Elliot L Elson

List of Publications by Year
in descending order

115 papers	12,018 citations	38742 50 h-index	28297 105 g-index
118 all docs	118 docs citations	118 times ranked	8365 citing authors

#	Article	IF	Citations
1	A review on qualifications and cost effectiveness of induced pluripotent stem cells (IPSCs)-induced cardiomyocytes in drug screening tests. Archives of Physiology and Biochemistry, 2023, 129, 131-142.	2.1	3
2	Memorial Viewpoint for Watt W. Webb: An Experimentalistâ€™s Experimentalist. Journal of Physical Chemistry B, 2021, 125, 2793-2795.	2.6	1
3	Watt W. Webb: His measurements of the seemingly inaccessible broadened the horizons of biophysics. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	0
4	Fluorescence Correlation Spectroscopy and Photon Counting Histograms in Finite, Bounded Domains. Biophysical Journal, 2020, 119, 265-273.	0.5	5
5	The Balance between Actomyosin Contractility and Microtubule Polymerization Regulates Hierarchical Protrusions That Govern Efficient Fibroblastâ€“Collagen Interactions. ACS Nano, 2020, 14, 7868-7879.	14.6	37
6	Stable fitting of noisy stress relaxation data. Mechanics of Soft Materials, 2019, 1, 1.	0.9	2
7	Atomic Force Microscopy of Phase Separation on Ruptured, Giant Unilamellar Vesicles, and a Mechanical Pathway for the Co-Existence of Lipid Gel Phases. Journal of Biomechanical Engineering, 2019, 141, .	1.3	1
8	A model for positive feedback control of the transformation of fibroblasts to myofibroblasts. Progress in Biophysics and Molecular Biology, 2019, 144, 30-40.	2.9	19
9	Introduction to fluorescence correlation Spectroscopyâ€”Brief and simple. Methods, 2018, 140-141, 3-9.	3.8	17
10	Reminiscences on the "Classic" 1976 FRAP Article in Biophysical Journal. Biophysical Journal, 2018, 115, 1156-1159.	0.5	3
11	Energy dissipation in quasi-linear viscoelastic tissues, cells, and extracellular matrix. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 84, 198-207.	3.1	15
12	Fibroblasts Slow Conduction Velocity in a Reconstituted Tissue Model of Fibrotic Cardiomyopathy. ACS Biomaterials Science and Engineering, 2017, 3, 3022-3028.	5.2	17
13	Investigation of Nanoscopic Phase Separations in Lipid Membranes Using Inverse FCS. Biophysical Journal, 2017, 112, 2367-2376.	0.5	13
14	Discrete quasi-linear viscoelastic damping analysis of connective tissues, and the biomechanics of stretching. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 69, 193-202.	3.1	23
15	Remodeling by fibroblasts alters the rate-dependent mechanical properties of collagen. Acta Biomaterialia, 2016, 37, 28-37.	8.3	35
16	Tissue constructs: platforms for basic research and drug discovery. Interface Focus, 2016, 6, 20150095.	3.0	28
17	Efficient and optimized identification of generalized Maxwell viscoelastic relaxation spectra. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 55, 32-41.	3.1	62
18	A discrete spectral analysis for determining quasi-linear viscoelastic properties of biological materials. Journal of the Royal Society Interface, 2015, 12, 20150707.	3.4	29

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19	Collective Matrix Remodeling by Isolated Cells: Unionizing Home Improvement Do-It-Yourselfers. Biophysical Journal, 2015, 108, 2611-2612.	0.5	5
20	Mechanically Guided Cell Migration: Less of a Stretch than Ever. Biophysical Journal, 2014, 106, 776-777.	0.5	2
21	Diffusion of Human Replication Protein A along Single-Stranded DNA. Journal of Molecular Biology, 2014, 426, 3246-3261.	4.2	120
22	Optical Microscopy Methods for Measuring Structure and Dynamic Processes of Cells and Tissues. , 2014, , 507-518.		0
23	The role of mechanics in actin stress fiber kinetics. Experimental Cell Research, 2013, 319, 2490-2500.	2.6	33
24	Study of Nanoscopic Phase Separation in Membranes using Inverse FCS. Biophysical Journal, 2013, 104, 373a.	0.5	0
25	Import of Short Peptides in Yeast as a Bistable Switch. Biophysical Journal, 2013, 104, 159a-160a.	0.5	0
26	40 Years of FCS. Methods in Enzymology, 2013, 518, 1-10.	1.0	18
27	Brief Introduction to Fluorescence Correlation Spectroscopy. Methods in Enzymology, 2013, 518, 11-41.	1.0	35
28	Confidence Intervals for Estimation of the Concentration and Brightness of Multiple Diffusing Species. , 2012, , .		0
29	Confidence Intervals for Concentration and Brightness from Fluorescence Fluctuation Measurements. Biophysical Journal, 2012, 103, 898-906.	0.5	11
30	Confidence Intervals for Estimation of the Concentration and Brightness of Multiple Diffusing Species. , 2012, , .		0
31	Physically-Induced Cytoskeleton Remodeling of Cells in Three-Dimensional Culture. PLoS ONE, 2012, 7, e45512.	2.5	57
32	Interfacial Phases on Giant Unilamellar Vesicles. , 2012, , .		0
33	Fluorescence Correlation Spectroscopy: Past, Present, Future. Biophysical Journal, 2011, 101, 2855-2870.	0.5	356
34	Diffusion of MMPs on the Surface of Collagen Fibrils: The Mobile Cell Surface â€“ Collagen Substratum Interface. PLoS ONE, 2011, 6, e24029.	2.5	69
35	Short Communication: Vascular Smooth Muscle Cell Stiffness As a Mechanism for Increased Aortic Stiffness With Aging. Circulation Research, 2010, 107, 615-619.	4.5	275
36	Phase Separation in Biological Membranes: Integration of Theory and Experiment. Annual Review of Biophysics, 2010, 39, 207-226.	10.0	188

