>2009</b> , 38, 245-54	26
1151	Surface-bound selectin-ligand binding is regulated by carrier diffusion. <b>2009</b> , 38, 701-11	10
1150	Methods and estimations of uncertainties in single-molecule dynamic force spectroscopy. <b>2009</b> , 38, 911-22	10
1149	Modeling cell interactions under flow. <b>2009</b> , 58, 235-59	25
1148	Models for actin polymerization motors. <b>2009</b> , 58, 81-103	31
1147	Computational modeling of epithelial tissues. <b>2009</b> , 1, 191-201	16
1146	Single molecule measurements of mechanical interactions within ternary SNARE complexes and dynamics of their disassembly: SNAP25 vs. SNAP23. <b>2009</b> , 587, 1943-60	33

1145	Force probing surfaces of living cells to molecular resolution. <b>2009</b> , 5, 383-90	371
1144	Deformation and failure of protein materials in physiologically extreme conditions and disease. <b>2009</b> , 8, 175-88	270
1143	Bottoms up: transduction channels at tip link bases. <b>2009</b> , 12, 529-30	7
1142	Single molecule probing of SNARE proteins by atomic force microscopy. <b>2009</b> , 1152, 113-20	8
1141	Single-molecule approach to understanding multivalent binding kinetics. <b>2009</b> , 1161, 74-82	6
1140	Single-molecule force spectroscopy: Practical limitations beyond Bell model. <b>2009</b> , 388, 1120-1132	9
1139	Coupled Flow-Structure-Biochemistry Simulations of Dynamic Systems of Blood Cells Using an Adaptive Surface Tracking Method. <b>2009</b> , 25, 936-953	15
1138	Design of high-toughness polyacrylamide hydrogels by hydrophobic modification. <b>2009</b> , 50, 5449-5455	208
1137	A computational modeling for micropipette-manipulated cell detachment from a substrate mediated by receptorligand binding. <b>2009</b> , 57, 205-220	16
1136	Continuum modeling of forces in growing viscoelastic cytoskeletal networks. <b>2009</b> , 256, 596-606	14
1135	AFM measurements of interactions between the platelet integrin receptor GPIIbIIIa and fibrinogen. <b>2009</b> , 71, 138-47	29
1134	Blood cell transport and aggregation using discrete ellipsoidal particles. <b>2009</b> , 38, 1782-1794	19
1133	Dynamic force spectroscopy of the Helicobacter pylori BabA-Lewis b binding. <b>2009</b> , 143, 102-5	19
1132	Single molecular dynamic interactions between glycophorin A and lectin as probed by atomic force microscopy. <b>2009</b> , 144, 72-7	25
1131	Leukocytes dynamics in microcirculation under shear-thinning blood flow. <b>2009</b> , 58, 1035-1044	12
1130	Event-tracking model of adhesion identifies load-bearing bonds in rolling leukocytes. <b>2009</b> , 16, 115-30	19
1129	Microtubules and motor proteins: Mechanically regulated self-organization in vivo. 2009, 178, 57-69	2
1128	Atomic force spectroscopy in biological complex formation: strategies and perspectives. <b>2009</b> , 113, 16449-64	42

1127	Atomic force microscopy studies of the initial interactions between fibrinogen and surfaces. <b>2009</b> , 25, 3675-81	35
1126	Single molecular pair interactions between hydrophobically modified hydroxyethyl cellulose and amylose determined by dynamic force spectroscopy. <b>2009</b> , 25, 10174-82	14
1125	Antibody-antigen exchange equilibria in a field of an external force: design of reagentless biosensors. <b>2009</b> , 81, 7510-4	7
1124	Harnessing labile bonds between nanogel particles to create self-healing materials. <b>2009</b> , 3, 885-92	70
1123	Brownian dynamics simulation of DNA unrolling from the nucleosome. <b>2009</b> , 113, 2639-46	43
1122	The mechanics and fluctuation spectrum of active gels. <b>2009</b> , 113, 3820-30	65
1121	Atomistic simulation combined with analytic theory to study the response of the P-selectin/PSGL-1 complex to an external force. <b>2009</b> , 113, 2090-100	17
1120	Action at a distance: lengthening adhesion bonds with poly(ethylene glycol) spacers enhances mechanically stressed affinity for improved vascular targeting of microparticles. <b>2009</b> , 25, 10038-44	33
1119	Beyond molecular recognition: using a repulsive field to tune interfacial valency and binding specificity between adhesive surfaces. <b>2009</b> , 25, 84-96	17
1118	Oxide-dependent adhesion of the Jurkat line of T lymphocytes. <b>2009</b> , 25, 6270-8	16
1117	Simple, clickable protocol for atomic force microscopy tip modification and its application for trace ricin detection by recognition imaging. <b>2009</b> , 25, 2860-4	34
1116	Quantitative characterization of nanoadhesion by dynamic force spectroscopy. <b>2009</b> , 25, 256-61	19
1115	Physics puzzles on membrane domains posed by cell biology. <b>2009</b> , 5, 2841	39
1114	Periodic forces trigger a complex mechanical response in ubiquitin. <b>2009</b> , 390, 443-56	11
1113	Effect of particle collisions and aggregation on red blood cell passage through a bifurcation. <b>2009</b> , 78, 301-13	29
1112	Mechanochemistry: one bond at a time. <b>2009</b> , 3, 1628-45	116
1111	Active site formation, not bond kinetics, limits adhesion rate between human neutrophils and immobilized vascular cell adhesion molecule 1. <b>2009</b> , 96, 268-75	7
1110	Changing the mechanical unfolding pathway of FnIII10 by tuning the pulling strength. <b>2009</b> , 96, 429-41	41

### (2009-2009)

1109	membrane capsules. <b>2009</b> , 96, 1218-31	15
1108	DNA as membrane-bound ligand-receptor pairs: duplex stability is tuned by intermembrane forces. <b>2009</b> , 96, 1554-65	28
1107	Mechanical properties of the icosahedral shell of southern bean mosaic virus: a molecular dynamics study. <b>2009</b> , 96, 1350-63	102
1106	Adhesive dynamics simulation of G-protein-mediated chemokine-activated neutrophil adhesion. <b>2009</b> , 96, 2989-3004	13
1105	Mechanical characterization of protein L in the low-force regime by electromagnetic tweezers/evanescent nanometry. <b>2009</b> , 96, 3810-21	53
1104	Biomolecule association rates do not provide a complete description of bond formation. <b>2009</b> , 96, 4642-50	19
1103	Quantitative analysis of single-molecule RNA-protein interaction. <b>2009</b> , 96, 5030-9	30
1102	Cytoskeletal polymer networks: viscoelastic properties are determined by the microscopic interaction potential of cross-links. <b>2009</b> , 96, 4725-32	89
1101	Neurexin/neuroligin interaction kinetics characterized by counting single cell-surface attached quantum dots. <b>2009</b> , 97, 480-9	20
1100	Direct and model free calculation of force-dependent dissociation rates from force spectroscopic data. <b>2009</b> , 97, L19-21	26
1099	Lifetime and strength of periodic bond clusters between elastic media under inclined loading. <b>2009</b> , 97, 2438-45	73
1098	Kinetics of the multistep rupture of fibrin 'A-a' polymerization interactions measured using atomic force microscopy. <b>2009</b> , 97, 2820-8	20
1097	Reversal of the myosin power stroke induced by fast stretching of intact skeletal muscle fibers. <b>2009</b> , 97, 2922-9	12
1096	An atomic force microscope nanoscalpel for nanolithography and biological applications. <b>2009</b> , 20, 445302	17
1095	Alpha-helical protein domains unify strength and robustness through hierarchical nanostructures. <b>2009</b> , 20, 075103	23
1094	Mechanically unfolding proteins: the effect of unfolding history and the supramolecular scaffold. <b>2002</b> , 11, 2759-65	67
1093	Mechanisms for transcellular diapedesis: probing and pathfinding by 'invadosome-like protrusions'. <b>2009</b> , 122, 3025-35	147
1092	Cell adhesion: the effect of a surprising cohesive force. <b>2009</b> , 80, 042901	4

1091	Scientific Modeling and Simulations. <b>2009</b> ,	5
1090	Handbook of Single-Molecule Biophysics. 2009,	49
1089	A Fluid-Cell Interaction and Adhesion Algorithm for Tissue Coating of Cardiovascular Implants. <b>2009</b> , 7, 1669-1694	4
1088	Theoretical aspects of the biological catch bond. <b>2009</b> , 42, 693-703	68
1087	Binding site models of friction due to the formation and rupture of bonds: state-function formalism, force-velocity relations, response to slip velocity transients, and slip stability. <b>2009</b> , 80, 046124	49
1086	Exploring hysteresis and energy dissipation in single-molecule force spectroscopy. <b>2009</b> , 130, 084703	17
1085	Adhesion of membranesviareceptorligand complexes: Domain formation, binding cooperativity, and active processes. <b>2009</b> , 5, 3213	81
1084	Pulling force generated by interacting SNAREs facilitates membrane hemifusion. <b>2009</b> , 1, 301-10	17
1083	Free energies and forces in helix-coil transition of homopolypeptides under stretching. <b>2009</b> , 11, 4019-24	9
1082	Binding cooperativity of membrane adhesion receptors. <b>2009</b> , 5, 3354	55
1081	Linking single integrinligand bond properties to cell adhesiveness under external forces exemplified by the VLA-4I/CAM-1 bond. <b>2009</b> , 5, 4141	2
1080	Kinesin's backsteps under mechanical load. <b>2009</b> , 11, 4899-910	44
1079	Review: Rheological properties of biological materials. <b>2009</b> , 10, 790-811	61
1078	Chapter 8 Modeling Leukocyte Rolling. <b>2009</b> , 221-273	2
1077	Cryogels as Matrices for Cell Separation and Cell Cultivation. 2009, 363-404	3
1076	Chapter 6 Membrane Lytoskeletal Platforms for Rapid Chemokine Signaling to Integrins. <b>2009</b> , 64, 157-193	
1075	Flow dynamics, binding and detachment of spherical carriers targeted to ICAM-1 on endothelial cells. <b>2009</b> , 46, 323-41	54
1074	Single-molecule bonds characterized by solid-state nanopore force spectroscopy. <b>2009</b> , 3, 3009-14	63

1073 Cohesive suction-cup force in cell separation dynamics. 2010, 91, 28004

1072	Cargo Transport by Teams of Molecular Motors: Basic Mechanisms for Intracellular Drug Delivery. <b>2010</b> , 289-309	1
1071	Molecular to Multicellular Deformation during Adhesion of Immune Cells Under Flow. <b>2010</b> , 341-368	
1070	Measuring Forces and Motion. <b>2010</b> , 99-197	
1069	Force-induced cleavage of single VWFA1A2A3 tridomains by ADAMTS-13. <b>2010</b> , 115, 370-8	89
1068	Mechanism of shear deformation of a coiled myosin coil: Computer simulation. <b>2010</b> , 52, 662-670	7
1067	Scanning near-field optical microscopy-based study of local dynamics of receptor-ligand interactions at the single molecule level. <b>2010</b> , 20, 78-84	3
1066	Force-extension curves of bacterial flagella. <b>2010</b> , 33, 259-71	35
1065	Reconstruction of potential energy profiles from multiple rupture time distributions. <b>2010</b> , 466, 3479-3499	7
1064	Maximum likelihood estimation of the kinetics of receptor-mediated adhesion. <b>2010</b> , 262, 478-87	5
1063	Mechanism of CDK5 activation revealed by steered molecular dynamics simulations and energy calculations. <b>2010</b> , 16, 1159-68	7
1062	A computational biomimetic study of cell crawling. <b>2010</b> , 9, 573-81	18
1061	Multi-scale simulation of L-selectin-PSGL-1-dependent homotypic leukocyte binding and rupture. <b>2010</b> , 9, 613-27	16
1060	Molecular Biomechanics: The Molecular Basis of How Forces Regulate Cellular Function. <b>2010</b> , 3, 91-105	27
1059	The Effects of Load on E-Selectin Bond Rupture and Bond Formation. <b>2010</b> , 3, 128-138	16
1058	Dynamic Adhesion Energy Between Surfaces Connected by Molecular Bonds and its Application to Peel Test. <b>2010</b> , 3, 247-255	2
1057	Cell creeping and controlled migration by magnetic carbon nanotubes. <b>2009</b> , 5, 257-62	17
1056	Size and shape dependent steady-state pull-off force in molecular adhesion between soft elastic materials. <b>2010</b> , 166, 13-19	18

1055	Force and length regulation in the microtubule cytoskeleton: lessons from fission yeast. <b>2010</b> , 22, 21-8	33
1054	The molecular basis of frictional loads in the in vitro motility assay with applications to the study of the loaded mechanochemistry of molecular motors. <b>2010</b> , 67, 273-85	53
1053	Apparent dependence of rupture force on loading rate in single-molecule force spectroscopy. <b>2010</b> , 11, 2096-8	4
1052	Topics in Materials Design, Temporal Multiscale Problems and Bio-Materials. <b>2010</b> , 299-341	
1051	Optimization of ultrasound contrast agents with computational models to improve selection of ligands and binding strength. <b>2010</b> , 107, 854-64	26
1050	Force spectroscopy of barnase-barstar single molecule interaction. <b>2010</b> , 23, 583-8	9
1049	Mechanics of soft interfaces studied with displacement-controlled scanning force microscopy. <b>2010</b> , 85, 347-397	22
1048	A stochastic model of cell aggregation under planar flow in the dilute regime. <b>2010</b> , 43, 248-53	1
1047	Stabilizing to disruptive transition of focal adhesion response to mechanical forces. <b>2010</b> , 43, 2524-9	34
1046	A kinematic model coupling stress fiber dynamics with JNK activation in response to matrix stretching. <b>2010</b> , 264, 593-603	13
1045	Biomolecules under mechanical force. <b>2010</b> , 486, 1-74	193
1044	A model of cell motility leading to biphasic dependence of transport speed on adhesive strength. <b>2010</b> , 58, 502-514	21
1043	Numerical modeling of mass transport in microfluidic biomolecule-capturing devices equipped with reactive surfaces. <b>2010</b> , 165, 668-677	24
1042	Measuring the force of single protein molecule detachment from surfaces with AFM. <b>2010</b> , 75, 252-9	15
1041	Characterization of nanoscale adhesion between a fluoroalkyl silane monolayer and a silicon AFM tip. Complex character of the interaction potential. <b>2010</b> , 489, 54-58	10
1040	Untersuchung von Konformationsgleichgewichten und Wasserstoffbr©kenbindungen mit Hilfe der Hochdruckschwingungsspektroskopie. <b>2010</b> , 21, 381-387	6
1039	Dual energy landscape: the functional state of the #barrel outer membrane protein G molds its unfolding energy landscape. <b>2010</b> , 10, 4151-62	14
1038	Nanoimaging for protein misfolding diseases. <b>2010</b> , 2, 526-43	39

1037 Optical trapping v	with high forces reveals unexpected behaviors of prion fibrils. <b>2010</b> , 17, 1422-30	49
1036 TCR-peptide-MH0	C interactions in situ show accelerated kinetics and increased affinity. <b>2010</b> , 463, 963-7	362
1035 A mechanically st	tabilized receptor-ligand flex-bond important in the vasculature. <b>2010</b> , 466, 992-5	209
1034 Tension directly s	stabilizes reconstituted kinetochore-microtubule attachments. <b>2010</b> , 468, 576-9	305
The mechanism o 588, 495-510	of the resistance to stretch of isometrically contracting single muscle fibres. 2010,	37
Crossbridge recru skeletal muscle fi	uitment by stretching does not invalidate force spectroscopy experiments in living ibres. <b>2010</b> , 588, 4327-8; author reply 4329	
1031 Mechanoregulatio	ion: Cellular seat belts. <b>2010</b> , 468, 518-9	3
Harnessing traction 1030 <b>2010</b> , 9, 518-26	ion-mediated manipulation of the cell/matrix interface to control stem-cell fate.	1126
1029 A Discrete State N	Model for Kinesin-1 with Rate Constants Modulated by Neck Linker Tension. <b>2010</b> ,	
1028 . <b>2010,</b>		6
	characterization of microbial polysaccharides. <b>2010</b> , 253-268	3
1027 Single-molecule c	characterization of microbial polysaccharides. <b>2010</b> , 253-268  opress cooperative behaviors among receptor-ligand bonds in cell adhesion. <b>2010</b> ,	
Single-molecule of Soft matrices sup 5, e12342		3
Soft matrices sup 5, e12342  Boundary crossing	opress cooperative behaviors among receptor-ligand bonds in cell adhesion. <b>2010</b> ,	3
Single-molecule of Soft matrices sup 5, e12342  1025 Boundary crossing 1024 Full distance-reso	opress cooperative behaviors among receptor-ligand bonds in cell adhesion. <b>2010</b> , and in epithelial wound healing. <b>2010</b> , 107, 19302-7	3 38 47
Soft matrices sup 5, e12342  1025 Boundary crossing 1024 Full distance-resord 1023 Constitutive Mod	opress cooperative behaviors among receptor-ligand bonds in cell adhesion. <b>2010</b> , and in epithelial wound healing. <b>2010</b> , 107, 19302-7  colved folding energy landscape of one single protein molecule. <b>2010</b> , 107, 2013-8	3 38 47 162
Soft matrices sup 5, e12342  1025 Boundary crossing 1024 Full distance-resord 1023 Constitutive Mod 1022 Insights into the runbinding force in	opress cooperative behaviors among receptor-ligand bonds in cell adhesion. 2010, and in epithelial wound healing. 2010, 107, 19302-7  olived folding energy landscape of one single protein molecule. 2010, 107, 2013-8  dels for the Force-Extension Behavior of Biological Filaments. 2010, 141-159  mechanisms of myosin and kinesin molecular motors from the single-molecule measurements. 2010, 7 Suppl 3, S295-306  approach to single oligomeric enzyme catalysis: mechanically controlled further	3 38 47 162 2

