Martin Guthold

List of Publications by Year
in descending order

68 papers	5,204 citations	136885 32 h-index	114418 63 g-index
70 all docs	70 docs citations	70 times ranked	5904 citing authors

#	Article	IF	Citations
1	Scanning Force Microscopy of DNA Deposited onto Mica: EquilibrationversusKinetic Trapping Studied by Statistical Polymer Chain Analysis. Journal of Molecular Biology, 1996, 264, 919-932.	2.0	641
2	Circular DNA molecules imaged in air by scanning force microscopy. Biochemistry, 1992, 31, 22-26.	1.2	438
3	Escherichia coli RNA Polymerase Activity Observed Using Atomic Force Microscopy. Biochemistry, 1997, 36, 461-468.	1.2	341
4	Increased Heating Efficiency and Selective Thermal Ablation of Malignant Tissue with DNA-Encased Multiwalled Carbon Nanotubes. ACS Nano, 2009, 3, 2667-2673.	7.3	244
5	Direct Observation of One-Dimensional Diffusion and Transcription by Escherichia coli RNA Polymerase. Biophysical Journal, 1999, 77, 2284-2294.	0.2	238
6	Fibrin Fibers Have Extraordinary Extensibility and Elasticity. Science, 2006, 313, 634-634.	6.0	230
7	DNA-functionalized single-walled carbon nanotubes. Nanotechnology, 2002, 13, 601-604.	1.3	221
8	Controlled manipulation of molecular samples with the nanoManipulator. IEEE/ASME Transactions on Mechatronics, 2000, 5, 189-198.	3.7	203
9	Wrapping of DNA around the E.coli RNA polymerase open promoter complex. EMBO Journal, 1999, 18, 4464-4475.	3.5	195
10	A Comparison of the Mechanical and Structural Properties of Fibrin Fibers with Other Protein Fibers. Cell Biochemistry and Biophysics, 2007, 49, 165-181.	0.9	194
11	Determining the mechanical properties of electrospun poly-Îµ-caprolactone (PCL) nanofibers using AFM and a novel fiber anchoring technique. Materials Science and Engineering C, 2016, 59, 203-212.	3.8	171
12	Transcriptional activation via DNA-looping: visualization of intermediates in the activation pathway of E. coli RNA polymeraseÂ·Ïƒ54 holoenzyme by scanning force microscopy. Journal of Molecular Biology, 1997, 270, 125-138.	2.0	143
13	The mechanical properties of single fibrin fibers. Journal of Thrombosis and Haemostasis, 2010, 8, 1030-1036.	1.9	142
14	Following the assembly of RNA polymerase-DNA complexes in aqueous solutions with the scanning force microscope.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 12927-12931.	3.3	136
15	Characterizing the micro-scale elastic modulus of hydrogels for use in regenerative medicine. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 27, 115-127.	1.5	108
16	Fibrin Fiber Stiffness Is Strongly Affected by Fiber Diameter, but Not by Fibrinogen Glycation. Biophysical Journal, 2016, 110, 1400-1410.	0.2	101
17	The mechanical properties of individual, electrospun fibrinogen fibers. Biomaterials, 2009, 30, 1205-1213.	5.7	99
18	A simple and robust approach to reducing contact resistance in organic transistors. Nature Communications, 2018, 9, 5130.	5.8	96