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37	Increases in Vascular Smooth Muscle Stiffness with Aging. FASEB Journal, 2010, 24, .	0.5	0
38	Stretch-activated force shedding, force recovery, and cytoskeletal remodeling in contractile fibroblasts. Journal of Biomechanics, 2008, 41, 2964-2971.	2.1	72
39	Engineering lipid tubules using nano-sized building blocks: the combinatorial self-assembly of vesicles. Lab on A Chip, 2008, 8, 339-345.	6.0	19
40	Oligomerization of the EGF Receptor Investigated by Live Cell Fluorescence Intensity Distribution Analysis. Biophysical Journal, 2007, 93, 1021-1031.	0.5	184
41	A simplified approach to quasi-linear viscoelastic modeling. Journal of Biomechanics, 2007, 40, 3070-3078.	2.1	84
42	Reconstitution of the Frank-Starling Mechanism in Engineered Heart Tissues. Biophysical Journal, 2006, 91, 1800-1810.	0.5	46
43	Cellular and Matrix Mechanics of Bioartificial Tissues During Continuous Cyclic Stretch. Annals of Biomedical Engineering, 2006, 34, 1678-1690.	2.5	44
44	Cellular and Matrix Contributions to Tissue Construct Stiffness Increase with Cellular Concentration. Annals of Biomedical Engineering, 2006, 34, 1475-1482.	2.5	41
45	Myosin-based contraction is not necessary for cardiac c-looping in the chick embryo. Anatomy and Embryology, 2006, 211, 443-454.	1.5	24
46	On the application of strain factors for approximation of the contribution of anisotropic cells to the mechanics of a tissue construct. Journal of Biomechanics, 2006, 39, 2145-2151.	2.1	13
47	The kinetics of conformational fluctuations in an unfolded protein measured by fluorescence methods. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 2385-2389.	7.1	138
48	Thin Bio-Artificial Tissues in Plane Stress: The Relationship between Cell and Tissue Strain, and an Improved Constitutive Model. Biophysical Journal, 2005, 88, 765-777.	0.5	52
49	The Relationship between Cell and Tissue Strain in Three-Dimensional Bio-Artificial Tissues. Biophysical Journal, 2005, 88, 778-789.	0.5	71
50	Measuring Unfolding of Proteins in the Presence of Denaturant Using Fluorescence Correlation Spectroscopy. Biophysical Journal, 2005, 88, 1413-1422.	0.5	99
51	Rho-kinase-mediated Ca2+-independent contraction in rat embryo fibroblasts. American Journal of Physiology - Cell Physiology, 2004, 286, C8-C21.	4.6	54
52	Quick tour of fluorescence correlation spectroscopy from its inception. Journal of Biomedical Optics, 2004, 9, 857.	2.6	97
53	Fluorescence correlation spectroscopy with high-order and dual-color correlation to probe nonequilibrium steady states. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 2828-2833.	7.1	77
54	The biochemical response of the heart to hypertension and exercise. Trends in Biochemical Sciences, 2004, 29, 609-617.	7.5	89