1019	Forcing switch from short- to intermediate- and long-lived states of the alphaA domain generates LFA-1/ICAM-1 catch bonds. <b>2010</b> , 285, 35967-78	123
1018	Single-molecule force spectroscopy approach to enzyme catalysis. <b>2010</b> , 285, 18961-6	57
1017	Models of dynamic extraction of lipid tethers from cell membranes. <b>2010</b> , 7, 026002	11
1016	Dynamic strength of titin's Z-disk end. <b>2010</b> , 2010, 838530	3
1015	Force-induced destabilization of focal adhesions at defined integrin spacings on nanostructured surfaces. <b>2010</b> , 81, 051914	13
1014	Single-molecule force spectroscopy: a method for quantitative analysis of ligand-receptor interactions. <b>2010</b> , 5, 657-66	31
1013	Is the Mechanics of CellMatrix Adhesion Amenable to Physical Modeling?. <b>2010</b> , 24, 2203-2214	4
1012	Unfolding times for proteins in a force clamp. <b>2010</b> , 81, 010902	15
1011	Model accounting for the effects of pulling-device stiffness in the analyses of single-molecule force measurements. <b>2010</b> , 104, 108301	54
1010	DNA force-extension curve under uniaxial stretching. <b>2010</b> , 36, 221-228	1
	DNA force-extension curve under uniaxial stretching. <b>2010</b> , 36, 221-228  Free energy and critical force for adhesion clusters. <b>2010</b> , 81, 061908	7
1009		
1009	Free energy and critical force for adhesion clusters. <b>2010</b> , 81, 061908	7
1009	Free energy and critical force for adhesion clusters. <b>2010</b> , 81, 061908  Control of myosin-I force sensing by alternative splicing. <b>2010</b> , 107, 698-702	7 33
1009 1008 1007 1006	Free energy and critical force for adhesion clusters. <b>2010</b> , 81, 061908  Control of myosin-I force sensing by alternative splicing. <b>2010</b> , 107, 698-702  Simulation of cell motility that reproduces the force-velocity relationship. <b>2010</b> , 107, 9141-6	7 33 56
1009 1008 1007 1006	Free energy and critical force for adhesion clusters. 2010, 81, 061908  Control of myosin-I force sensing by alternative splicing. 2010, 107, 698-702  Simulation of cell motility that reproduces the force-velocity relationship. 2010, 107, 9141-6  Dynamic instability of the intracellular pressure drives bleb-based motility. 2010, 123, 3884-92	7 33 56 82
1009 1008 1007 1006	Free energy and critical force for adhesion clusters. 2010, 81, 061908  Control of myosin-I force sensing by alternative splicing. 2010, 107, 698-702  Simulation of cell motility that reproduces the force-velocity relationship. 2010, 107, 9141-6  Dynamic instability of the intracellular pressure drives bleb-based motility. 2010, 123, 3884-92  Probing static disorder in Arrhenius kinetics by single-molecule force spectroscopy. 2010, 107, 11336-40	7 33 56 82

1001	Cell crawling assisted by contractile stress induced retraction. <b>2010</b> , 132, 061005	2
1000	Cooperativity between trans and cis interactions in cadherin-mediated junction formation. <b>2010</b> , 17592-7	99
999	Chemokine arrest signals to leukocyte integrins trigger bi-directional-occupancy of individual heterodimers by extracellular and cytoplasmic ligands. <b>2010</b> , 4, 211-4	9
998	Nanopore force spectroscopy tools for analyzing single biomolecular complexes. <b>2010</b> , 475, 565-89	22
997	Energy landscape, structure and rate effects on strength properties of alpha-helical proteins. <b>2010</b> , 22, 035102	11
996	Monitoring ligand-receptor interactions by photonic force microscopy. <b>2010</b> , 21, 255102	18
995	Inelastic mechanics of sticky biopolymer networks. <b>2010</b> , 12, 053024	40
994	Translocation of Ehelix chains through a nanopore. <b>2010</b> , 133, 154903	15
993	Segregation of receptorlgand complexes in cell adhesion zones: phase diagrams and the role of thermal membrane roughness. <b>2010</b> , 12, 095003	34
992	Detecting cell-adhesive sites in extracellular matrix using force spectroscopy mapping. <b>2010</b> , 22, 194102	16
991	Molecular dynamics simulation of the 由elix to 卧heet transition in coiled protein filaments: evidence for a critical filament length scale. <b>2010</b> , 104, 198304	107
990	. <b>2010</b> , 19, 752-763	13
989	Adhesion and Signaling of Tumor Cells to Leukocytes and Endothelium in Cancer Metastasis. <b>2010</b> , 477-521	1
988	Structure and dynamics of cross-linked actin networks. <b>2010</b> , 6, 218-225	176
987	Direct evidence of the multidimensionality of the free-energy landscapes of proteins revealed by mechanical probes. <b>2010</b> , 81, 031923	37
986	Design rules for biomolecular adhesion: lessons from force measurements. <b>2010</b> , 1, 365-89	10
985	Molecular interaction studies of vascular endothelial growth factor with RNA aptamers. <b>2010</b> , 135, 2014-21	16
984	Long-lived, high-strength states of ICAM-1 bonds to beta2 integrin, I: lifetimes of bonds to recombinant alphaLbeta2 under force. <b>2010</b> , 98, 1458-66	35

983	Bipedal locomotion in crawling cells. <b>2010</b> , 98, 933-42	78
982	Cell adhesion strength is controlled by intermolecular spacing of adhesion receptors. <b>2010</b> , 98, 543-51	155
981	Microscopic basis for the mesoscopic extensibility of dendrimer-compacted DNA. <b>2010</b> , 98, 834-42	16
980	Long-lived, high-strength states of ICAM-1 bonds to beta2 integrin, II: lifetimes of LFA-1 bonds under force in leukocyte signaling. <b>2010</b> , 98, 1467-75	24
979	Mechanical principle of enhancing cell-substrate adhesion via pre-tension in the cytoskeleton. <b>2010</b> , 98, 2154-62	20
978	Massively parallel single-molecule manipulation using centrifugal force. <b>2010</b> , 98, L53-5	51
977	The role of cell contraction and adhesion in dictyostelium motility. 2010, 99, 50-8	52
976	Force-induced lysozymeHyHEL5 antibody dissociation and its analysis by means of a cooperative binding model. <b>2010</b> , 99, 323-32	5
975	Mechanical unfolding of acylphosphatase studied by single-molecule force spectroscopy and MD simulations. <b>2010</b> , 99, 238-47	25
974	Cholesterol-dependent nanomechanical stability of phase-segregated multicomponent lipid bilayers. <b>2010</b> , 99, 507-16	83
973	Triphasic force dependence of E-selectin/ligand dissociation governs cell rolling under flow. <b>2010</b> , 99, 1166-74	38
972	The mechanism of VWF-mediated platelet GPIbalpha binding. <b>2010</b> , 99, 1192-201	27
971	Catch-bond behavior of bacteria binding by slip bonds. <b>2010</b> , 99, 1331-41	10
970	Complex unfolding kinetics of single-domain proteins in the presence of force. <b>2010</b> , 99, 1620-7	23
969	Order statistics theory of unfolding of multimeric proteins. <b>2010</b> , 99, 1959-68	15
968	A mathematical framework for analyzing T cell receptor scanning of peptides. <b>2010</b> , 99, 2717-25	5
967	Single-molecule force spectroscopy of cartilage aggrecan self-adhesion. <b>2010</b> , 99, 3498-504	21
966	Squeezing and detachment of living cells. <b>2010</b> , 99, 3555-62	17

## (2010-2010)

965	A semianalytical model to study the effect of cortical tension on cell rolling. <b>2010</b> , 99, 3870-9	20
964	Single-molecule adhesion forces and attachment lifetimes of myosin-I phosphoinositide interactions. <b>2010</b> , 99, 3916-22	11
963	Rolling cell adhesion. <b>2010</b> , 26, 363-96	243
962	Specific adhesion of membranes: Mapping to an effective bond lattice gas. <b>2010</b> , 82, 021923	24
961	Distributions of Parameters and Features of Multiple Bond Ruptures in Force Spectroscopy by Atomic Force Microscopy. <b>2010</b> , 114, 8755-8765	13
960	Immobilization and molecular interactions between bacteriophage and lipopolysaccharide bilayers. <b>2010</b> , 26, 12095-103	23
959	Modeling and computational analysis of nanoparticle adhesion on the inflamed endothelium. 2010,	
958	Quantitative Analysis of the Interaction between an Atomic Force Microscopy Tip and a Hydrophobic Monolayer. <b>2010</b> , 114, 21572-21578	14
957	Fold catastrophes and the dependence of free-energy barriers to conformational transitions on applied force. <b>2010</b> , 114, 10821-5	12
956	Conservation of molecular interactions stabilizing bovine and mouse rhodopsin. <b>2010</b> , 49, 10412-20	22
955	Regulation of catch binding by allosteric transitions. <b>2010</b> , 114, 11866-74	7
954	Protein mechanics: from single molecules to functional biomaterials. <b>2010</b> , 43, 1331-41	97
953	Rupture mechanism of aromatic systems from graphite probed with molecular dynamics simulations. <b>2010</b> , 26, 10791-5	6
952	Study on intercalations between double-stranded DNA and pyrene by single-molecule force spectroscopy: toward the detection of mismatch in DNA. <b>2010</b> , 26, 13773-7	22
951	Strain-Dependent Acceleration of a Paradigmatic SN2 Reaction Accurately Predicted by the Force Formalism. <b>2010</b> , 1, 2820-2825	37
950	Statistics of reversible bond dynamics observed in force-clamp spectroscopy. <b>2010</b> , 82, 051132	4
949	Effect of humidity on nanoscale adhesion on self-assembled thiol monolayers studied by dynamic force spectroscopy. <b>2010</b> , 26, 1837-47	18
948	Investigation of the binding preference of reovirus sigma1 for junctional adhesion molecule A by classical and steered molecular dynamics. <b>2010</b> , 49, 1776-86	7

947	Dissociation kinetics of an enzyme-inhibitor system using single-molecule force measurements. <b>2010</b> , 11, 3352-8	6
946	Spontaneous and specific activation of chemical bonds in macromolecular fluids. <b>2010</b> , 132, 12487-91	23
945	Monte Carlo simulation of mechanical unfolding of proteins based on a simple two-state model. <b>2010</b> , 46, 159-66	10
944	T cell receptor triggering by force. <b>2010</b> , 31, 1-6	57
943	Fibroblast growth factor-2 binding to the endothelial basement membrane peaks at a physiologically relevant shear stress. <b>2010</b> , 29, 586-93	9
942	Stretchy proteins on stretchy substrates: the important elements of integrin-mediated rigidity sensing. <b>2010</b> , 19, 194-206	313
941	Hopping around an entropic barrier created by force. <b>2010</b> , 403, 133-7	40
940	Atomic force microscopy-based molecular recognition of a fibrinogen receptor on human erythrocytes. <b>2010</b> , 4, 4609-20	109
939	Matrix mechanics and receptor-ligand interactions in cell adhesion. <b>2010</b> , 8, 299-304	35
938	Sop-GPU: accelerating biomolecular simulations in the centisecond timescale using graphics processors. <b>2010</b> , 78, 2984-99	52
937	Rate theories for biologists. <b>2010</b> , 43, 219-93	107
936	Methods to Measure the Strength of Cell Adhesion to Substrates. <b>2010</b> , 24, 2027-2058	43
935	Colloidal probe microscopy of membrane-membrane interactions: from ligand-receptor recognition to fusion events. <b>2010</b> , 150, 54-63	19
934	Theoretical concepts and models of cellular mechanosensing. <b>2010</b> , 98, 143-75	29
933	IUTAM Symposium on Cellular, Molecular and Tissue Mechanics. 2010,	
932	Atomic force microscopy studies of human rhinovirus topology and molecular forces. <b>2010</b> , 475, 515-39	3
931	Mechanomutable properties of a PAA/PAH polyelectrolyte complex: rate dependence and ionization effects on tunable adhesion strength. <b>2010</b> , 6, 4175	78
930	Modeling cytoskeletal flow over adhesion sites: competition between stochastic bond dynamics and intracellular relaxation. <b>2010</b> , 22, 194112	41

929	Model for how retrograde actin flow regulates adhesion traction stresses. <b>2010</b> , 22, 194113	29
928	Perfluorophenyl azide immobilization chemistry for single molecule force spectroscopy of the concanavalin A/mannose interaction. <b>2010</b> , 26, 16677-80	9
927	Adhesive dynamics of lubricated films. <b>2010</b> , 81, 041923	3
926	Oncothermia 🖪 New Kind of Oncologic Hyperthermia. <b>2010</b> , 173-392	3
925	Computational Modeling in Biomechanics. 2010,	5
924	Computational and single-molecule force studies of a macro domain protein reveal a key molecular determinant for mechanical stability. <b>2010</b> , 107, 1989-94	49
923	Single Molecule Spectroscopy in Chemistry, Physics and Biology. <b>2010</b> ,	22
922	Modelling semiflexible polymers: shape analysis, buckling instabilities, and force generation. <b>2010</b> , 6, 5764	12
921	The application of atomic force spectroscopy to the study of biological complexes undergoing a biorecognition process. <b>2010</b> , 39, 734-49	108
920	Atomistic evidence of how force dynamically regulates thiol/disulfide exchange. <b>2010</b> , 132, 16790-5	55
919	Single-molecule force spectroscopy of supramolecular heterodimeric capsules. <b>2010</b> , 12, 10981-7	16
918	Mechanical distortion of protein receptor decreases the lifetime of a receptor-ligand bond. <b>2010</b> , 132, 9681-7	9
917	Force required to disassemble block copolymer micelles in water. <b>2010</b> , 26, 9183-6	10
916	Colloquium: Failure of molecules, bones, and the Earth itself. <b>2010</b> , 82, 1459-1487	36
915	Influence of pulling handles and device stiffness in single-molecule force spectroscopy. <b>2011</b> , 13, 1836-42	21
914	Focusing bond tension in bottle-brush macromolecules during spreading. <b>2011</b> , 21, 8448	26
913	Cell receptor and surface ligand density effects on dynamic states of adhering circulating tumor cells. <b>2011</b> , 11, 3431-9	30
912	Dynamic force spectroscopy on the binding of monoclonal antibodies and tau peptides. <b>2011</b> , 7, 4370	9

911	Free energy evaluation of the p53-Mdm2 complex from unbinding work measured by dynamic force spectroscopy. <b>2011</b> , 13, 2738-43	12
910	Mechanochemically triggered bond formation in solid-state polymers. <b>2011</b> , 21, 8460	63
909	Contrasting the individual reactive pathways in protein unfolding and disulfide bond reduction observed within a single protein. <b>2011</b> , 133, 3104-13	21
908	Cell Signaling Reactions. <b>2011</b> ,	4
907	Highly covalent ferric-thiolate bonds exhibit surprisingly low mechanical stability. <b>2011</b> , 133, 6791-8	55
906	Force-induced change in protein unfolding mechanism: discrete or continuous switch?. <b>2011</b> , 115, 1546-61	45
905	Single-molecule atomic force microscopy force spectroscopy study of A斛0 interactions. <b>2011</b> , 50, 5154-62	73
904	Single-molecule force-clamp spectroscopy: dwell time analysis and practical considerations. <b>2011</b> , 27, 1440-7	12
903	Using mesoscopic models to design strong and tough biomimetic polymer networks. <b>2011</b> , 27, 13796-805	18
902	Base-catalyzed peptide hydrolysis is insensitive to mechanical stress. <b>2011</b> , 115, 10126-32	17
901	Reversible hydrogen bond network dynamics: molecular dynamics simulations of calix[4]arene-catenanes. <b>2011</b> , 115, 6445-54	15
900	Examining the lateral displacement of HL60 cells rolling on asymmetric P-selectin patterns. <b>2011</b> , 27, 240-9	18
899	Using engineered single-chain antibodies to correlate molecular binding properties and nanoparticle adhesion dynamics. <b>2011</b> , 27, 13701-12	8
898	Single-molecule force spectroscopy for studying kinetics of enzymatic dextran elongations. <b>2011</b> , 133, 5701-3	15
897	Impact of local versus global ligand density on cellular adhesion. <b>2011</b> , 11, 1469-76	120
896	Mechanical strength of specific bonds acting isolated or in pairs: a case study on engineered proteins. <b>2011</b> , 115, 2582-92	2
895	The entropic and enthalpic contributions to force-dependent dissociation kinetics of the pyrophosphate bond. <b>2011</b> , 133, 20044-7	33
894	Steered molecular dynamics simulations of the electron transfer complex between azurin and cytochrome c551. <b>2011</b> , 115, 1211-9	8

893	Bond Tension in Tethered Macromolecules. <b>2011</b> , 44, 4520-4529	38
892	Probing multivalent interactions in a synthetic host-guest complex by dynamic force spectroscopy. <b>2011</b> , 133, 10849-57	65
891	Role of parallel reformable bonds in the self-healing of cross-linked nanogel particles. <b>2011</b> , 27, 3991-4003	23
890	The effect of interactions on the cellular uptake of nanoparticles. <b>2011</b> , 8, 046002	58
889	Dissociation of bimolecular ∰b-fibrinogen complex under a constant tensile force. <b>2011</b> , 100, 165-73	51
888	Polymer-based catch-bonds. <b>2011</b> , 100, 174-82	18
887	A role for septins in the interaction between the Listeria monocytogenes INVASION PROTEIN InlB and the Met receptor. <b>2011</b> , 100, 1949-59	63
886	Minimal encounter time and separation determine ligand-receptor binding in cell adhesion. <b>2011</b> , 100, 2642-51	20
885	An analytical model for determining two-dimensional receptor-ligand kinetics. <b>2011</b> , 100, 2338-46	15
884	Motor force homeostasis in skeletal muscle contraction. <b>2011</b> , 101, 396-403	23
883	Bistability of cell adhesion in shear flow. <b>2011</b> , 101, 1032-40	16
882	Characterization of enhanced monovalent and bivalent thrombin DNA aptamer binding using single molecule force spectroscopy. <b>2011</b> , 101, 1781-7	25
881	Direct measurements of the mechanical stability of zinc-thiolate bonds in rubredoxin by single-molecule atomic force microscopy. <b>2011</b> , 101, 1467-73	23
880	Dynamic role of cross-linking proteins in actin rheology. <b>2011</b> , 101, 1597-603	28
879	The two-pathway model of the biological catch-bond as a limit of the allosteric model. <b>2011</b> , 101, 2026-36	16
878	Nucleation and decay initiation are the stiffness-sensitive phases of focal adhesion maturation. <b>2011</b> , 101, 2919-28	31
877	Divergent Shear Thinning and Shear Thickening Behavior of Supramolecular Polymer Networks in Semidilute Entangled Polymer Solutions. <b>2011</b> , 44, 2343-2353	59
876	Equilibrium Structure and Dynamics of Self-Associating Single Polymers. <b>2011</b> , 44, 6962-6971	31