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19	Î±â˜Î± Cross-Links Increase Fibrin Fiber Elasticity and Stiffness. Biophysical Journal, 2012, 102, 168-175.	0.2	85
20	Visualization and Mechanical Manipulations of Individual Fibrin Fibers Suggest that Fiber Cross Section Has Fractal Dimension 1.3. Biophysical Journal, 2004, 87, 4226-4236.	0.2	83
21	Facilitated Target Location on DNA by IndividualEscherichia coli RNA Polymerase Molecules Observed with the Scanning Force Microscope Operating in Liquid. Journal of Biological Chemistry, 1999, 274, 16665-16668.	1.6	82
22	Easy and direct method for calibrating atomic force microscopy lateral force measurements. Review of Scientific Instruments, 2007, 78, 063707.	0.6	75
23	The mechanical stressâ€“strain properties of single electrospun collagen type I nanofibers. Acta Biomaterialia, 2010, 6, 2997-3003.	4.1	72
24	A combined atomic force/fluorescence microscopy technique to select aptamers in a single cycle from a small pool of random oligonucleotides. Microscopy Research and Technique, 2007, 70, 372-381.	1.2	67
25	Interconvertible Lac Repressorâ€“DNA Loops Revealed by Single-Molecule Experiments. PLoS Biology, 2008, 6, e232.	2.6	67
26	Investigation and modification of molecular structures with the nanoManipulator. Journal of Molecular Graphics and Modelling, 1999, 17, 187-197.	1.3	55
27	The mechanical properties of dry, electrospun fibrinogen fibers. Materials Science and Engineering C, 2012, 32, 215-221.	3.8	55
28	Enhanced Charge Transport in Hybrid Perovskite Fieldâ€Effect Transistors via Microstructure Control. Advanced Electronic Materials, 2018, 4, 1800316.	2.6	52
29	The effect of neighboring cells on the stiffness of cancerous and non-cancerous human mammary epithelial cells. New Journal of Physics, 2014, 16, 105002.	1.2	47
30	A Modular Fibrinogen Model that Captures the Stress-Strain Behavior ofÂFibrin Fibers. Biophysical Journal, 2012, 103, 1537-1544.	0.2	43
31	Solution-Processed Organic and Halide Perovskite Transistors on Hydrophobic Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 18120-18126.	4.0	40
32	Combining capillary electrophoresis and next-generation sequencing for aptamer selection. Analytical and Bioanalytical Chemistry, 2015, 407, 1527-1532.	1.9	39
33	Developing a problem-based learning (PBL) curriculum for professionalism and scientific integrity training for biomedical graduate students. Journal of Medical Ethics, 2010, 36, 614-619.	1.0	32
34	Strength and failure of fibrin fiber branchpoints. Journal of Thrombosis and Haemostasis, 2010, 8, 1135-1138.	1.9	27
35	Molecular interference of fibrin's divalent polymerization mechanism enables modulation of multiscale material properties. Biomaterials, 2015, 49, 27-36.	5.7	27
36	Interpretation and Validation of Maximum Absorbance Data Obtained from Turbidimetry Analysis of Plasma Clots. Thrombosis and Haemostasis, 2020, 120, 044-054.	1.8	20

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37	Stretching single fibrin fibers hampers their lysis. Acta Biomaterialia, 2017, 60, 264-274.	4.1	19
38	Nonuniform Internal Structure of Fibrin Fibers: Protein Density and Bond Density Strongly Decrease with Increasing Diameter. BioMed Research International, 2017, 2017, 1-13.	0.9	18
39	CD138-negative myeloma cells regulate mechanical properties of bone marrow stromal cells through SDF-1/CXCR4/AKT signaling pathway. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 338-347.	1.9	17
40	Analysis of single, cisplatinâ€induced DNA bends by atomic force microscopy and simulations. Journal of Molecular Recognition, 2018, 31, e2731.	1.1	17
41	Fluorinated benzalkylsilane molecular rectifiers. Scientific Reports, 2016, 6, 38092.	1.6	16
42	Denaturing of single electrospun fibrinogen fibers studied by deep ultraviolet fluorescence microscopy. Microscopy Research and Technique, 2011, 74, 219-224.	1.2	15
43	Multiscale Modeling of Double-Helical DNA and RNA: A Unification through Lie Groups. Journal of Physical Chemistry B, 2012, 116, 8556-8572.	1.2	15
44	PT-ACRAMTU, A Platinumâ€“Acridine Anticancer Agent, Lengthens and Aggregates, but does not Stiffen or Soften DNA. Cell Biochemistry and Biophysics, 2013, 67, 1103-1113.	0.9	15
45	Mechanical Properties of Electrospun, Blended Fibrinogen: PCL Nanofibers. Nanomaterials, 2020, 10, 1843.	1.9	15
46	Strength, deformability and toughness of uncrosslinked fibrin fibers from theoretical reconstruction of stress-strain curves. Acta Biomaterialia, 2021, 136, 327-342.	4.1	15
47	Electrospinning and optical characterization of organic rubrene nanofibers. Journal of Applied Physics, 2012, 111, .	1.1	14
48	Title is missing!. Biomedical Microdevices, 2001, 3, 9-18.	1.4	13
49	Erythrocytic bioactivation of nitrite and its potentiation by far-red light. Redox Biology, 2019, 20, 442-450.	3.9	13
50	Fibrinogen Unfolding Mechanisms Are Not Too Much of a Stretch. Structure, 2011, 19, 1536-1538.	1.6	12
51	Simple method of DNA stretching on glass substrate for fluorescence imaging and spectroscopy. Journal of Biomedical Optics, 2014, 19, 051210.	1.4	11
52	AFM of self-assembled lambda DNAâ€“histone networks. Colloids and Surfaces B: Biointerfaces, 2015, 134, 17-25.	2.5	10
53	Single-Molecule Study Reveals a ComplexE. coli RNA Polymerase. ChemBioChem, 2001, 2, 167-170.	1.3	9
54	Automated Fiber Diameter and Porosity Measurements of Plasma Clots in Scanning Electron Microscopy Images. Biomolecules, 2021, 11, 1536.	1.8	9