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55	Cell Orientation Influences the Biaxial Mechanical Properties of Fibroblast Populated Collagen Vessels. Annals of Biomedical Engineering, 2004, 32, 720-731.	2.5	29
56	Interstitial Collagenase Is a Brownian Ratchet Driven by Proteolysis of Collagen. Science, 2004, 306, 108-111.	12.6	174
57	Incremental Mechanics of Collagen Gels: New Experiments and a New Viscoelastic Model. Annals of Biomedical Engineering, 2003, 31, 1287-1296.	2.5	72
58	Continual assembly of desmosomes within stable intercellular contacts of epithelial A-431 cells. Cell and Tissue Research, 2003, 314, 399-410.	2.9	27
59	Statistical Analysis of Fluorescence Correlation Spectroscopy: The Standard Deviation and Bias. Biophysical Journal, 2003, 84, 2030-2042.	0.5	130
60	Mechanics of cell spreading: role of myosin II. Journal of Cell Science, 2003, 116, 1617-1625.	2.0	141
61	One-Dimensional Viscoelastic Behavior of Fibroblast Populated Collagen Matrices. Journal of Biomechanical Engineering, 2003, 125, 719-725.	1.3	58
62	FCS, Then and Now. Microscopy and Microanalysis, 2003, 9, 1144-1145.	0.4	0
63	Concentration fluctuations in a mesoscopic oscillating chemical reaction system. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 10376-10381.	7.1	118
64	Measurement of microsecond dynamic motion in the intestinal fatty acid binding protein by using fluorescence correlation spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 14171-14176.	7.1	119
65	What fluorescence correlation spectroscopy can tell us about unfolded proteins. Advances in Protein Chemistry, 2002, 62, 91-109.	4.4	29
66	Epidermal growth factor induces acute matrix contraction and subsequent calpain-modulated relaxation. Wound Repair and Regeneration, 2002, 10, 67-76.	3.0	37
67	Reciprocal interactions between cells and extracellular matrix during remodeling of tissue constructs. Biophysical Chemistry, 2002, 100, 593-605.	2.8	78
68	Substrate Recognition by Gelatinase A: The C-Terminal Domain Facilitates Surface Diffusion. Biophysical Journal, 2001, 81, 2370-2377.	0.5	28
69	Fluorescence Correlation Spectroscopy Measures Molecular Transport in Cells. Traffic, 2001, 2, 789-796.	2.7	112
70	Cell Mechanics Studied by a Reconstituted Model Tissue. Biophysical Journal, 2000, 79, 2353-2368.	0.5	212
71	A Cell-Based Constitutive Relation for Bio-Artificial Tissues. Biophysical Journal, 2000, 79, 2369-2381.	0.5	96
72	Weak Dependence of Mobility of Membrane Protein Aggregates on Aggregate Size Supports a Viscous Model of Retardation of Diffusion. Biophysical Journal, 1999, 76, 314-322.	0.5	77

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73	Quantitative Study of Polymer Conformation and Dynamics by Single-Particle Tracking. Biophysical Journal, 1999, 76, 1598-1605.	0.5	39
74	Collagen Receptor Control of Epithelial Morphogenesis and Cell Cycle Progression. American Journal of Pathology, 1999, 155, 927-940.	3.8	56
75	Alternative Pathways of Epidermal Growth Factor Receptor Mediated Contractile Force in NR6 Fibroblasts. , 1999, , .		0
76	Axial and transverse stiffness measures of cochlear outer hair cells suggest a common mechanical basis. Pflugers Archiv European Journal of Physiology, 1998, 436, 9-15.	2.8	32
77	Regulation of cytoskeletal mechanics and cell growth by myosin light chain phosphorylation. American Journal of Physiology - Cell Physiology, 1998, 275, C1349-C1356.	4.6	96
78	Threeâ€dimensional reconstitution of embryonic cardiomyocytes in a collagen matrix: a new heart muscle model system. FASEB Journal, 1997, 11, 683-694.	0.5	584
79	Fibroblast Contractility without an Increase in Basal Myosin Light Chain Phosphorylation in Wild Type Cells and Cells Expressing the Catalytic Domain of Myosin Light Chain Kinase. Journal of Biological Chemistry, 1995, 270, 18734-18737.	3.4	30
80	Capping protein levels influence actin assembly and cell motility in dictyostelium. Cell, 1995, 81, 591-600.	28.9	158
81	Barriers to diffusion. Current Biology, 1993, 3, 152-154.	3.9	1
82	Surface particle transport mechanism independent of myosin II in Dictyostelium. Nature, 1992, 356, 438-440.	27.8	56
83	Analysis of confocal laser-microscope optics for 3-D fluorescence correlation spectroscopy. Applied Optics, 1991, 30, 1185.	2.1	166
84	Actin tracks. Nature, 1991, 354, 362-363.	27.8	3
85	Mechanical Properties of HL60 Cells: Role of Stimulation and Differentiation in Retention in Capillary-sized Pores. American Journal of Respiratory Cell and Molecular Biology, 1991, 5, 230-241.	2.9	28
86	To flow or not to flow?. Nature, 1990, 345, 28-28.	27.8	1
87	Nanometre-level analysis demonstrates that lipid flow does not drive membrane glycoprotein movements. Nature, 1989, 340, 284-288.	27.8	281
88	Forward transport of glycoproteins on leading lamellipodia in locomoting cells. Nature, 1989, 340, 315-317.	27.8	121
89	Capping of surface receptors and concomitant cortical tension are generated by conventional myosin. Nature, 1989, 341, 549-551.	27.8	272
90	Chapter 11 Interpretation of Fluorescence Correlation Spectroscopy and Photobleaching Recovery in Terms of Molecular Interactions. Methods in Cell Biology, 1989, 30, 307-332.	1.1	47