875	Free Energy Landscapes of Proteins: Insights from Mechanical Probes. 2011, 395-417	1
874	EMSA and single-molecule force spectroscopy study of interactions between Bacillus subtilis single-stranded DNA-binding protein and single-stranded DNA. <b>2011</b> , 27, 15008-15	20
873	Velocity effect on aptamer-based circulating tumor cell isolation in microfluidic devices. <b>2011</b> , 115, 13891-6	71
872	High-resolution atomic force microscopy and spectroscopy of native membrane proteins. <b>2011</b> , 74, 086601	102
871	Influence of external force on properties and reactivity of disulfide bonds. <b>2011</b> , 115, 2308-15	43
870	Self-complementary recognition of supramolecular urea-aminotriazines in solution and on surfaces. <b>2011</b> , 27, 14272-8	11
869	Computational Methods Related to Reaction Chemistry. <b>2011</b> , 155-169	
868	Protein Nanomechanics. <b>2011</b> , 227-261	2
867	On the detection of single bond ruptures in dynamic force spectroscopy by AFM. <b>2011</b> , 27, 11287-91	12
866	Mechanobiology of Cell-Cell and Cell-Matrix Interactions. 2011,	15
865	The physical chemistry of mechanoresponsive polymers. <b>2011</b> , 21, 8237	96
864	. 2011,	1
863	Atomic Force Microscopy in Biomedical Research. 2011,	7
862	On the role of polymer chains in transducing external mechanical forces to benzocyclobutene mechanophores. <b>2011</b> , 21, 8309	50
861	Biophysics of selectin-ligand interactions in inflammation and cancer. <b>2011</b> , 8, 015013	35
860	Nanotribology and Nanomechanics I. <b>2011</b> ,	17
859	Adhesion through single peptide aptamers. <b>2011</b> , 115, 3657-64	17
858	Assessing bacterial adhesion on an individual adhesin and single pili level using optical tweezers. <b>2011</b> , 715, 301-13	15

857	Highly anisotropic stability and folding kinetics of a single coiled coil protein under mechanical tension. <b>2011</b> , 133, 12749-57	50
856	Single-molecule recognition of biomolecular interaction via Kelvin probe force microscopy. <b>2011</b> , 5, 6981-90	46
855	Molecular tensile machines: intrinsic acceleration of disulfide reduction by dithiothreitol. <b>2011</b> , 133, 17479-84	43
854	Cellular and Biomolecular Mechanics and Mechanobiology. <b>2011</b> ,	5
853	Kinetic measurements on single-molecule disulfide bond cleavage. <b>2011</b> , 133, 3528-34	50
852	Chemomechanics: chemical kinetics for multiscale phenomena. <b>2011</b> , 40, 2359-84	108
851	From molecular mechanochemistry to stress-responsive materials. <b>2011</b> , 21, 1655-1663	259
850	Intracellular pathogens and CD8(+) dendritic cells: dangerous liaisons. <b>2011</b> , 35, 153-5	5
849	A new vampire saga: the molecular mechanism of T cell trogocytosis. <b>2011</b> , 35, 151-3	30
848	Structure and stability of the lamin A tail domain and HGPS mutant. <b>2011</b> , 175, 425-33	38
847	Two-dimensional kinetics of inter-connexin interactions from single-molecule force spectroscopy. <b>2011</b> , 412, 72-9	10
846	References. <b>2011</b> , 635-660	O
845	The effect of a mechanical force on quantum reaction rate: quantum Bell formula. <b>2011</b> , 135, 194112	8
844	Interaction of an anticancer peptide fragment of azurin with p53 and its isolated domains studied by atomic force spectroscopy. <b>2011</b> , 6, 3011-9	35
843	Molecular mechanistic insights into the endothelial receptor mediated cytoadherence of Plasmodium falciparum-infected erythrocytes. <b>2011</b> , 6, e16929	25
842	From molecular signal activation to locomotion: an integrated, multiscale analysis of cell motility on defined matrices. <b>2011</b> , 6, e18423	18
841	Force generation upon T cell receptor engagement. <b>2011</b> , 6, e19680	132
840	Structural basis and kinetics of force-induced conformational changes of an ♣ domain-containing integrin. <b>2011</b> , 6, e27946	17

839	Colloidal Examination of Worts Associated with Premature Yeast Flocculation 1. <b>2011</b> , 69, 81-90	5
838	Biomechanics of leukocyte rolling. <b>2011</b> , 48, 1-35	88
837	Molecular Recognition Force Spectroscopy. <b>2011</b> , 3-46	1
836	Mapping Membrane Proteins on Living Cells Using the Atomic Force Microscope. <b>2011</b> , 263-284	
835	Effects of contact surface shape on lifetime of cellular focal adhesion. <b>2011</b> , 6, 495-510	7
834	Slow dynamics and internal stress relaxation in bundled cytoskeletal networks. <b>2011</b> , 10, 236-42	115
833	New insights into the T cell synapse from single molecule techniques. <b>2011</b> , 11, 672-84	156
832	Mechanochemistry in thermomechanical processing of foods: kinetic aspects. <b>2011</b> , 76, R134-42	11
831	Interlaboratory round robin on cantilever calibration for AFM force spectroscopy. <b>2011</b> , 111, 1659-69	93
830	Quantitative analysis predicts the relative therapeutic efficacy of different forms of CTLA4Ig. <b>2011</b> , 49, 527-36	3
829	Adhesive particulate flow: The discrete-element method and its application in energy and environmental engineering. <b>2011</b> , 37, 633-668	166
828	Leukocyte rolling on engineered nanodot surfaces. <b>2011</b> , 6, 301	
827	Force spectroscopy 101: how to design, perform, and analyze an AFM-based single molecule force spectroscopy experiment. <b>2011</b> , 15, 710-8	63
826	Supramolecular Capsules Derived from Resorcin[4]arenes by H-Bonding and Metal Coordination: Synthesis, Characterization, and Single-Molecule Force Spectroscopy. <b>2011</b> , 51, 725-742	15
825	Antigen potency and maximal efficacy reveal a mechanism of efficient T cell activation. 2011, 4, ra39	53
824	Locating an extracellular K+-dependent interaction site that modulates betaine-binding of the Na+-coupled betaine symporter BetP. <b>2011</b> , 108, E890-8	26
823	Recognition properties of cucurbit[7]uril self-assembled monolayers studied with force spectroscopy. <b>2011</b> , 27, 11508-13	40
822	The resistance curve for subcritical cracks near the threshold. <b>2011</b> , 167, 147-155	4

821	Force fluctuation on pulling a ssDNA from a carbon nanotube. <b>2011</b> , 10, 221-7	4
820	Fast uncoiling kinetics of F1C pili expressed by uropathogenic Escherichia coli are revealed on a single pilus level using force-measuring optical tweezers. <b>2011</b> , 40, 305-16	24
819	The influence of topographic microstructures on the initial adhesion of L929 fibroblasts studied by single-cell force spectroscopy. <b>2011</b> , 40, 317-27	21
818	Integrin organization: linking adhesion ligand nanopatterns with altered cell responses. <b>2011</b> , 274, 120-30	30
817	Structural solution using molecular dynamics: Fundamentals and a case study of epoxy-silica interface. <b>2011</b> , 48, 2131-2140	96
816	Modeling of Cell Aggregation Dynamics Governed by Receptorligand Binding Under Shear Flow. <b>2011</b> , 4, 427-441	8
815	Advances in Experiments and Modeling in Micro- and Nano-Biomechanics: A Mini Review. <b>2011</b> , 4, 327-339	13
814	Desmosomal Hyperadhesion Is Accompanied with Enhanced Binding Strength of Desmoglein 3 Molecules. <b>2020</b> , 119, 1489-1500	3
813	Unfolding mechanism and free energy landscape of single, stable, alpha helices at low pull speeds. <b>2020</b> , 16, 9917-9928	4
812	The role of temperature in the rigidity-controlled fracture of elastic networks. <b>2020</b> , 16, 9975-9985	2
811	Influence of Binding Site Affinity Patterns on Binding of Multivalent Polymers. <b>2020</b> , 5, 10774-10781	2
810	Clot Permeability, Agonist Transport, and Platelet Binding Kinetics in Arterial Thrombosis. <b>2020</b> , 119, 2102-2115	4
809	Computational models of migration modes improve our understanding of metastasis. <b>2020</b> , 4, 041505	5
808	Ultrahigh Adhesion Force Between Silica-Binding Peptide SB7 and Glass Substrate Studied by Single-Molecule Force Spectroscopy and Molecular Dynamic Simulation. <b>2020</b> , 8, 600918	11
807	Dsg2 Upregulation as a Rescue Mechanism in Pemphigus. <b>2020</b> , 11, 581370	2
806	Atomic Force Microscopy-Based Force Spectroscopy and Multiparametric Imaging of Biomolecular and Cellular Systems. <b>2021</b> , 121, 11701-11725	24
805	Hidden Intermediate State and Second Pathway Determining Folding and Unfolding Dynamics of GB1 Protein at Low Forces. <b>2020</b> , 125, 198101	8
804	Unfolding Pathway of Proteins Predicted by Elastic Network Model. <b>2020</b> , 2, 235-241	O

803	Quantifying the Native Energetics Stabilizing Bacteriorhodopsin by Single-Molecule Force Spectroscopy. <b>2020</b> , 125, 068102	5
802	Effect of grafting density on local dynamics in functionalized polymer-grafted nanoparticle systems. <b>2020</b> , 43, 1	
801	Glassy Dynamics and Memory Effects in an Intrinsically Disordered Protein Construct. 2020, 125, 058001	9
800	Correcting molecular transition rates measured by single-molecule force spectroscopy for limited temporal resolution. <b>2020</b> , 102, 022402	3
799	Talin folding as the tuning fork of cellular mechanotransduction. <b>2020</b> , 117, 21346-21353	17
798	Polymer Stiffness Regulates Multivalent Binding and Liquid-Liquid Phase Separation. <b>2020</b> , 119, 1849-1864	3
797	Single molecule distribution of RhD binding epitopes on ultraflat erythrocyte ghosts. <b>2020</b> , 12, 22097-22106	
796	Stochastic resetting and the mean-field dynamics of focal adhesions. <b>2020</b> , 102, 022134	1
795	High Mechanical Stability and Slow Unfolding Rates Are Prevalent in Parallel-Stranded DNA G-Quadruplexes. <b>2020</b> , 11, 7966-7971	5
794	Nanomechanical Properties of a Supramolecular Helix Stabilized by Non-Covalent Interactions. <b>2020</b> , 41, e2000453	2
793	Application of Force to a Syndecan-4 Containing Complex With Thy-1-Integrin Accelerates Neurite Retraction. <b>2020</b> , 7, 582257	4
792	A Stochastic Modelling Framework for Single Cell Migration: Coupling Contractility and Focal Adhesions. <b>2020</b> , 12, 1348	
791	Influence of cell interaction forces on growth of bacterial biofilms. 2020, 32, 091902	5
790	Stick-slip model for actin-driven cell protrusions, cell polarization, and crawling. <b>2020</b> , 117, 24670-24678	9
789	High force catch bond mechanism of bacterial adhesion in the human gut. <b>2020</b> , 11, 4321	12
788	Molecular interaction and inhibition of SARS-CoV-2 binding to the ACE2 receptor. <b>2020</b> , 11, 4541	246
787	An Exactly Solvable Stochastic Kinetic Theory of Single-Molecule Force Experiments. <b>2020</b> , 124, 7735-7744	4
786	Fracture of Polymer Networks Containing Topological Defects. <b>2020</b> , 53, 7346-7355	15

## (2020-2020)

Detachment of human mesenchymal stem cells from a gold substrate using electric current. 2020, 785 13, 100866 Multicellular contractility contributes to the emergence of mesothelioma nodules. 2020, 10, 20114 784 Recent Advances and Prospects in the Research of Nascent Adhesions. 2020, 11, 574371 783 5 Impact of crosslink heterogeneity on extracellular matrix mechanics and remodeling. 2020, 18, 3969-3976 782 Wi-Fi Live-Streaming Centrifuge Force Microscope for Benchtop Single-Molecule Experiments. 781 1 2020. 119. 2231-2239 Effect of Loading Device in the Mechanical Force-Driven Biomolecular Bond Rupture Mechanism. 780 2020, 2, 252-256 Blue light-induced low mechanical stability of ruthenium-based coordination bonds: an AFM-based 2 779 single-molecule force spectroscopy study.. 2020, 10, 40543-40551 Unfolding compactly folded molecular domains: Overall stiffness modifies the force-barrier 3 relation. 2020, 758, 137924 Dynamics of Vesicles Driven Into Closed Constrictions by Molecular Motors. 2020, 82, 141 1 776 Effective behavior of cooperative and nonidentical molecular motors. 2020, 7, 1 State and Rate Dependent Contact Line Dynamics over an Aging Soft Surface. 2020, 124, 188003 775 3 Adhesion-stabilizing long-distance transport of cells on tissue surface. 2020, 101, 052410 774 Collective intracellular cargo transport by multiple kinesins on multiple microtubules. 2020, 101, 052413 773 5 Force and phosphate release from Arp2/3 complex promote dissociation of actin filament 772 12 branches. 2020, 117, 13519-13528 Ultra-stable Biomembrane Force Probe for Accurately Determining Slow Dissociation Kinetics of 7 771 PD-1 Blockade Antibodies on Single Living Cells. 2020, 20, 5133-5140 Investigation of the interaction between MeCP2 methyl-CpG binding domain and methylated DNA 77° by single molecule force spectroscopy. 2020, 1124, 52-59 The mechanochemistry of the kinesin-2 KIF3AC heterodimer is related to strain-dependent kinetic 769 2 properties of KIF3A and KIF3C. 2020, 117, 15632-15641 Single-Molecule Studies of Protein Folding with Optical Tweezers. 2020, 89, 443-470 768 51

767	Next Generation Methods for Single-Molecule Force Spectroscopy on Polyproteins and Receptor-Ligand Complexes. <b>2020</b> , 7, 85	26
766	Probing the recognition specificity of #Integrin and syndecan-4 using force spectroscopy. <b>2020</b> , 137, 102888	2
765	Modeling of Mechanosensing Mechanisms Reveals Distinct Cell Migration Modes to Emerge From Combinations of Substrate Stiffness and Adhesion Receptor-Ligand Affinity. <b>2020</b> , 8, 459	4
764	Rate-dependent force-extension models for single-molecule force spectroscopy experiments. <b>2020</b> , 17, 056002	4
763	Measuring and modelling mechanochemical reaction kinetics. <b>2020</b> , 56, 7730-7733	15
762	Cotranslational folding cooperativity of contiguous domains of Espectrin. <b>2020</b> , 117, 14119-14126	11
761	Calcium ions tune the beats of cilia and flagella. <b>2020</b> , 196, 104172	4
760	Fundamental Characteristics of Neuron Adhesion Revealed by Forced Peeling and Time-Dependent Healing. <b>2020</b> , 118, 1811-1819	8
759	Adhesion between P. falciparum infected erythrocytes and human endothelial receptors follows alternative binding dynamics under flow and febrile conditions. <b>2020</b> , 10, 4548	3
758	Native-state fingerprint on the ubiquitin translocation across a nanopore. <b>2020</b> , 101, 032401	1
757	Predicting Confined 1D Cell Migration from Parameters Calibrated to a 2D Motor-Clutch Model. <b>2020</b> , 118, 1709-1720	9
756	Unfolding force definition and the unified model for the mean unfolding force dependence on the loading rate. <b>2020</b> , 2020, 033201	O
755	Soft mechano-chemistry of molecular hubs in mitotic spindle: biomechanics and mechanical proofreading at microtubule ends. <b>2020</b> , 32, 284001	1
754	Environment-dependent single-chain mechanics of synthetic polymers and biomacromolecules by atomic force microscopy-based single-molecule force spectroscopy and the implications for advanced polymer materials. <b>2020</b> , 49, 2799-2827	40
753	Simulation Study of Process-Controlled Supramolecular Block Copolymer Phase Separation with Reversible Reaction Algorithm. <b>2020</b> , 12,	
75 <sup>2</sup>	The bioenergetics of integrin-based adhesion, from single molecule dynamics to stability of macromolecular complexes. <b>2020</b> , 18, 393-416	6
75 <sup>1</sup>	Mechanical Unfolding of Single Polyubiquitin Molecules Reveals Evidence of Dynamic Disorder. <b>2020</b> , 5, 9104-9113	3
750	Harnessing biomimetic cryptic bonds to form self-reinforcing gels. <b>2020</b> , 16, 5120-5131	3