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55	Single DNA Molecule Analysis of Transcription Complexes. Methods in Enzymology, 2003, 371, 34-50.	0.4	8
56	Development of Transient Recombinant Expression and Affinity Chromatography Systems for Human Fibrinogen. International Journal of Molecular Sciences, 2022, 23, 1054.	1.8	6
57	The Applicability of Current Turbidimetric Approaches for Analyzing Fibrin Fibers and Other Filamentous Networks. Biomolecules, 2022, 12, 807.	1.8	6
58	Selection of beadâ€displayed, PNAâ€encoded chemicals. Journal of Molecular Recognition, 2010, 23, 414-422.	1.1	5
59	Single fibrin fiber experiments suggest longitudinal rather than transverse cross-linking: reply to a rebuttal. Journal of Thrombosis and Haemostasis, 2010, 8, 2090-2091.	1.9	5
60	Human mammary epithelial cells in a mature, stratified epithelial layer flatten and stiffen compared to single and confluent cells. Biochimica Et Biophysica Acta - General Subjects, 2021, 1865, 129891.	1.1	5
61	Highly Stretchable, Biocompatible, Striated Substrate Made from Fugitive Glue. Materials, 2015, 8, 3508-3518.	1.3	3
62	Diffusion and Binding of Mismatch Repair Protein, MSH2, in Breast Cancer Cells at Different Stages of Neoplastic Transformation. PLoS ONE, 2017, 12, e0170414.	1.1	2
63	How Stiff Is It? Characterizing the microâ€scale elastic modulus of hydrogels for use in regenerative medicine. FASEB Journal, 2013, 27, 1217.21.	0.2	2
64	Scanning Force Microscopy and Nanomangulation: Studies of Dna and Proteins Involved in Dna Repair. Microscopy and Microanalysis, 1999, 5, 1004-1005.	0.2	0
65	Diffusive Behavior of Mismatch Repair Protein MSH2 in Cells at Different Stages of Cancer. Biophysical Journal, 2017, 112, 123a-124a.	0.2	0
66	Development of Zinc Chelating Resin Polymer Beads for the Removal of Cell-Free Hemoglobin. Annals of Biomedical Engineering, 2019, 47, 1470-1478.	1.3	0
67	Influence of Cell Confluency on Mechanical Properties of Breast Cells. Biophysical Journal, 2020, 118, 600a.	0.2	0
68	Intrinsically Unfolded Alpha-C Region Of Fibrinogen is Major Contributor to Mechanical Strength of Fibrin Fibers. Biophysical Journal, 2020, 118, 536a.	0.2	0