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91	Fluorescence photobleaching and correlation spectroscopy for translational diffusion in biological systems. Biochemical Society Transactions, 1986, 14, 839-841.	3.4	4
92	Alpha1-adrenergic stimulation and cytoplasmic free calcium concentration in cultured renal proximal tubular cells: Evidence for compartmentalization of quin-2 and fura-2. Journal of Cellular Physiology, 1986, 128, 466-474.	4.1	27
93	The effect of salivary amylase on the viscosity behaviour of gelatinised starch suspensions and the mechanical properties of gelatinised starch granules. Journal of the Science of Food and Agriculture, 1986, 37, 573-590.	3.5	39
94	Cross-linking surface immunoglobulin increases the stiffness of lymphocytes. Molecular Immunology, 1984, 21, 1253-1257.	2.2	7
95	5. Fluorescence Methods for Studying Membrane Dynamics. Methods in Experimental Physics, 1982, 20, 197-227.	0.1	8
96	The M Protein of Vesicular Stomatitis Virus. Biophysical Journal, 1982, 37, 26-28.	0.5	7
97	Fluorescence photobleaching in cell biology. Nature, 1982, 295, 283-284.	27.8	30
98	Differences in the response of several cell types to inhibition of surface receptor mobility by local concanavalina binding. Experimental Cell Research, 1981, 136, 189-201.	2.6	28
99	Fluorescence photobleaching recovery measurements reveal differences in envelopment of sindbis and vesicular stomatitis viruses. Cell, 1981, 23, 423-431.	28.9	48
100	Analysis of cell surface interactions by measurements of lateral mobility. Journal of Supramolecular Structure, 1979, 12, 481-489.	2.3	76
101	Membrane receptor mobility changes by sendai virus. Experimental Cell Research, 1979, 123, 333-343.	2.6	25
102	Fluorescence correlation spectroscopy. III. Uniform translation and laminar flow. Biopolymers, 1978, 17, 361-376.	2.4	303
103	Lateral motion and valence of Fc receptors on rat peritoneal mast cells. Nature, 1976, 264, 550-552.	27.8	143
104	A new technique for optical observation of the kinetics of chemical reactions perturbed by small pressure changes. Biopolymers, 1975, 14, 883-887.	2.4	25
105	Fluorescence correlation spectroscopy. I. Conceptual basis and theory. Biopolymers, 1974, 13, 1-27.	2.4	1,467
106	Fluorescence correlation spectroscopy. II. An experimental realization. Biopolymers, 1974, 13, 29-61.	2.4	1,340
107	The strand-separation transition of T2 bacteriophage DNA. Biopolymers, 1974, 13, 797-824.	2.4	15
108	Thermodynamic Fluctuations in a Reacting Systemâ€”Measurement by Fluorescence Correlation Spectroscopy. Physical Review Letters, 1972, 29, 705-708.	7.8	1,526

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109	A sequential model of nucleation-dependent protein folding: Kinetic studies of ribonuclease A. Journal of Molecular Biology, 1972, 63, 453-469.	4.2	133
110	Analysis of the steady-state approximation for the sequential model. Journal of Molecular Biology, 1972, 63, 469-475.	4.2	8
111	Helix formation by d(TA) oligomers. Journal of Molecular Biology, 1970, 48, 145-171.	4.2	153
112	Helix formation by d(TA) oligomers. Journal of Molecular Biology, 1970, 54, 401-415.	4.2	94
113	Fractionation of oligodeoxynucleotides by polyacrylamide gel electrophoresis. Analytical Biochemistry, 1969, 27, 193-204.	2.4	37
114	Helix Formation by dAT oligomers. Journal of Molecular Biology, 1968, 36, 291-304.	4.2	207
115	Hydrolysis of 2-Methyl-Î”2-thiazoline and its Formation from N-Acetyl-Î²-mercaptoethylamine. Observations on an N-S Acyl Shift1. Journal of the American Chemical Society, 1959, 81, 5089-5095.	13.7	70