## (2020-2020)

749	Selectins-The Two Dr. Jekyll and Mr. Hyde Faces of Adhesion Molecules-A Review. <b>2020</b> , 25,	19
748	A QCM-based rupture event scanning technique as a simple and reliable approach to study the kinetics of DNA duplex dissociation. <b>2020</b> , 12, 3771-3777	1
747	On the interpretation of kinetics and thermodynamics probed by single-molecule experiments. <b>2020</b> , 298, 819-827	
746	In vitro analysis of the trajectories of adhesive microbubbles approaching endothelial cells. <b>2020</b> , 578, 758-767	2
745	A mechano-chemo-biological model for bone remodeling with a new mechano-chemo-transduction approach. <b>2020</b> , 19, 2499-2523	8
744	Stretching and heating cells with lightBonlinear photothermal cell rheology. <b>2020</b> , 22, 085003	2
743	Detection of single DNA mismatches by force spectroscopy in short DNA hairpins. <b>2020</b> , 152, 074204	5
742	Characterizing the Locus of a Peripheral Membrane Protein-Lipid Bilayer Interaction Underlying Protein Export Activity in. <b>2020</b> , 36, 2143-2152	3
741	Advances in molecular simulations of protein mechanical properties and function. <b>2020</b> , 61, 132-138	11
740	Functional binding of E-selectin to its ligands is enhanced by structural features beyond its lectin domain. <b>2020</b> , 295, 3719-3733	7
739	Mechanical Model for Catch-Bond-Mediated Cell Adhesion in Shear Flow. <b>2020</b> , 21,	2
738	Mechanomicrobiology: how bacteria sense and respond to forces. <b>2020</b> , 18, 227-240	81
737	Shape effects in biological adhesion of ellipsoidal cells. <b>2020</b> , 31, 01002	
736	Constitutive behaviors of tough physical hydrogels with dynamic metal-coordinated bonds. <b>2020</b> , 139, 103935	24
735	The generic unfolding of a biomimetic polymer during force spectroscopy. <b>2020</b> , 16, 3941-3951	Ο
734	Theoretical perspectives on biological machines. <b>2020</b> , 92,	34
733	Force production of human cytoplasmic dynein is limited by its processivity. 2020, 6, eaaz4295	11
732	Ankyrin Is An Intracellular Tether for TMC Mechanotransduction Channels. <b>2020</b> , 107, 112-125.e10	14

731	First-order 'hyper-selective' binding transition of multivalent particles under force. <b>2020</b> , 32, 214002	5
730	Protein mechanics probed using simple molecular models. <b>2020</b> , 1864, 129613	3
729	Force-dependent folding pathways in mechanically interlocked calixarene dimers via atomistic force quench simulations. <b>2020</b> , 118, e1743886	
728	Molecular engineering of metal coordination interactions for strong, tough, and fast-recovery hydrogels. <b>2020</b> , 6, eaaz9531	41
727	Electro-chemo-mechanical model to investigate multi-pulse electric-field-driven integrin clustering. <b>2021</b> , 137, 107638	1
726	Engineered Microsystems for Spheroid and Organoid Studies. <b>2021</b> , 10, e2001284	18
725	Towards a Quantitative Understanding of Protein-Lipid Bilayer Interactions at the Single Molecule Level: Opportunities and Challenges. <b>2021</b> , 254, 17-28	1
724	Cell aggregation on nanorough surfaces. <b>2021</b> , 115, 110134	3
723	A quantitative view on multivalent nanomedicine targeting. <b>2021</b> , 169, 1-21	15
722	Protein folding modulates the chemical reactivity of a Gram-positive adhesin. <b>2021</b> , 13, 172-181	14
721	Unraveling the Friction Evolution Mechanism of Diamond-Like Carbon Film during Nanoscale Running-In Process toward Superlubricity. <b>2021</b> , 17, e2005607	6
720	Detailed Balance Broken by Catch Bond Kinetics Enables Mechanical-Adaptation in Active Materials. <b>2021</b> , 31, 2006745	3
719	Distal conformational locks on ferrocene mechanophores guide reaction pathways for increased mechanochemical reactivity. <b>2021</b> , 13, 56-62	25
718	Does protein unfolding play a functional role in vivo?. <b>2021</b> , 288, 1742-1758	3
717	Multiscale mechanics and temporal evolution of vimentin intermediate filament networks.	
716	Magnetic tweezers meets AFM: ultra-stable protein dynamics across the force spectrum.	3
715	Practical Guide to Single-Protein AFM Nanomechanical Spectroscopy Mapping: Insights and Pitfalls As Unraveled by All-Atom MD Simulations on Immunoglobulin G. <b>2021</b> , 6, 553-564	1
714	Mechanical Stretch Inhibition Sensitizes Proprioceptors to Compressive Stresses.	О

713	Burnt bridge ratchet motor force scales linearly with polyvalency: a computational study. <b>2021</b> , 17, 6056-6062	1
712	Surface chemistry at the solid-solid interface: mechanically induced reaction pathways of C carboxylic acid monolayers on copper. <b>2021</b> , 23, 17803-17812	2
711	Effects of domain unfolding and catch-like dissociation on the collective behavior of integrinfibronectin bond clusters. <b>2021</b> , 37, 229-243	2
710	Transient mechanical interactions between cells and viscoelastic extracellular matrix. <b>2021</b> , 17, 10274-10285	2
709	Regulation of SMC traction forces in human aortic thoracic aneurysms. <b>2021</b> , 20, 717-731	O
708	Role of Ligand Binding Site in Modulating the Mechanical Stability of Proteins with 眨rasp Fold. <b>2021</b> , 125, 1009-1019	2
707	Barnes Update Applied in the Gauss-Newton Method: An Improved Algorithm to Locate Bond Breaking Points. <b>2021</b> , 17, 996-1007	1
706	Acceleration of tissue maturation by mechanotransduction-based bioprinting. 2021, 3,	1
705	Physical 'strength' of the multi-protein chain connecting immune cells: Does the weakest link limit antibody affinity maturation?: The weakest link in the multi-protein chain facilitating antigen acquisition by B cells in germinal centres limits antibody affinity maturation. <b>2021</b> , 43, e2000159	1
704	Preliminaries. <b>2021</b> , 13-29	
703	Complexity in genetic cardiomyopathies and new approaches for mechanism-based precision medicine. <b>2021</b> , 153,	7
702	Molecular origins of reduced activity and binding commitment of processive cellulases and associated carbohydrate-binding proteins to cellulose III. <b>2021</b> , 296, 100431	2
701	A network model of transient polymers: exploring the micromechanics of nonlinear viscoelasticity. <b>2021</b> , 17, 8742-8757	3
700	Transition-metal coordinate bonds for bioinspired macromolecules with tunable mechanical properties. <b>2021</b> , 6, 421-436	37
699	Kinetic properties of bio-molecules by different noises in the two-dimensional free-energy model. <b>2021</b> , 11, 025318	2
698	Low Force Unfolding of a Single-Domain Protein by Parallel Pathways. <b>2021</b> , 125, 1799-1805	2
697	Identical Sequences, Different Behaviors: Protein Diversity Captured at the Single-Molecule Level.	1
696	Single-molecule force spectroscopy reveals the dynamic strength of the hair-cell tip-link connection. <b>2021</b> , 12, 849	8

695	Mechanical regulation of tension-transmission supramolecular linkages. <b>2021</b> , 25, 100895	1
694	Time-dependent response of bio-polymer networks regulated by catch and slip bond-like kinetics of cross-linkers. <b>2021</b> , 147, 104267	O
693	Numerical simulation of the viral entry into a cell driven by receptor diffusion. 2021, 84, 224-243	О
692	Membrane fusion studied by colloidal probes. <b>2021</b> , 50, 223-237	O
691	The cancer glycocalyx mediates intravascular adhesion and extravasation during metastatic dissemination. <b>2021</b> , 4, 255	12
690	A microstructure-based constitutive model of anisotropic cellulose nanopaper with aligned nanofibers. <b>2021</b> , 43, 101158	4
689	Physical Origin of the Mechanochemical Coupling at Interfaces. <b>2021</b> , 126, 076001	2
688	Protein Friction and Filament Bending Facilitate Contraction of Disordered Actomyosin Networks.	O
687	Energy Landscape of Ubiquitin is Weakly Multidimensional.	
686	Optimizing mechanostable anchor points of engineered lipocalin in complex with CTLA-4.	
686 685	Optimizing mechanostable anchor points of engineered lipocalin in complex with CTLA-4.  Affinity selection in germinal centers: Cautionary tales and new opportunities.	
		7
685	Affinity selection in germinal centers: Cautionary tales and new opportunities.	7
685 684	Affinity selection in germinal centers: Cautionary tales and new opportunities.  Holding it together: when cadherin meets cadherin. 2021, 120, 4182-4192  Nanomechanical mechanisms of Lyme disease spirochete motility enhancement in extracellular	
685 684 683	Affinity selection in germinal centers: Cautionary tales and new opportunities.  Holding it together: when cadherin meets cadherin. 2021, 120, 4182-4192  Nanomechanical mechanisms of Lyme disease spirochete motility enhancement in extracellular matrix. 2021, 4, 268	2
685 684 683	Affinity selection in germinal centers: Cautionary tales and new opportunities.  Holding it together: when cadherin meets cadherin. 2021, 120, 4182-4192  Nanomechanical mechanisms of Lyme disease spirochete motility enhancement in extracellular matrix. 2021, 4, 268  Aptamer-Based Detection of Circulating Targets for Precision Medicine. 2021, 121, 12035-12105  Mobility of Alpha-Actinin Along Growing Actin Filaments Might Affect the Cellular Chirality. 2021,	2
685 684 683 682	Affinity selection in germinal centers: Cautionary tales and new opportunities.  Holding it together: when cadherin meets cadherin. 2021, 120, 4182-4192  Nanomechanical mechanisms of Lyme disease spirochete motility enhancement in extracellular matrix. 2021, 4, 268  Aptamer-Based Detection of Circulating Targets for Precision Medicine. 2021, 121, 12035-12105  Mobility of Alpha-Actinin Along Growing Actin Filaments Might Affect the Cellular Chirality. 2021, 88,  Oncogenic mutations on Rac1 affect global intrinsic dynamics underlying GTP and PAK1 binding.	2 61 0

677	Stretching of Silk Protein in Flow. <b>2021</b> , 26,	3
676	A Hotspot's Better Half: Non-Equilibrium Intra-Molecular Strain in Shock Physics. <b>2021</b> , 12, 2756-2762	7
675	Pre-complexation of talin and vinculin without tension is required for efficient nascent adhesion maturation. <b>2021</b> , 10,	13
674	Type III secretion system effector proteins are mechanically labile. 2021, 118,	4
673	The synergic role of actomyosin architecture and biased detachment in muscle energetics: insights in cross bridge mechanism beyond the lever-arm swing.	
672	How accurately do mechanophores report on bond scission in soft polymer materials?. <b>2021</b> , 59, 1188-1199	4
671	Computational models of cancer cell transport through the microcirculation. <b>2021</b> , 20, 1209-1230	2
670	Free-energy changes of bacteriorhodopsin point mutants measured by single-molecule force spectroscopy. <b>2021</b> , 118,	7
669	Modulation of a protein-folding landscape revealed by AFM-based force spectroscopy notwithstanding instrumental limitations. <b>2021</b> , 118,	4
668	Force probe simulations using an adaptive resolution scheme. <b>2021</b> , 33,	О
667	Force-velocity and tension transient measurements from Drosophila jump muscle reveal the necessity of both weakly-bound cross-bridges and series elasticity in models of muscle contraction. <b>2021</b> , 701, 108809	2
666	Computational Models and Simulations of Cancer Metastasis. <b>2021</b> , 28, 4837	6
665	Salt-induced first-order structural transition in a DNA-interacting protein.	
664	Can active hydrodynamic fluctuations affect barrier crossing during enzymatic catalysis?.	
663	Crystallization of Active Emulsion. <b>2021</b> , 37, 5691-5698	2
662	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. <b>2021</b> , 121, 4309-4372	145
661	Equilibrium folding and unfolding dynamics reveals detailed free energy landscape of src SH3 protein by magnetic tweezers.	1
660	Long-Range Cooperative Disassembly and Aging During Adenovirus Uncoating. <b>2021</b> , 11,	2

659	Force-FAK signaling coupling at individual focal adhesions coordinates mechanosensing and microtissue repair. <b>2021</b> , 12, 2359	10
658	Adhesive rolling of nanoparticles in a lateral flow inspired from diagnostics of COVID-19. <b>2021</b> , 44, 101239	
657	Interplay Between Receptor-Ligand Binding and Lipid Domain Formation Depends on the Mobility of Ligands in Cell-Substrate Adhesion. <b>2021</b> , 8, 655662	2
656	Identification of lectin receptors for conserved SARS-CoV-2 glycosylation sites.	4
655	Activation of von Willebrand factor via mechanical unfolding of its discontinuous autoinhibitory module. <b>2021</b> , 12, 2360	6
654	Affinity Selection in Germinal Centers: Cautionary Tales and New Opportunities. 2021, 10,	2
653	Sticky Rouse Time Features the Self-Adhesion of Supramolecular Polymer Networks. <b>2021</b> , 54, 5053-5064	2
652	Chemomechanical Simulation of Microtubule Dynamics With Explicit Lateral Bond Dynamics. <b>2021</b> , 9,	O
651	Modeling Local Oscillatory Shear Dynamics of Functionalized Polymer Grafted Nanoparticles. <b>2021</b> , 30, 2100005	1
650	A micromechanics-based model for deformation-induced damage and failure in elastomeric media. <b>2021</b> , 140, 102976	11
649	Molecular simulation-guided and physics-informed mechanistic modeling of multifunctional polymers. <b>2021</b> , 37, 725-745	1
648	Modeling cells spreading, motility, and receptors dynamics: a general framework. <b>2021</b> , 37, 1013	1
647	Mechanobiology of shear-induced platelet aggregation leading to occlusive arterial thrombosis: A multiscale in silico analysis. <b>2021</b> , 120, 110349	5
646	Single molecule characterization of the binding kinetics of a transcription factor and its modulation by DNA sequence and methylation.	1
645	Modeling the Mechanical Response of Microtubule Lattices to Pressure. <b>2021</b> , 125, 5009-5021	2
644	Modeling mechanochemical pattern formation in elastic sheets of biological matter. <b>2021</b> , 44, 82	O
643	Super Stretchable and Compressible Hydrogels Inspired by Hook-and-Loop Fasteners. <b>2021</b> , 37, 7760-7770	4
642	The Synergic Role of Actomyosin Architecture and Biased Detachment in Muscle Energetics: Insights in Cross Bridge Mechanism Beyond the Lever-Arm Swing. <b>2021</b> , 22,	O

641 Counterdiabatic control of biophysical processes.

640	Mechanical Forces Have a Range of Effects on the Rate of Ribosome Catalyzed Peptidyl Transfer Depending on Direction. <b>2021</b> , 125, 7128-7136	1
639	Nanomechanical Phenotypes in Cardiac Myosin-Binding Protein C Mutants That Cause Hypertrophic Cardiomyopathy. <b>2021</b> , 15, 10203-10216	8
638	Force transduction creates long-ranged coupling in ribosomes stalled by arrest peptides. <b>2021</b> , 120, 2425-2	<b>435</b> 0
637	Shear-driven rolling of DNA-adhesive microspheres. <b>2021</b> , 120, 2102-2111	2
636	Computational investigation of platelet thrombus mechanics and stability in stenotic channels. <b>2021</b> , 122, 110398	1
635	The concept of substituent-induced force in the rationale of substituent effect. <b>2021</b> , 154, 224106	0
634	Rheology and Pinching Dynamics of Associative Polysaccharide Solutions. <b>2021</b> , 54, 6372-6388	8
633	Mechanical diversity and folding intermediates of parallel-stranded G-quadruplexes with a bulge. <b>2021</b> , 49, 7179-7188	2
632	Multiscale mechanics and temporal evolution of vimentin intermediate filament networks. <b>2021</b> , 118,	3
631	Surface Chemistry at the Solid-Solid Interface; Selectivity and Activity in Mechanochemical Reactions on Surfaces. <b>2021</b> , 1, 340-349	1
630	Optical manipulation: advances for biophotonics in the 21st century. <b>2021</b> , 26,	6
629	Dependence of Work on the Pulling Speed in Mechanical Ligand Unbinding. 2021, 125, 8325-8330	0
628	Anisotropy in mechanical unfolding of protein upon partner-assisted pulling and handle-assisted pulling. <b>2021</b> , 4, 925	O
627	Mechanobiology of T Cell Activation: To Catch a Bond. <b>2021</b> , 37, 65-87	3
626	Modeling Fracture in Rate-Dependent Polymer Networks: A Quasicontinuum Approach. <b>2021</b> , 88,	O
625	Predicting the yield stress of oil-wax gels with long-chained n-alkanes. <b>2021</b> , 208, 109238	3
624	The human neuronal receptor NgR1 bridges reovirus capsid proteins to initiate infection.	

623	Simulation of Potential-Dependent Activation Energies in Electrocatalysis: Mechanism of OD Bond Formation on RuO2. <b>2021</b> , 125, 15243-15250	7
622	Interactions of platelets with circulating tumor cells contribute to cancer metastasis. 2021, 11, 15477	10
621	Inside-out regulation of E-cadherin conformation and adhesion. 2021, 118,	3
620	Ab initio molecular dynamics modeling of single polyethylene chains: Scission kinetics and influence of radical under mechanical strain. <b>2021</b> , 155, 024102	1
619	Biophysical reviews top five: atomic force microscopy in biophysics. <b>2021</b> , 13, 455-458	О
618	Energy Landscape of Ubiquitin Is Weakly Multidimensional. <b>2021</b> , 125, 8682-8689	2
617	Fatigue-induced stress-softening in cross-linked multi-network elastomers: Effect of damage accumulation. <b>2021</b> , 142, 102993	10
616	A Tethered Ligand Assay to Probe SARS-CoV-2:ACE2 Interactions.	
615	Functionalized supported membranes for quantifying adhesion of P. falciparum-infected erythrocytes. <b>2021</b> , 120, 3315-3328	2
614	A chemo-mechano-thermodynamical contact theory for adhesion, friction, and (de)bonding reactions. 108128652110327	
613	The MIDAS domain of AAA mechanoenzyme Mdn1 forms catch bonds with two different substrates.	
612	A mechanistic systems pharmacology modeling platform to investigate the effect of PD-L1 expression heterogeneity and dynamics on the efficacy of PD-1 and PD-L1 blocking antibodies in cancer. <b>2021</b> , 522, 110697	
611	Single-molecule force spectroscopy reveals structural differences of heparan sulfate chains during binding to vitronectin. <b>2021</b> , 104, 024409	1
610	The Mammalian Membrane Microenvironment Regulates the Sequential Attachment of Bacteria to Host Cells. <b>2021</b> , 12, e0139221	2
609	Single-molecule mechanical folding and unfolding kinetics of armless mitochondrial tRNAArg from Romanomermis culicivorax.	
608	Mechanical Behavior of Axonal Actin, Spectrin, and Their Periodic Structure: A Brief Review. 1	O
607	Protein nanomechanics in biological context. <b>2021</b> , 13, 435-454	1
606	Qualitative Description of Detachment Forces for Macromolecules. <b>2021</b> , 54, 7377-7387	1

605	Neuromechanobiology: An Expanding Field Driven by the Force of Greater Focus. 2021, 10, e2100102	2
604	Mechanical activation of spike fosters SARS-CoV-2 viral infection. <b>2021</b> , 31, 1047-1060	4
603	Simulation of protein pulling dynamics on second time scale with boxed molecular dynamics. <b>2021</b> , 155, 085101	1
602	Identification of lectin receptors for conserved SARS-CoV-2 glycosylation sites. <b>2021</b> , 40, e108375	10
601	Cis-interaction of ligands on a supported lipid bilayer affects their binding to cell adhesion receptors. <b>2021</b> , 64, 1	0
600	Cell-cell contact landscapes in gastrula tissues. <b>2021</b> , 118,	2
599	Defective Desmosomal Adhesion Causes Arrhythmogenic Cardiomyopathy by involving an Integrin-V事/TGF-路ignaling Cascade.	
598	Criticality in Cell Adhesion. <b>2021</b> , 11,	О
597	Temperature controlled decohesion regimes of an elastic chain adhering to a fixed substrate by softening and breakable bonds.	1
596	Synergistic Regulation Mechanism of Selectin and Integrin on Leukocyte Adhesion Under Shear Flow. <b>2022</b> , 89,	О
595	Boron nitride nanosheet as a promising reinforcement for cementitious composites. <b>2021</b> , 572, 151395	3
594	Calculating the force-dependent unbinding rate of biological macromolecular bonds from the force-ramp optical trapping assays.	
593	Mechanics of microtubule organizing center clustering and spindle positioning in budding yeast Cryptococcus neoformans. <b>2021</b> , 104, 034402	2
592	Biophysical characterization of lynx-nicotinic receptor interactions using atomic force microscopy <b>2021</b> , 3, 1034-1042	O
591	Mean field fracture in disordered solids: Statistics of fluctuations. <b>2021</b> , 104646	0
590	An asymmetric mechanical code ciphers curvature-dependent proprioceptor activity. <b>2021</b> , 7, eabg4617	4
589	A model for equilibrium swelling of the upper critical solution temperature type thermoresponsive hydrogels.	0
588	Protein friction and filament bending facilitate contraction of disordered actomyosin networks. <b>2021</b> , 120, 4029-4040	O

587	A Transient Microsphere Model for nonlinear viscoelasticity in dynamic polymer networks. 1-15	0
586	A Framework of Paracellular Transport via Nanoparticles-Induced Endothelial Leakiness. <b>2021</b> , 8, e2102519	5
585	Interfacial welding and reprocessing of engineering thermosets based on surface depolymerization. <b>2021</b> , 26, 101368	2
5 <sup>8</sup> 4	Nanoscale dry friction: Dependence on load and sliding velocity. <b>2021</b> , 162, 107133	4
583	Chain breaking in the statistical mechanical constitutive theory of polymer networks. <b>2021</b> , 156, 104593	1
582	The biophysics of bacterial infections: Adhesion events in the light of force spectroscopy. <b>2021</b> , 7, 100048	2
581	An investigation of tribochemical reaction kinetics from the perspective of tribo-oxidation. <b>2022</b> , 165, 107289	2
580	Evaluating the single-molecule interactions between targeted peptides and the receptors on living cell membrane. <b>2021</b> , 13, 17318-17324	O
579	A multiscale study on the mechanisms of spatial organization in ligand-receptor interactions on cell surfaces. <b>2021</b> , 19, 1620-1634	2
578	Motility-induced fracture reveals a ductile-to-brittle crossover in a simple animal epithelia. <b>2021</b> , 17, 504-511	11
577	Self-strengthening biphasic nanoparticle assemblies with intrinsic catch bonds. <b>2021</b> , 12, 85	2
576	Mechanophores in polymer mechanochemistry: Insights from single-molecule experiments and computer simulations. <b>2021</b> , 113-139	
575	Cellular Pushing Forces during Mitosis Drive Mitotic Elongation in Collagen Gels. 2021, 8, 2000403	3
574	Biofriendly molecular and protein release substrate with integrated piezoelectric motivation and anti-oxidative stress capabilities. <b>2021</b> , 13, 8481-8489	2
573	Single molecule characterization of the binding kinetics of a transcription factor and its modulation by DNA sequence and methylation. <b>2021</b> , 49, 10975-10987	1
572	Single-Molecule Force Spectroscopy. 157-187	1
571	Molecular Recognition Force Microscopy. <b>2005</b> , 283-312	2
570	Carbohydrate-Carbohydrate Interactions in Biological and Model Systems. <b>2002</b> , 45-92	63

569	Studies of DNA-Protein Interactions at the Single Molecule Level with Magnetic Tweezers. 2007, 123-140	1
568	Encyclopedia of Complexity and Systems Science. <b>2009</b> , 7026-7051	6
567	Hierarchical Nanomechanics of Collagen Fibrils: Atomistic and Molecular Modeling. 2008, 175-247	3
566	Single-Molecule Manipulation Using Optical Traps. <b>2009</b> , 341	1
565	Probing the Energy Landscape of Protein-Binding Reactions by Dynamic Force Spectroscopy. <b>2009</b> , 407	5
564	Atomic Force Microscopy of Protein <b>B</b> rotein Interactions. <b>2009</b> , 555	10
563	Atomic Force Microscopy Methods for Characterizing Protein Interactions with Microphase-Separated Polyurethane Biomaterials. <b>2009</b> , 43-67	1
562	Microbial Attachment to Plant Aerial Surfaces. <b>1996</b> , 43-57	8
561	Specific Nucleic Acid Chaperone Activity of HIV-1 Nucleocapsid Protein Deduced from Hairpin Unfolding. <b>2020</b> , 2106, 59-88	1
560	Systems nanobiology: from quantitative single molecule biophysics to microfluidic-based single cell analysis. <b>2007</b> , 43, 301-21	9
559	Nanopore Force Spectroscopy: Insights from Molecular Dynamics Simulations. 2011, 335-356	1
558	Molecular Motors: Cooperative Phenomena of Multiple Molecular Motors. <b>2015</b> , 27-61	10
557	Destruction of Tumor Cells by Macrophages: Mechanisms of Recognition and Lysis and Their Regulation. <b>1986</b> , 69-122	9
556	Initial Steps of Cell-Substrate Adhesion. <b>1994</b> , 145-159	5
555	Receptor-Mediated Adhesive Interactions at the Cytoskeleton/Substratum Interface During Cell Migration. <b>1994</b> , 490-514	1
554	Catch Bonds of Integrin/Ligand Interactions. <b>2012</b> , 77-96	1
553	Single-Molecule Studies of Amyloidogenic Proteins. <b>2012</b> , 169-210	1
552	Individual Proteins Under Mechanical Stress: Lessons from Theory and Computer Simulations. <b>2012</b> , 235-268	6

551	In Vitro Flow Models of Leukocyte Adhesion. <b>2001</b> , 204-221	3
550	Mechanical manipulation of single titin molecules with laser tweezers. <b>2000</b> , 481, 111-26; discussion 127-8	21
549	The Regulation of Cell Behavior by Cell Adhesion. <b>1980</b> , 339-376	9
548	Intercellular Collisions and Their Effect on Microcirculatory Transport. <b>1992</b> , 41-63	1
547	Measurement of intercellular cohesion by tissue surface tensiometry. <b>2015</b> , 1189, 237-54	2
546	Force-clamp measurements of receptor-ligand interactions. <b>2011</b> , 736, 331-53	3
545	Biophysical methods to probe claudin-mediated adhesion at the cellular and molecular level. <b>2011</b> , 762, 77-89	2
544	Method for measuring single-molecule adhesion forces and attachment lifetimes of protein-membrane interactions. <b>2013</b> , 1046, 389-403	6
543	Advanced Particle-Based Techniques for Complex Fluids and Multiscale Flow Processes. <b>2020</b> , 361-392	2
542	Work Fluctuations, Transient Violations of the Second Law and Free-Energy Recovery Methods: Perspectives in Theory and Experiments. <b>2004</b> , 193-226	4
541	Stochastic Modeling and Rate Theory of Atomic Friction. <b>2015</b> , 115-137	1
540	Multiscale Modeling of Blood Flow-Mediated Platelet Thrombosis. <b>2020</b> , 2667-2698	2
539	Single-Molecule Studies on Cells and Membranes Using the Atomic Force Microscope. <b>2007</b> , 101-125	1
538	Atomic Force Microscopy Studies of the Mechanical Properties of Living Cells. 2008, 89-109	1
537	Application of Atomic Force Microscopy to the Study of Expressed Molecules in or on a Single Living Cell. <b>2008</b> , 149-175	1
536	Multiscale analysis of T cell activation: correlating in vitro and in vivo analysis of the immunological synapse. <b>2009</b> , 334, 47-70	7
535	Atomic Force Microscopy Studies of the Mechanical Properties of Living Cells. <b>2010</b> , 533-553	1
534	Molecular Recognition Force Microscopy: From Molecular Bonds to Complex Energy Landscapes. <b>2010</b> , 763-785	2

533	Cellular Nanomechanics. <b>2010</b> , 1171-1200	12
532	Force-Clamp Spectroscopy of Single Proteins. <b>2010</b> , 317-335	6
531	Unraveling the Secrets of Bacterial Adhesion Organelles Using Single-Molecule Force Spectroscopy. <b>2010</b> , 337-362	7
530	Force-Extension and Force-Clamp AFM Spectroscopies in Investigating Mechanochemical Reactions and Mechanical Properties of Single Biomolecules. <b>2010</b> , 395-423	4
529	Theoretical Models for the Specific Adhesion of Cells to Cells or to Surfaces. <b>1980</b> , 367-376	2
528	Bildung und Erhaltung von Zell- und Organstrukturen. <b>1980</b> , 391-528	1
527	Adhesion and Traction Forces in Migration: Insights From Mathematical Models and Experiments. <b>1994</b> , 329-368	2
526	Analysis of the Motion of Cells Driven Along an Adhesive Surface by a Laminar Shear Flow. <b>1994</b> , 157-173	2
525	Bridging the Gap Between Single-Molecule Unbinding Properties and Macromolecular Rheology. <b>2017</b> , 3-37	1
524	Background to Adhesion of Cells, Viruses and Nanoparticles. <b>2010</b> , 3-20	2
523	A Theoretical Study of the Thermodynamics and Kinetics of Focal Adhesion Dynamics. <b>2010</b> , 181-192	1
522	Tension-Induced Growth of Focal Adhesions at CellBubstrate Interface. <b>2010</b> , 193-201	1
521	The Role of the Actin Cytoskeleton in Mechanosensation. <b>2010</b> , 25-65	1
520	Atomic force microscopy to study intermolecular forces and bonds associated with bacteria. <b>2011</b> , 715, 285-99	15
519	A Process-Algebra Model of the Cell Mechanics of Autoreactive Lymphocytes Recruitment. <b>2012</b> , 311-333	1
518	Physical Aspects of Adhesion of Leukocytes. <b>1996</b> , 61-101	2
517	Ligand Binding under RF EM Exposure. <b>2000</b> , 429-447	1
516	Micro-Nano Coupling in Biological Systems. <b>2003</b> , 167-204	O

515	Regulation of Nerve Fiber Elongation during Embryogenesis. <b>1986</b> , 33-71	4
514	Single molecule measurements of titin elasticity. <b>2001</b> , 1-44	1
513	Fertilization Biophysics. <b>2002</b> , 387-399	2
512	Mechanics of Fluid-Filled Interstitial Gaps. II. Gap Characteristics in Xenopus Embryonic Ectoderm. <b>2017</b> , 113, 923-936	5
511	Use of loading devices with low stiffness may cause uncertainty in measuring the strength of cellular adhesion. <b>2020</b> , 142, 103970	1
510	INTERACTIONS BETWEEN NEUTRAL PHOSPHOLIPID BILAYER MEMBRANES. 1982, 37, 657-665	656
509	The role of concanavalin A dissociation on positive cooperativity of binding with native and fixed erythrocytes <b>1979</b> , 254, 1932-1937	14
508	Isolation and characterization of a receptor for type 1 fimbriae of Escherichia coli from guinea pig erythrocytes <b>1988</b> , 263, 5362-5367	43
507	Monoclonal antibody covalently coupled with fatty acid. A reagent for in vitro liposome targeting <b>1980</b> , 255, 8015-8018	130
506	Cell Surface Models on Polymer Supports From Artificial Membranes to Native Cells. <b>2005</b> , 2, 95-120	1
505	Biological Physics of the Developing Embryo. <b>2005</b> ,	182
504	Maleimide-thiol adducts stabilized through stretching. <b>2019</b> , 11, 310-319	90
503	Mechanically tightening, untying and retying a protein trefoil knot by single-molecule force spectroscopy. <b>2020</b> , 11, 12512-12521	6
502	The extracellular matrix-myosin pathway in mechanotransduction: from molecule to tissue. <b>2018</b> , 2, 727-737	4
501	Stepwise unfolding of titin under force-clamp atomic force microscopy. <b>2001</b> , 98, 468-72	192
500	Energetic dependencies dictate folding mechanism in a complex protein. <b>2019</b> , 116, 25641-25648	17
499	Biological physics by high-speed atomic force microscopy. <b>2020</b> , 378, 20190604	10

497	A space-jump derivation for non-local models of cell-cell adhesion and non-local chemotaxis.	1
496	Non-Elastic Remodeling of the 3D Extracellular Matrix by Cell-Generated Forces.	2
495	High Force Catch Bond Mechanism of Bacterial Adhesion in the Human Gut.	1
494	Disordered Proteins Enable Histone Chaperoning on the Nucleosome.	5
493	Glycocalyx-Mediated Vascular Dissemination of Circulating Tumor Cells.	7
492	Inside-out regulation of E-cadherin conformation and adhesion.	1
491	Stick-Slip model for actin-driven cell protrusions, cell polarisation and crawling.	О
490	Real-Time Microfluidics-Magnetic Tweezers connects conformational stiffness with energy landscape by a single experiment.	3
489	On the molecular mechanism of SARS-CoV-2 retention in the upper respiratory tract. <b>2020</b> ,	1
488	A Tethered Ligand Assay to Probe the SARS-CoV-2 ACE2 Interaction under Constant Force.	4
487	Ribosome exit tunnel electrostatics.	2
486	The membrane microenvironment regulates the sequential attachment of bacteria to host cells.	1
485	Rapid assembly of a polar network architecture drives efficient actomyosin contractility.	1
484	Monomeric streptavidin: a versatile regenerative handle for force spectroscopy.	5
483	Positive Cardiac Inotrope, Omecamtiv Mecarbil, Activates Muscle Despite Suppressing the Myosin Working Stroke.	2
482	Glioma cell migration in confined microchannels via a motor-clutch mechanism.	2
481	The axonal actin-spectrin lattice acts as a tension buffering shock absorber.	4
480	Motility induced fracture reveals a ductile to brittle crossover in the epithelial tissues of a simple animal.	3

479	Talin-vinculin precomplex drives adhesion maturation by accelerated force transmission and vinculin recruitment.	7
478	Direct Observation of a Coil-to-Helix Contraction Triggered by Vinculin Binding to Talin.	1
477	Protein folding modulates the adhesion strategy of Gram positive pathogens.	2
476	The Dynamic Strength of the Hair-Cell Tip Link Reveals Mechanisms of Hearing and Deafness.	3
475	Molecular anisotropy and rearrangement as mechanisms of toughness and extensibility in entangled physical gels. <b>2020</b> , 4,	8
474	Role of temperature in the decohesion of an elastic chain tethered to a substrate by onsite breakable links. <b>2020</b> , 2,	7
473	Stability of heterogeneous parallel-bond adhesion clusters under load. <b>2020</b> , 2,	O
472	Switching Cellular Swirling Upon One-Way Torsional Drive. <b>2020</b> , 87,	O
471	Nonlinear Elastic and Inelastic Properties of Cells. <b>2020</b> , 142,	6
470	A method for tethering single viral particles for virus-cell interaction studies with optical tweezers. <b>2018</b> , 10723,	2
469	Direct observation of a coil-to-helix contraction triggered by vinculin binding to talin. <b>2020</b> , 6, eaaz4707	21
468	RNA structure. Pulling on hair(pins). Science, 2001, 292, 653-4	20
467	Quantitation of the adherence of an enteropathogenic Escherichia coli to isolated rabbit intestinal brush borders. <b>1979</b> , 26, 736-43	30
466	Kinetic and chemical analyses of the biologic significance of lipoteichoic acids in mediating adherence of serotype III group B streptococci. <b>1985</b> , 50, 107-15	31
465	Fibrinogen-binding protein/clumping factor from Staphylococcus aureus. 1989, 57, 2358-63	82
464	Cell fusion mediated by interaction of a hybrid CD4.CD8 molecule with the human immunodeficiency virus type 1 envelope glycoprotein does occur after a long lag time. <b>1993</b> , 67, 6469-75	16
463	COMPUTATIONAL DETERMINATION OF THE DETACHMENT TIME OF THE LEUKOCYTE UNDER DIFFERENT KINETIC DISSOCIATION RATE PARAMETERS. <b>2015</b> , 23, 457-469	1
462	A Network Evolution Model for Recovery of the Mullins Effect in Filled Rubbers. <b>2020</b> , 12, 2050108	8

## (2015-2009)

461	Single Molecule Measurements of Interaction Free Energies Between the Proteins Within Binary and Ternary SNARE Complexes. <b>2009</b> , 1, 120-129	23
460	Adhesion-activating phorbol ester increases the mobility of leukocyte integrin LFA-1 in cultured lymphocytes. <b>1996</b> , 97, 2139-44	282
459	Effects of fluid dynamic forces on vascular cell adhesion. <b>1996</b> , 98, 2661-5	53
458	Computational Analysis of Particle-Hemodynamics and Prediction of the Onset of Arterial Diseases. <b>2000</b> ,	2
457	Quantifying Cell Adhesion Using Single-Cell Force Spectroscopy. <b>2011</b> , 209-224	3
456	Probing Cellular Adhesion at the Single-Molecule Level. <b>2011</b> , 225-261	4
455	Theoretical Models in Force Spectroscopy. <b>2012</b> , 51-91	1
454	Fundamentals of Molecular Photoactuation. <b>2012</b> , 83-106	5
453	Integrin alpha 6 beta 4 mediates dynamic interactions with laminin. <b>1994</b> , 107, 3153-3163	46
452	A mechanical function of myosin II in cell motility. <b>1995</b> , 108, 387-393	196
452 451	A mechanical function of myosin II in cell motility. <b>1995</b> , 108, 387-393  A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat. <b>1997</b> , 110, 249-256	196 32
	A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat.	
45 <sup>1</sup>	A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat.  1997, 110, 249-256  Muscle cell peeling from micropatterned collagen: direct probing of focal and molecular properties	32
45 <sup>1</sup> 45 <sup>0</sup>	A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat.  1997, 110, 249-256  Muscle cell peeling from micropatterned collagen: direct probing of focal and molecular properties of matrix adhesion. 1999, 112, 1425-1436  Integrin (alpha) and beta subunit contribution to the kinetic properties of (alpha)2beta1 collagen	32
451 450 449	A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat. 1997, 110, 249-256  Muscle cell peeling from micropatterned collagen: direct probing of focal and molecular properties of matrix adhesion. 1999, 112, 1425-1436  Integrin (alpha) and beta subunit contribution to the kinetic properties of (alpha)2beta1 collagen receptors on human keratinocytes analyzed under hydrodynamic conditions. 1999, 112, 2335-2345  Ca2+-dependent myosin II activation is required for uropod retraction during neutrophil migration.	32 32 13
451 450 449 448	A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat. 1997, 110, 249-256  Muscle cell peeling from micropatterned collagen: direct probing of focal and molecular properties of matrix adhesion. 1999, 112, 1425-1436  Integrin (alpha) and beta subunit contribution to the kinetic properties of (alpha)2beta1 collagen receptors on human keratinocytes analyzed under hydrodynamic conditions. 1999, 112, 2335-2345  Ca2+-dependent myosin II activation is required for uropod retraction during neutrophil migration. 2000, 113, 1287-1298	32 32 13
45 <sup>1</sup> 45 <sup>0</sup> 449 448	A simple method for measurement of cell-substrate attachment forces: application to HIV-1 Tat. 1997, 110, 249-256  Muscle cell peeling from micropatterned collagen: direct probing of focal and molecular properties of matrix adhesion. 1999, 112, 1425-1436  Integrin (alpha) and beta subunit contribution to the kinetic properties of (alpha)2beta1 collagen receptors on human keratinocytes analyzed under hydrodynamic conditions. 1999, 112, 2335-2345  Ca2+-dependent myosin II activation is required for uropod retraction during neutrophil migration. 2000, 113, 1287-1298  Study of Adhesion Interaction Using Atomic Force Microscopy. 2004, 105, 501-510  Molecular Interaction between Bacterial Antigens and Macrophage Receptors Studied by Atomic	32 32 13 161

443	Chemomechanical regulation of myosin Ic cross-bridges: Deducing the elastic properties of an ensemble from single-molecule mechanisms. <b>2017</b> , 13, e1005566	4
442	Dissection of kinesin's processivity. <b>2009</b> , 4, e4612	8
441	The non-equilibrium thermodynamics and kinetics of focal adhesion dynamics. <b>2010</b> , 5, e12043	21
440	Mechanical characterization of one-headed myosin-V using optical tweezers. <b>2010</b> , 5, e12224	8
439	Strength of hydrogen bond network takes crucial roles in the dissociation process of inhibitors from the HIV-1 protease binding pocket. <b>2011</b> , 6, e19268	27
438	Estimating the threshold surface density of Gp120-CCR5 complexes necessary for HIV-1 envelope-mediated cell-cell fusion. <b>2011</b> , 6, e19941	15
437	Elongated membrane tethers, individually anchored by high affinity 個 / VCAM-1 complexes, are the quantal units of monocyte arrests. <b>2013</b> , 8, e64187	18
436	Individual globular domains and domain unfolding visualized in overstretched titin molecules with atomic force microscopy. <b>2014</b> , 9, e85847	5
435	Ca2+ binding enhanced mechanical stability of an archaeal crystallin. <b>2014</b> , 9, e94513	11
434	Atomic force microscopy reveals a role for endothelial cell ICAM-1 expression in bladder cancer cell adherence. <b>2014</b> , 9, e98034	33
433	Dynamics of receptor-mediated nanoparticle internalization into endothelial cells. 2015, 10, e0122097	16
432	Simulation and Analysis of Tethering Behavior of Neutrophils with Pseudopods. <b>2015</b> , 10, e0128378	7
431	Energy Landscape of Alginate-Epimerase Interactions Assessed by Optical Tweezers and Atomic Force Microscopy. <b>2015</b> , 10, e0141237	6
430	Interactions between the breast cancer-associated MUC1 mucins and C-type lectin characterized by optical tweezers. <b>2017</b> , 12, e0175323	7
429	Ligand Functionalized Polymer as a New Tool for Studying Biomolecular Interaction using Atomic Force Microscopy. <b>2006</b> , 27, 436-441	1
428	Harvesting Mechanical Work From Folding-Based Protein Engines: From Single-Molecule Mechanochemical Cycles to Macroscopic Devices. 138-147	23
427	Chemical Design Model for Emergent Synthetic Catch Bonds. <b>2020</b> , 8,	1
426	Machine Learning Based Prediction of Nanoscale Ice Adhesion on Rough Surfaces. <b>2021</b> , 11, 33	4

425	Modulation of Dissociation Kinetics by External Force: Examination of the Bell Model. <b>2005</b> , 5, 744-758	2
424	A mathematical applications into the cells. <b>2012</b> , 3, 19-23	3
423	Force-induced Unbinding Dynamics in a Multidimensional Free Energy Landscape. <b>2012</b> , 33, 897-900	1
422	Cooperative unfolding of distinctive mechanoreceptor domains transduces force into signals. <b>2016</b> , 5,	48
421	Increasing evidence of mechanical force as a functional regulator in smooth muscle myosin light chain kinase. <b>2017</b> , 6,	14
420	Stochastic bond dynamics facilitates alignment of malaria parasite at erythrocyte membrane upon invasion. <b>2020</b> , 9,	О
419	Structural basis of <b>E</b> -catenin-F-actin catch bond behavior. <b>2020</b> , 9,	13
418	Tuning cell adhesion on supported lipid bilayers nanoscale geometry. <b>2021</b> , 17, 10376-10382	O
417	Single-Molecule Force Spectroscopy Studies of Missense Titin Mutations That Are Likely Causing Cardiomyopathy. <b>2021</b> , 37, 12128-12137	О
416	Emergence of viscosity and dissipation via stochastic bonds. <b>2022</b> , 158, 104660	1
415	Why is mechanical fatigue different from toughness in elastomers? The role of damage by polymer chain scission. <b>2021</b> , 7, eabg9410	5
414	A mesoscale mechanical model of cellular interactions. <b>2021</b> , 120, 4905-4917	Ο
413	Prandtllomlinson-Type Models for Molecular Sliding Friction. 2021, 69, 1	1
412	Determinants of Ligand Specificity and Functional Plasticity in Type I Interferon Signaling. <b>2021</b> , 12, 748423	1
411	Short-range and long-range forces between hydrophilic surfaces and biopolymers in aqueous solutions. <b>2000</b> , 3-21	
410	Molecular Mechanisms of Leukocyte Adhesion. <b>2003</b> , 23-71	1
409	Processes Governing Bacterial Colonization of Biomaterials. <b>2003</b> , 111-149	
408	Molecular Recognition Force Microscopy. <b>2004</b> , 475-494	1

407	Molecular Recognition Force Microscopy. <b>2004</b> , 475-494
406	Selectin avidity modulation by chemokines at subsecond endothelial contacts: a novel regulatory level of leukocyte trafficking. <b>2004</b> , 109-35
405	Probability of Receptor Unbinding During Ligand Assisted Tether Elongation from the Red Cell Membrane. <b>2006</b> , 4, 273-275
404	HYDRODYNAMIC INTERACTIONS BETWEEN CELLS ON REACTIVE SURFACES. <b>2006</b> , 255-266
403	BOND FORMATION DURING CELL COMPRESSION. <b>2006</b> , 105-122
402	Atomic Force Microscopy. <b>2006</b> , 67-1-67-29
401	Adhesion of soft objects(*). <b>2006</b> , 29, 35-47
400	Direct Detection of Ligand-Protein Interaction Using AFM. <b>2007</b> , 165-203
399	Molecular Recognition Force Microscopy: From Simple Bonds to Complex Energy Landscapes. <b>2007</b> , 767-790
398	Mechanical Forces on Cells. 2007, 4-1-4-18
397	Modeling in Cellular Biomechanics. <b>2007</b> , 16-1-16-15
396	Microscopic mechanics of biomolecules in living cells. <b>2008</b> , 339-362
395	Counting and Breaking Single Bonds. 2008, 251-272
394	References. <b>2008</b> , 635-661
393	Simulation in Force Spectroscopy. <b>2008</b> , 163-184
392	Single-molecular interaction forces. <b>2008</b> , 105-125
391	Probing Single Membrane Proteins by Atomic Force Microscopy. <b>2009</b> , 449-485
390	Nanoforce and Imaging. <b>2009</b> , 375-475

389	Thermal Activation Effects in Dynamic Force Spectroscopy and Atomic Friction. <b>2009</b> , 199-229
388	An Observation on Bell Model for Molecular Bond Separation Under Force. <b>2010</b> , 173-180
387	Catch-to-Slip Bond Transition in Biological Bonds by Entropic and Energetic Elasticity. <b>2010</b> , 227-233
386	Single-Molecule Studies on Cells and Membranes Using the Atomic Force Microscope. <b>2010</b> , 479-503
385	Computational Scale Linking in Biological Protein Materials. <b>2010</b> , 491-531
384	Application of Atomic Force Microscopy to the Study of Expressed Molecules in or on a Single Living Cell. <b>2010</b> , 555-581
383	Multiscale Modeling of Biological Protein Materials [Deformation and Failure. 2010, 473-533
382	Free-Energy Transducers. <b>2010</b> , 255-279
381	Wechselwirkungen zwischen einzelnen Moleklen. <b>2010</b> , 87-104
380	Size and shape dependent steady-state pull-off force in molecular adhesion between soft elastic materials. <b>2010</b> , 13-19
379	Single-Molecule Analysis of Cell-Virus Binding Interactions. <b>2011</b> , 153-166
378	Coarse-Graining Parameterization and Multiscale Simulation of Hierarchical Systems. Part II. <b>2010</b> , 35-68
377	Mechanical Models of Cell Adhesion Incorporating Nonlinear Behavior and Stochastic Rupture of the Bonds. <b>2011</b> , 599-627
376	Molecular Recognition Force Microscopy: From Molecular Bonds to Complex Energy Landscapes. <b>2011</b> , 355-387
375	A Role for Integrin-ECM Bonds as Mechanotransducers that Modulate Adult Stem Cell Fate. <b>2011</b> , 23-46
374	Network Theory of Living Cell Clusters and Rheological Applications at Nano-Level. <b>2011</b> , 120, 266-271
373	Coarse-Grained Modeling of Large Protein Complexes for Understanding Their Conformational Dynamics. <b>2011</b> , 61-93
372	Exploring the Energy Landscape of Biopolymers UsingSingle-Molecule Force Spectroscopy and MolecularSimulations. <b>2011</b> , 125-148

371	Introduction to Simulations in Nanobiotechnology. <b>2011</b> , 1-40	
370	Mechanics of Proteins and Tailored Mechanics of Engineered Proteins. 2011, 47-82	
369	Mechanical Characterization in Molecular Simulation. <b>2012</b> , 265-296	
368	Biomolecular Recognition. <b>2012</b> , 1-50	O
367	Experimental Approaches. <b>2012</b> , 173-211	
366	Force Spectroscopy and Recognition Imaging of Cells from the Immune System. <b>2012</b> , 49-75	
365	Principles Involved in Interpreting Single-Molecule Force Measurement of Biomolecules. 2013, 19-23	
364	Specific Adhesion of Soft Elastic Materials. <b>2013</b> , 153-173	
363	Mapping of the Surface® Mechanical Properties Through Analysis of Torsional Cantilever Bending in Dynamic Force Microscopy. <b>2013</b> , 315-350	
362	Biophysics of Titin in Cardiac Health and Disease. <b>2013</b> , 201-223	
361	Molecular Modeling of the Microstructure of Soft Materials. 2013,	
360	Phase transition from -helices to -sheets in supercoils of fibrillar proteins. <b>2013</b> , 5, 705-725	1
359	Force Spectroscopy of DNA and RNA: Structure and Kinetics from Single-Molecule Experiments. <b>2014</b> , 23-52	
358	Discrete State Space Models. <b>2014</b> , 47-78	
357	Smart Surfaces. <b>2014</b> , 115-188	
356	Direct measurement of interaction forces and energies with proximal probes. <b>2014</b> , 307-318	
355	Some Models for the Interaction between Cells of the Immune System. <b>1979</b> , 66-74	2
354	Attachment and Recognition Factors in the Interaction between Microbes and Mononuclear Phagocytes. <b>1980</b> , 21-43	

353	Interaction of ELF Electromagnetic Fields with Cell Membrane Receptors. <b>1985</b> , 273-294	2
352	Modeling of the Interaction Between Ligands and Cell Membrane Receptors in the Presence of Exogenous Electric Fields. <b>1985</b> , 306-311	1
351	Regulation of Nerve Fiber Elongation during Embryogenesis. <b>1986</b> , 33-71	
350	Some Notes on Mathematical Modelling of the Immune Response. <b>1986</b> , 8-14	
349	Red Cell Membrane Under Zero Gravity: Interpretation of ARC Experiment on STS51-C. <b>1990</b> , 235-250	
348	Specific Recognition at Functionalized Interfaces: Direct Force Measurements of Biomolecular Interactions. <b>1995</b> , 207-222	
347	Evidence for the Role of Immobilization of Ligand-Occupied Membrane Receptors in Signal Transduction. <b>1997</b> , 165-189	
346	Direct Measurement of Lateral Mobility. <b>1997</b> , 17-48	
345	Single Molecule Force Spectroscopy with Individual Proteins. <b>1999</b> , 319-336	
344	Energetics of Fluctuating World and Molecular Motors <b>1999</b> , 39, 229-234	1
344	Energetics of Fluctuating World and Molecular Motors 1999, 39, 229-234  A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of Receptor-Ligand Interaction. 1999, 261-298	1
	A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of	
343	A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of Receptor-Ligand Interaction. <b>1999</b> , 261-298	
343	A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of Receptor-Ligand Interaction. <b>1999</b> , 261-298  Biomechanics of Brain Injury: Looking to the Future. <b>2015</b> , 247-257	
343 342 341	A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of Receptor-Ligand Interaction. 1999, 261-298  Biomechanics of Brain Injury: Looking to the Future. 2015, 247-257  Modeling in Cellular Biomechanics. 2014, 16-1-16-22	
343 342 341 340	A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of Receptor-Ligand Interaction. 1999, 261-298  Biomechanics of Brain Injury: Looking to the Future. 2015, 247-257  Modeling in Cellular Biomechanics. 2014, 16-1-16-22  Epithelial Mesenchymal Transition Influence on CTL Activity. 2015, 267-284  Function and structure of von Willebrand factorfhechanical interaction between A1 domain and	
343 342 341 340 339	A Centrifugation Method for Measurement of Two-Dimensional Binding Characteristics of Receptor-Ligand Interaction. 1999, 261-298  Biomechanics of Brain Injury: Looking to the Future. 2015, 247-257  Modeling in Cellular Biomechanics. 2014, 16-1-16-22  Epithelial Mesenchymal Transition Influence on CTL Activity. 2015, 267-284  Function and structure of von Willebrand factorfhechanical interaction between A1 domain and GPIDH2015, 26, 557-561	

335 Introduction. **2016**, 1-4

334 Computational Mechanochemistry. **2016**, 233-243

Mechanical properties of elastomeric proteins studied by single molecule force spectroscopy. **2016**, 65, 188703

2

A wireless centrifuge force microscope (CFM) enables multiplexed single-molecule experiments in a commercial centrifuge.

331 Free energy relationships. **2017**, 601-613

332

329

323

322

321

Single molecule force spectroscopy study of calcium regulated mechanical unfolding of the A6 domain of adseverin. **2017**, 66, 196201

1

Spatiotemporal relationships defining the adaptive gating of the bacterial mechanosensitive channel MscS.

О

328 Modeling cell-substrate de-adhesion dynamics <u>under fluid shear.</u>

Catch-slip behavior observed upon rupturing membrane-cytoskeleton bonds.

Applications of AFM Cellular and Molecular Biophysical Detection in Clinical Lymphoma Rituximab Treatment. **2018**, 79-128

Forced-rupture of Cell-Adhesion Complexes Reveals abrupt switch between two Brittle States.

324 Molecular mechanism of cell-cell adhesion mediated by cadherin-23.

The Folding Pathway of an Ig Domain is Conserved On and Off the Ribosome.

4

In-Situ Measurement of Tribochemical Processes in Ultrahigh Vacuum. 2018, 129-158

Molecular Mechanism of the Strong Cell-Adhesion by Cadherin-23.

C

Mass Action Kinetic Model of Apoptosis by TRAIL-Functionalized Leukocytes.

319 Concurrent Atomic Force Spectroscopy.

Modeling meiotic chromosome pairing: increased fidelity from a tug of war between telomere forces and a pairing-based Brownian ratchet.

317	Stiffness Sensing and Cell Motility: Durotaxis and Contact Guidance.	
316	A small single-domain protein folds through the same pathway on- and off- the ribosome.	
315	Nanobody-antigen catch-bond reveals NK cell mechanosensitivity.	
314	Cargo diffusion shortens single-kinesin runs at low viscous drag.	
313	Exploring the Binding Mechanism between Human Profilin (PFN1) and Polyproline-10 through Binding Mode Screening.	
312	Kinetics of Ligand-Receptor Bond Formation. <b>2018</b> , 1-34	
311	A Simple Mechanical Model for Synthetic Catch Bonds.	
310	Force-Induced Unravelling of DNA Origami. <b>2019</b> , 69-93	
309	Mechanical feedback enables catch bonds to selectively stabilize scanning microvilli at T-cell surfaces.	
308	Varying crosslinking motifs drive the mesoscale mechanics of actin-microtubule composites.	
307	Substrate-rigidity dependent migration of an idealized twitching bacterium.	
306	How signals of calcium ions initiate the beats of cilia and flagella.	
305	Mechanisms of motor-independent membrane remodeling driven by dynamic microtubules.	
304	Broken force dispersal network in tip-links by the mutations induces hearing-loss.	
303	Force-dependent facilitated dissociation can generate protein-DNA catch bonds.	
302	Cotranslational folding cooperativity of contiguous domains of Beectrin.	
301	Lateral Subunit Coupling Determines Intermediate Filament Mechanics.	
300	Structural determinants of protocadherin-15 elasticity and function in inner-ear mechanotransduction.	

299	Dissecting the cytochrome -reaction centre interaction in bacterial photosynthesis using single molecule force spectroscopy. <b>2019</b> , 476, 2173-2190	4
298	Effects of Substrate Stiffness on Neutrophil Adhesion over L-selectin Coated Endothelial.	
297	Thermal versus Mechanical Unfolding in a Model Protein.	
296	Strain-Dependent Kinetic Properties of KIF3A and KIF3C Tune the Mechanochemistry of the KIF3AC Heterodimer.	1
295	Multiscale Modeling of Malaria-Infected Red Blood Cells. <b>2020</b> , 2625-2648	
294	Talin Folding as the Tuning Fork of Cellular Mechanotransduction.	
293	Polymer Stiffness Regulates Multivalent Binding and Liquid-Liquid Phase Separation.	0
292	Multiscale Characterization of Complex Binding Interactions of Cellulolytic Enzymes Highlights Limitations of Classical Approaches.	О
291	Reliable extraction of energy landscape properties from critical force distributions. <b>2020</b> , 2,	0
290	Nanomechanical phenotypes in cMyBP-C mutants that cause hypertrophic cardiomyopathy.	О
289	Molecular Paradigms for Biological Mechanosensing. <b>2021</b> , 125, 12115-12124	3
288	Protein-Ligand Dissociation Rate Constant from All-Atom Simulation. <b>2021</b> , 12, 10631-10636	O
287	Structure and Mechanical Stabilities of the Three-Way Junction Motifs in Prohead RNA. <b>2021</b> , 125, 12125-121	3 <b>⊕</b>
286	Multivalent polymers can control phase boundary, dynamics, and organization of liquid-liquid phase separation.	
285	Receptor-mediated endocytosis of nanoparticle based on the co-rotational grid method. <b>2021</b> , 96, 015009	3
284	Low force unfolding of a single-domain protein by parallel pathways.	
283	Nanoscaffolds for neural regenerative medicine. <b>2020</b> , 47-88	О
282	Stochastic bond dynamics facilitates alignment of malaria parasite at erythrocyte membrane upon invasion.	2

281	Mesoscopic irreversible thermodynamics of morphological evolution kinetics of helical conformation in bioproteins <b>D</b> NA <b>L</b> under the isothermal isobaric conditions. <b>2020</b> , 4, 009-019	1
280	DNA self-organization controls valence in programmable colloid design. <b>2021</b> , 118,	1
279	Multivalent polymers can control phase boundary, dynamics, and organization of liquid-liquid phase separation. <b>2021</b> , 16, e0245405	0
278	Complex surrounding affections for kinetics properties of bio-molecules in two-dimensional free-energy model. <b>2021</b> , 11, 115210	
277	Two energy barriers and a transient intermediate state determine the unfolding and folding dynamics of cold shock protein. <b>2021</b> , 4,	O
276	Zeptomole detection of DNA based on microparticle dissociation from a glass plate in a combined acoustic-gravitational field. <b>2022</b> , 238, 123042	1
275	Weak catch bonds make strong networks.	0
274	A Wi-Fi live streaming Centrifuge Force Microscope for benchtop single-molecule experiments.	
273	Cell Adhesion and Motility. <b>2005</b> , 221-245	
272	Biofluids as structured media: Rheology and flow properties of blood. <b>1991</b> , 158-193	O
271	Tissue Engineering: Nanoscale Contacts in Cell Adhesion to Substrates. <b>2008</b> , 257-283	
270	Molecular Recognition Force Microscopy: From Simple Bonds to Complex Energy Landscapes. <b>2008</b> , 279-308	Ο
269	A Theoretical Model to Mechanochemical Damage in the Endothelial Cells. <b>2009</b> , 1945-1948	
268	Force dependence of E-selectin/sialyl Lewis/sup x/ single bond dissociation.	
267	Physical biology of cell-substrate interactions under cyclic stretch.	
266	Negative durotaxis: cell movement toward softer environments.	Ο
265	A Generalised Mechano-Kinetic Model For Use in Multiscale Simulation Protocols.	
264	Affinity and kinetic analysis of the interaction of the cell adhesion molecules rat CD2 and CD48. <b>1993</b> , 12, 4945-54	31

263	Interactions between neutral phospholipid bilayer membranes. <b>1982</b> , 37, 657-65	494
262	Kinetics analysis of binding between melanoma cells and neutrophils. <b>2006</b> , 3, 79-87	17
261	Tumor cell extravasation mediated by leukocyte adhesion is shear rate dependent on IL-8 signaling. <b>2010</b> , 7, 77-91	14
260	Probing of Amyloid A∭14-23) Trimers by Single-Molecule Force Spectroscopy. <b>2016</b> , 1,	7
259	Diagnosis of Muscle Diseases at the Molecular Level With a Passive Constitutive Theory for a Single Muscle Fiber.	
258	Distinct binding kinetics of E-, P- and L-selectin to CD44. <b>2021</b> ,	1
257	Force Dependence of Proteins' Transition State Position and the Bell-Evans Model. 2021, 11,	1
256	Molecular insights into receptor binding energetics and neutralization of SARS-CoV-2 variants. <b>2021</b> , 12, 6977	6
255	Massively Parallelized Molecular Force Manipulation with On-Demand Thermal and Optical Control. <b>2021</b> , 143, 19466-19473	0
254	Polymer Adhesion: Seeking New Solutions for an Old Problem#.	8
253	Quantifying and controlling bond multivalency for advanced nanoparticle targeting to cells. <b>2021</b> , 8, 38	4
252	Cooperative binding of TCR and CD4 to pMHC enhances TCR sensitivity.	O
251	Exposure of Von Willebrand Factor Cleavage Site in A1A2A3-Fragment under Extreme Hydrodynamic Shear. <b>2021</b> , 13,	3
250	Mechanotransduction as a major driver of cell behaviour: mechanisms, and relevance to cell organization and future research. <b>2021</b> , 11, 210256	3
249	Molecular dynamics simulations on adhesion energy of PDMS-silica interface caused by molecular structures and temperature. <b>2021</b> , 577, 151930	1
248	A Conformational Transition of Von Willebrand Factor ☑D D 3 Domain Primes It For Multimerization.	
247	Modeling cell protrusion predicts how Myosin II and actin turnover affect adhesion-based signaling. <b>2021</b> ,	0
246	A Mathematical Model for Bone Cell Population Dynamics of Fracture Healing Considering the Effect of Energy Dissipation. <b>2021</b> , 33-52	

245 Cell adhesion strength and tractions are mechano-diagnostic features of cellular invasiveness.

244	Understanding the Adhesion Mechanism of Hydroxyapatite-Binding Peptide <b>2022</b> ,	3
243	Calculating the force-dependent unbinding rate of biological macromolecular bonds from force-ramp optical trapping assays <b>2022</b> , 12, 82	0
242	Molecular Recognition by Silicon Nanowire Field-Effect Transistor and Single-Molecule Force Spectroscopy <b>2022</b> , 13,	O
241	Effect of micro- and nanoparticle shape on biological processes <b>2021</b> , 342, 93-93	5
240	Electrostatic interactions contribute to the control of intramolecular thiol-disulfide isomerization in a protein. <b>2021</b> , 23, 26366-26375	O
239	Mechanochemistry of phosphate esters confined between sliding iron surfaces. 2021, 4,	4
238	Gecko adhesion: a molecular-simulation perspective on the effect of humidity 2022,	4
237	Cis-clustering of cadherin-23 controls the kinetics of cell-cell adhesion.	O
236	STReTCh: a strategy for facile detection of mechanical forces across proteins in cells.	O
235	Nascent Adhesion Clustering: Integrin-Integrin and Integrin-Substrate Interactions. 2022, 2, 34-58	O
234	Ribosome exit tunnel electrostatics <b>2022</b> , 105, 014409	O
233	A computational modeling of invadopodia protrusion into an extracellular matrix fiber network <b>2022</b> , 12, 1231	О
232	Multiscale mechanobiology: coupling models of adhesion kinetics and nonlinear tissue mechanics <b>2022</b> ,	O
231	Single-Molecule Force Spectroscopy of a Tetraaryl Succinonitrile Mechanophore <b>2022</b> , 126, 1215-1221	0
230	A three-dimensional multiscale model for the prediction of thrombus growth under flow with single-platelet resolution <b>2022</b> , 18, e1009850	O
229	Catch bond models explain how force amplifies TCR signaling and antigen discrimination.	
228	Interaction between miR4749 and Human Serum Albumin as Revealed by Fluorescence, FRET, Atomic Force Spectroscopy and Computational Modelling <b>2022</b> , 23,	Ο

227	Is There a Need for a More Precise Description of Biomolecule Interactions to Understand Cell Function?. <b>2022</b> , 44, 505-525	1
226	Force-Dependent Folding Kinetics of Single Molecules with Multiple Intermediates and Pathways <b>2022</b> , 1025-1032	1
225	Adhesion-regulated junction slippage controls cell intercalation dynamics in an Apposed-Cortex Adhesion Model <b>2022</b> , 18, e1009812	1
224	The creep behavior of semicrystalline carbon nanotube/polypropylene nanocomposite: A coarse-grained molecular study. <b>2022</b> , 196, 109834	O
223	Gnawing Between Cells and Cells in the Immune System: Friend or Foe? A Review of Trogocytosis <b>2022</b> , 13, 791006	2
222	Mechanics of transient semi-flexible networks: Soft-elasticity, stress relaxation and remodeling. <b>2022</b> , 160, 104776	O
221	Cell sedimentation during 3D bioprinting: a mini review. 1	3
220	A-to-I RNA editing of Filamin A (FLNA) regulates cellular adhesion, migration and mechanical properties <b>2022</b> ,	O
219	Probing Anion´-IInteractions between fluoroarene and carboxylate anion in aqueous solutions <b>2022</b> , 615, 778-785	2
218	A Mathematical Analysis of Focal Adhesion Lifetimes and Their Effect on Cell Motility 2022,	
217	Single-Molecule Force Probing of RGD-Binding Integrins on Pancreatic Cancer Cells 2022,	2
216	The MIDAS domain of AAA mechanoenzyme Mdn1 forms catch bonds with two different substrates <b>2022</b> , 11,	О
215	Mapping Mechanostable Pulling Geometries of a Therapeutic Anticalin/CTLA-4 Protein Complex <b>2021</b> ,	5
214	Monitoring the binding and insertion of a single transmembrane protein by an insertase. <b>2021</b> , 12, 7082	3
213	Mechanics of interactions of F-actin and vimentin networks. 2022, 301-316	
212	The nanocaterpillar's random walk: diffusion with ligand-receptor contacts 2022,	1
211	Single Molecular Chelation Dynamics Reveals That DNA Has a Stronger Affinity toward Lead(II) than Cadmium(II) <b>2022</b> ,	1
210	Fracture in living tissues <b>2022,</b>	2

209	Physiological Considerations for Modeling Antibody-Target Interactions 2022, 13, 856961	2
208	Supported Lipid Bilayers and the Study of Two-Dimensional Binding Kinetics <b>2022</b> , 9, 833123	
207	High-resolution Single-molecule Magnetic Tweezers 2022,	1
206	Review of Label-Free Monitoring of Bacteria: From Challenging Practical Applications to Basic Research Perspectives <b>2022</b> , 12,	O
205	The force required to remove tubulin from the microtubule lattice.	0
204	A tethered ligand assay to probe SARS-CoV-2:ACE2 interactions <b>2022</b> , 119, e2114397119	О
203	Reconstruction of the Free Energy Profile for SUMO1 from Nonequilibrium Single-Molecule Pulling Experiments <b>2022</b> ,	
202	Ligand Mobility-Mediated Cell Adhesion and Spreading 2022,	3
201	Cyanobacteria: Model Microorganisms and Beyond <b>2022</b> , 10,	1
200	Assembly of Graphene Platelets for Bioinspired, Stimuli-Responsive, Low Ice Adhesion Surfaces <b>2022</b> , 7, 10225-10234	
199	Monitoring the antibiotic darobactin modulating the Harrel assembly factor BamA. 2021,	2
198	Assessing models of force-dependent unbinding rates via infrequent metadynamics 2022, 156, 125102	Ο
197	Desmoglein 2 can undergo Ca-dependent interactions with both desmosomal and classical cadherins including E-cadherin and N-cadherin <b>2022</b> ,	1
196	Rheology of Growing Axons.	
195	Chain diffusion based framework for modeling the welding of vitrimers. 2022, 104883	1
194	Unbreakable DNA tension probes show that cell adhesion receptors detect the molecular force-extension curve of their ligands.	
193	Reactive molecular dynamics simulations of thermal and shear-driven oligomerization. <b>2022</b> , 591, 153209	0
192	Biophysical Approaches for Applying and Measuring Biological Forces <b>2021</b> , e2105254	3

Oscillating external force as a tool to tune motility characteristics of molecular motors.. **2021**, 104, 064406

Role of Ligand Distribution in the Cytoskeleton-Associated Endocytosis of Ellipsoidal Nanoparticles.. **2021**, 11,

О

Cooperative ectodomain interaction among TCR#CD3pand CD3penhances TCR mechanotransduction.

Ο

- Immunological Synapse Dynamics Induced by Bispecific T-cell Engagers Predict Clinical Pharmacodynamics and Tumor Evolution across Anatomical Sites.
- 187 CHAPTER 4. Materials Design Principles for Mechanochemical Transduction. 76-118
- 186 Data\_Sheet\_1.PDF. **2020**,
- 185 DataSheet\_1.pdf. 2020,
- 184 Table\_1.DOCX. **2020**,
- 183 Data\_Sheet\_1.pdf. 2019,
- 182 Video\_1.MP4. 2019,
- 181 Data\_Sheet\_1.pdf. 2020,
- 180 Data\_Sheet\_1.PDF. 2020,
- Angle-dependent strength of a single chemical bond by stereographic force spectroscopy.
- 3
- Connecting conformational stiffness of the protein with energy landscape by a single experiment.. **2022**,
- A brief overview on mechanosensing and stick-slip motion at the leading edge of migrating cells.
- О

- 176 Weak tension accelerates hybridization and dehybridization of short oligonucleotides.
- Acceleration of enzymatic catalysis by active hydrodynamic fluctuations. **2022**, 5,

- O
- 174 The Von Willebrand factor-ADAMTS-13 axis: a two-faced Janus in bleeding and thrombosis. 2022, 1, 9-18

Mechanical response of polyprotein revealed by single-molecule optical tweezers. 173 Force Mapping Reveals the Spatial Distribution of Individual Proteins in a Neuron.. 2022, 172 Mechanical forces impair antigen discrimination by reducing differences in T cell receptor off-rates. 171 Mechanism of the cadherin-catenin F-actin catch bond interaction. 170 Digital holography-based 3D particle localisation for single molecule tweezer techniques. 169 Thermal control of nucleation and propagation transition stresses in discrete lattices with non-local 168  $\circ$ interactions and non-convex energy. 2022, 137, 1 A General Numerical Model of Leukocyte Adhesion in Microchannels.. 2022, e3606 Multivalent 9-O-Acetylated-sialic acid glycoclusters as potent inhibitors for SARS-CoV-2 infection.. 166 2022, 13, 2564 Cadherins can dimerize via asymmetric interactions.. 2022, 165 Lanthanide ions induce DNA compaction with ionic specificity.. 2022, 210, 292-299 164 Computational modelling of poro-visco-hyperelastic effects on time-dependent fatigue crack 163 1 growth of hydrogels. 2022, 155, 103307 Cell adhesion strength and tractions are mechano-diagnostic features of cellular invasiveness. 162  $\circ$ Templated folding of the RTX domain of the bacterial toxin adenylate cyclase revealed by single 161 O molecule force spectroscopy.. 2022, 13, 2784 Optimal Sacrificial Domains in Mechanical Polyproteins: S. epidermidis Adhesins Are Tuned for 160 Work Dissipation. An increase in force after stretch of diaphragm fibers and myofibrils is accompanied by an increase 159  $\circ$ in sarcomere length non-uniformities and Ca2+ sensitivity. 158 Quantifying individual base stacking energies with the Centrifuge Force Microscope. New Insights into the Folding-Unfolding Mechanism and Conformations of Cytochrome C. 157 O

The Nature and Dynamics of General Anesthetics Sites.

156

155	Substituent Effects on the Mechanochemical Response of Zinc Dialkyldithiophosphate.	1
154	Elasticity-associated rebinding rate of molecular bonds between soft elastic media. 2022,	O
153	Immune-mediated alopecias and their mechanobiological aspects. <b>2022</b> , 203793	O
152	Multi-level force-dependent allosteric enhancement of <b>E</b> -catenin binding to F-actin by vinculin.	O
151	Rapid assembly of a polar network architecture drives efficient actomyosin contractility. <b>2022</b> , 39, 110868	
150	Digital holography-based 3D particle localisation for single molecule tweezer techniques. <b>2022</b> ,	
149	Molecular Homogeneity of GB1 Revealed by Single Molecule Force Spectroscopy.	0
148	The ClpP Peptidase Forcefully Grips Protein Substrates.	
147	Affections of dynamic ductility and molecular friction for kinetic properties of bio-molecules in multidimensional landscape model. <b>2022</b> , 12, 065111	
146	The force required to remove tubulin from the microtubule lattice by pulling on its £ubulin C-terminal tail. <b>2022</b> , 13,	1
145	Pathogen-Host Adhesion between SARS-CoV-2 S Proteins from Different Variants and Human ACE2 Probed at Single-Molecule and Single-Cell Levels.	
144	A cholesterol analog stabilizes the human $\mbox{$\mathbb{D}$}$ -adrenergic receptor nonlinearly with temperature. <b>2022</b> , 15,	O
143	Cargo surface fluidity can reduce inter-motor mechanical interference, promote load-sharing and enhance processivity in teams of molecular motors. <b>2022</b> , 18, e1010217	O
142	Identification of flexible Pif1DNA interactions and their impacts on enzymatic activities.	1
141	Passive constitutive theory of a single muscle fiber for the potential diagnosis of muscle diseases at the molecular level. <b>2022</b> , 167, 104981	O
140	A mesoscale model for the micromechanical study of gels. <b>2022</b> , 167, 104982	1
139	Modeling Receptor Motility along Advecting Lipid Membranes. <b>2022</b> , 12, 652	
138	Peeling dynamics of fluid membranes bridged by molecular bonds: moving or breaking. <b>2022</b> , 19,	O

137	Insights into intercellular receptor-ligand binding kinetics in cell communication. 10,	О
136	How torque on formins is relaxed strongly affects cellular swirling. 2022,	Ο
135	Understanding creep behavior of carbon fiber/epoxy interface via molecular dynamics simulation. 1-13	О
134	A mechanical model for elastic wave propagation in nacre-like materials with brick-and-mortar microstructures. 1-13	0
133	Self-sustaining oscillation of two axonemal microtubules based on a stochastic bonding model between microtubules and dynein. <b>2022</b> , 106,	
132	Anisotropy of Shear-Induced Mechanochemical Reaction Rates of Surface Adsorbates; Implications for Theoretical Models.	O
131	Mathematical and computational models in spheroid-based biofabrication. 2022,	О
130	Stability of hydrogel adhesion enabled by siloxane bonds. <b>2022</b> , 271, 108662	O
129	Extracellular matrix sensing via modulation of orientational order of integrins and F-actin in focal adhesions.	
128	Determination of protein protein interactions at the single-molecule level using optical tweezers. <b>2022</b> , 55,	O
127	Autoinhibitory module underlies species difference in shear activation of von Willebrand factor.	
126	Analysis of molecular photomechanical performance using a one-dimensional harmonic model.	O
125	Thermodynamics of Extra-Toughness and Hidden-Length in Polymeric Materials with Sacrificial Bonds. <b>2022</b> , 3, 935-955	О
124	The Development of Single Molecule Force Spectroscopy: From Polymer Biophysics to Molecular Machines. 1-105	1
123	Recently Designed Multivalent Spike Binders Cannot Bind Multivalently-How Do They Achieve Enhanced Avidity to SARS-CoV-2?.	O
122	Physical-chemical regulation of membrane receptors dynamics in viral invasion and immune defense. <b>2022</b> , 167800	O
121	Weak catch bonds make strong networks.	2
120	A physical wiring diagram for the human immune system. <b>2022</b> , 608, 397-404	2

119	Self-healing by Diels-Alder cycloaddition in advanced functional polymers: A review. <b>2022</b> , 101001	4
118	Rheology of growing axons. <b>2022</b> , 4,	1
117	Reversible bond kinetics from single-molecule force spectroscopy experiments close to equilibrium. <b>2022</b> , 4,	1
116	Simulations reveal slow detachment and fast reattachment of kinesin and dynein in antagonistic pairs.	1
115	Anisotropic CdSe Tetrapods in Vortex Flow for Removing Non-Specific Binding and Increasing Protein Capture. <b>2022</b> , 22, 5929	
114	Elastohydrodynamics of contact in adherent sheets. <b>2022</b> , 947,	1
113	Intercellular Receptor-ligand Binding: Effect of Protein-membrane Interaction. 2022, 167787	О
112	Mechanical role of the submembrane spectrin scaffold in red blood cells and neurons. 2022, 135,	1
111	Tip-links serve as force-pass filter to fulfil the role of gating-springs.	0
110	Free-energy landscape of two-state protein acylphosphatase with large contact order revealed by force-dependent folding and unfolding dynamics. <b>2022</b> , 106,	
109	First-Principle Coarse-Graining Framework for Scale-Free Bell-Like Association and Dissociation Rates in Thermal and Active Systems. <b>2022</b> , 12,	
108	Mechanism of the cadherinBatenin F-actin catch bond interaction. 11,	1
107	On modeling the multiscale mechanobiology of soft tissues: Challenges and progress. <b>2022</b> , 3, 031303	
106	Multiscale architecture: Mechanics of composite cytoskeletal networks. <b>2022</b> , 3, 031304	O
105	Effect of mechanical properties of Jurkat cell on adhesion properties of Jurkat integrin and VCAM-1: An AFM study. <b>2022</b> , 218, 112784	
104	Chemo-transport-mechanics in advecting membranes. <b>2022</b> , 181, 103746	O
103	Shear-driven reactions of organosulfur compounds on ferrous surfaces: A molecular dynamics study. <b>2022</b> , 176, 107922	O
102	Metabolic labeling and bioluminescent imaging of nascent peptidoglycan. <b>2022</b> , 372, 132580	O

101	Catch bond-inspired hydrogels with repeatable and loading rate-sensitive specific adhesion. <b>2023</b> , 21, 566-575	2
100	Quantifying the Interaction Strength Between Biopolymers. <b>2022</b> , 701-723	O
99	Measuring 町-Cell Receptor-Mediated Mechanosensing Using Optical Tweezers Combined with Fluorescence Imaging. <b>2022</b> , 727-753	0
98	Using Optical Tweezers to Monitor Allosteric Signals Through Changes in Folding Energy Landscapes. <b>2022</b> , 483-510	O
97	What stress components drive mechanochemistry? A study of ZDDP tribofilm formation.	1
96	The activated ClpP peptidase forcefully grips a protein substrate. 2022,	1
95	A molecularly engineered, broad-spectrum anti-coronavirus lectin inhibits SARS-CoV-2 and MERS-CoV infection in vivo. <b>2022</b> , 100774	2
94	Kinesin-1, -2, and -3 motors use family-specific mechanochemical strategies to effectively compete with dynein during bidirectional transport. 11,	3
93	Mechanical Stabilization of a Bacterial Adhesion Complex. <b>2022</b> , 144, 16808-16818	О
92	Interaction of miR-155 with Human Serum Albumin: An Atomic Force Spectroscopy, Fluorescence, FRET, and Computational Modelling Evidence. <b>2022</b> , 23, 10728	О
91	Facile detection of mechanical forces across proteins in cells with STReTCh. 2022, 2, 100278	0
90	Bell-Evans model and steered molecular dynamics in uncovering the dissociation kinetics of ligands targeting G-protein-coupled receptors. <b>2022</b> , 12,	O
89	A conformational transition of the D?D3 domain primes von Willebrand factor for multimerization. <b>2022</b> , 6, 5198-5209	0
88	Network Dynamics of the Nonlinear Power-law Relaxation of Cell Cortex. 2022,	О
87	Pathogen-Host Adhesion between SARS-CoV-2 Spike Proteins from Different Variants and Human ACE2 Studied at Single-Molecule and Single-Cell Levels. 1-24	1
86	Exploring the Nanomechanical Properties of a Coordination-bond Based Supramolecular Polymer.	1
85	Cancer metastasis chemoprevention prevents circulating tumour cells from germination. 2022, 7,	О
84	Mechanical response of networks formed by end-functionalised spherical polymer grafted nanoparticles.	O

83	Novel Perspective for Protein-Drug Interaction Analysis: Atomic Force Microscope.	О
82	Critical stresses in mechanochemical reactions.	O
81	Replica-Averaging: An algorithm to study mechano-reactive processes for polymers under flow conditions	0
80	Defective Desmosomal Adhesion Causes Arrhythmogenic Cardiomyopathy by Involving an Integrin-収度/TGF-版ignaling Cascade.	1
79	Kinetic model description of dissipation and recovery in collagen fibrils under cyclic loading. <b>2022</b> , 106,	0
78	Ensemble Force Spectroscopy of a G-Quadruplex Cluster on a Single-Molecule Platform.	o
77	Microfluidic device combining hydrodynamic and dielectrophoretic trapping for the controlled contact between single micro-sized objects and application to adhesion assays.	0
76	Catch bonds in sickle cell disease: shear-enhanced adhesion of red blood cells to laminin.	O
75	Cell mechanical responses to subcellular perturbations generated by ultrasound and targeted microbubbles. <b>2022</b> ,	O
74	Phosphorylation disrupts long-distance electron transport in cytochrome c. <b>2022</b> , 13,	0
74 73	Phosphorylation disrupts long-distance electron transport in cytochrome c. <b>2022</b> , 13,  Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. <b>2022</b> , 13,	0
	Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. <b>2022</b> ,	
73	Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. <b>2022</b> , 13,	1
73 72	Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. 2022, 13,  Lymphocyte-Endothelial Interactions. 2016, 505-524  Load transfer between permanent and dynamic networks due to stress gradients in nonlinear	1 O
73 72 71	Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. 2022, 13,  Lymphocyte-Endothelial Interactions. 2016, 505-524  Load transfer between permanent and dynamic networks due to stress gradients in nonlinear viscoelastic hydrogels. 2023, 58, 101928	1 0
73 72 71 70	Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. 2022, 13,  Lymphocyte-Endothelial Interactions. 2016, 505-524  Load transfer between permanent and dynamic networks due to stress gradients in nonlinear viscoelastic hydrogels. 2023, 58, 101928  Profiling oocytes with neural networks from images and mechanical data. 2023, 138, 105640  Data driven modeling of interfacial tractionBeparation relations using a thermodynamically	1 0 0
73 72 71 70 69	Cooperative binding of T cell receptor and CD4 to peptide-MHC enhances antigen sensitivity. 2022, 13,  Lymphocyte-Endothelial Interactions. 2016, 505-524  Load transfer between permanent and dynamic networks due to stress gradients in nonlinear viscoelastic hydrogels. 2023, 58, 101928  Profiling oocytes with neural networks from images and mechanical data. 2023, 138, 105640  Data driven modeling of interfacial tractionBeparation relations using a thermodynamically consistent neural network. 2023, 404, 115826	1 O O O

65	Atomistic insights into migration mechanism of graphene-based membranes on soil mineral phases. <b>2022</b> , 137617	0
64	Receptor occupancy assessment and interpretation in terms of quantitative systems pharmacology: nivolumab case study. <b>2023</b> , 15,	Ο
63	Mechanical forces impair antigen discrimination by reducing differences in T-cell receptor/peptideMHC off-rates.	Ο
62	冊b郡 integrin intermediates: from molecular dynamics to adhesion assembly. <b>2022</b> ,	Ο
61	Mechanisms that promote the evolution of cross-reactive antibodies upon vaccination with designed influenza immunogens.	0
60	Effects of activity distance on dynamics of bio-molecules in the multidimensional potential energy model. <b>2022</b> , 12, 125312	Ο
59	The rate of microtubule breaking increases exponentially with curvature. <b>2022</b> , 12,	Ο
58	May the force be with you: the role of hyper-mechanostability of the bone sialoprotein binding protein during early stages of Staphylococci infections.	O
57	The full model of micropipette aspiration of cells: A mesoscopic simulation. 2022,	О
56	Contractile ring composition dictates kinetics of in silico contractility. 2022,	Ο
55	Single-Molecule Human Nucleosome Spontaneously Ruptures under the Stress of Compressive Force: A New Perspective on Gene Stability and Epigenetic Pathways.	0
54	Force-tuned avidity of spike variant-ACE2 interactions viewed on the single-molecule level. <b>2022</b> , 13,	Ο
53	Mechanics of isolated individual collagen fibrils,. 2022,	Ο
52	Force Probe Molecular Dynamics Simulations. <b>2005</b> , 493-515	6
51	Single Molecule Mechanics and Kinetics of Cardiac Myosin Interacting with Regulated Thin Filaments.	0
50	Characterizing the Biophysical Properties of Adhesive Proteins in Live Cells Using Single-Molecule Atomic Force Microscopy. <b>2023</b> , 63-77	Ο
49	Applications of magnetic and electromagnetic forces in micro-analytical systems.	0
48	Compliant mechanical response of the ultrafast folding protein EnHD under force. 2023, 6,	Ο

47	Biomechanical activation of blood platelets via adhesion to von Willebrand factor studied with mesoscopic simulations.	0
46	Force-regulated spontaneous conformational changes of integrins □□and □□.	O
45	Microfluidics-Based Force Spectroscopy Enables High-Throughput Force Experiments with Sub-Nanometer Resolution and Sub-Piconewton Sensitivity. 2206713	O
44	Fracture in Living Cell Monolayers.	Ο
43	Piconewton forces mediate GAIN domain dissociation of the latrophilin-3 adhesion GPCR.	0
42	Emulating Titin by a Multidomain DNA Structure. <b>2023</b> , 12, 59-64	1
41	Free energy and kinetic rate calculation via non-equilibrium molecular simulation: application to biomolecules. <b>2022</b> , 14, 1303-1314	О
40	Success and Fail at the Internalization and Expelling of Nanoparticles off Tumor Cells Through Electrodynamics and Diffusion Equation. <b>2022</b> ,	O
39	Flow and remodeling processes occurring within the body proper. <b>2023</b> , 591-655	0
38	Recent advances in sensing the inter-biomolecular interactions at the nanoscale A comprehensive review of AFM-based force spectroscopy. <b>2023</b> , 238, 124089	1
37	A statistical mechanics framework for polymer chain scission, based on the concepts of distorted bond potential and asymptotic matching. <b>2023</b> , 174, 105244	О
36	The sliding motility of the bacilliform virions of Influenza A Viruses.	O
35	Multi-level Force-dependent Allosteric Enhancement of <b>E</b> -catenin Binding to F-actin by Vinculin. <b>2023</b> , 435, 167969	О
34	High-throughput single-molecule quantification of individual base stacking energies in nucleic acids. <b>2023</b> , 14,	O
33	Mathematical model of mechanobiology of acute and repeated synaptic injury and systemic biomarker kinetics. 17,	0
32	May the force be with you: The role of hyper-mechanostability of the bone sialoprotein binding protein during early stages of Staphylococci infections. 11,	O
31	BiomEanique de l <b>p</b> ithEum cornEn´: rEistance au stress et implications dans la cicatrisation et le remodelage. <b>2023</b> , 46, 287-299	O
30	Water-driven expansion of boron nitride nanosheets for self-healing tobermorite composite. <b>2023</b> , 235, 109954	O

29	T-cell antigen recognition: catch-as-catch-can or catch-22?. <b>2023</b> , 42,	0
28	Rapid Molecular Mechanotyping with Microfluidic Force Spectroscopy.	O
27	Non-specific protein removal and specific protein capture simultaneously using a hydrodynamic force induced under vortex flow. <b>2023</b> , 31, 85-90	0
26	Dptimality of motor and clutch mechanical properties in a generalized model for cell traction forces[]	O
25	Single-molecular insights into the breakpoint of cellulose nanofibers assembly during saccharification. <b>2023</b> , 14,	О
24	Lighthatter interaction empowered by orbital angular momentum: Control of matter at the micro- and nanoscale. <b>2023</b> , 88, 100459	O
23	Mechanisms that promote the evolution of cross-reactive antibodies upon vaccination with designed influenza immunogens. <b>2023</b> , 42, 112160	0
22	Weak tension accelerates hybridization and dehybridization of short oligonucleotides.	O
21	Coupled bond dynamics alters relaxation in polymers with multiple intrinsic dissociation rates. <b>2023</b> , 19, 2716-2725	1
20	Cross-linker Mobility Governs Fracture Behavior of Catch-Bonded Networks. <b>2023</b> , 130,	O
19	Can a bulky glycocalyx promote catch bonding in early integrin adhesion? Perhaps a bit.	O
18	Distinct effects of two hearing lossਬssociated mutations in the sarcomeric myosin MYH7b. <b>2023</b> , 299, 104631	O
17	Inferring equilibrium transition rates from nonequilibrium protocols. 2023,	0
16	Stability of DNA and RNA hairpins: a comparative study based on ox-DNA. <b>2023</b> , 35, 265101	O
15	Site-specific Effector Protein Functionalization to Create Bead-based Avidity Model Systems.	0
14	Sticking to the Subject: Multifunctionality in Microbial Adhesins. <b>2023</b> , 9, 419	O
13	Three structural solutions for bacterial adhesion pilus stability and superelasticity. 2023,	0
12	Collagen breaks at weak sacrificial bonds taming its mechanoradicals. <b>2023</b> , 14,	O

11	Binding kinetics study of SARS-CoV-2 main protease and potential inhibitors via molecular dynamics simulations.	0
10	Two-Molecule Force Spectroscopy on Proteins.	O
9	A mechanistic model for nuclear migration in hyphae during mitosis.	O
8	Mechanobiology of the relocation of proteins in advecting cells: in vitro experiments, multi-physics modeling, and simulations.	O
7	Assessing Breast Cancer Molecular Subtypes Using Extracellular Vesicles[mRNA.	O
6	Rapid activation of non-oriented mechanophores via shock loading and spallation. 2023, 7,	O
5	Reply to Comment on Anisotropy of Shear-Induced Mechanochemical Reaction Rates of Surface Adsorbates; Implications for Theoretical Models []	O
4	DNA Nanotechnology for Investigating Mechanical Signaling in the Immune System.	O
3	Characterizing Biophysical Parameters of Single TCR-pMHC Interactions Using Optical Tweezers. <b>2023</b> , 375-392	0
2	A Fast Discrete Element Method for Adhesive Particles. <b>2023</b> , 17-50	O
1	Dissociation Rate Calculation via Constant-Force Steered Molecular Dynamics Simulation.	O