Neil H Thomson

List of Publications by Year
in descending order

82 papers	6,239 citations	87888 38 h-index	66911 78 g-index
83 all docs	83 docs citations	83 times ranked	6942 citing authors

#	Article	IF	Citations
1	Mechanical properties of carbon nanotubes. Applied Physics A: Materials Science and Processing, 1999, 69, 255-260.	2.3	1,283
2	Short cantilevers for atomic force microscopy. Review of Scientific Instruments, 1996, 67, 3583-3590.	1.3	456
3	Escherichia coli RNA Polymerase Activity Observed Using Atomic Force Microscopy. Biochemistry, 1997, 36, 461-468.	2.5	341
4	Competing Pathways Determine Fibril Morphology in the Self-assembly of Î²2-Microglobulin into Amyloid. Journal of Molecular Biology, 2005, 351, 850-864.	4.2	320
5	Direct Observation of One-Dimensional Diffusion and Transcription by Escherichia coli RNA Polymerase. Biophysical Journal, 1999, 77, 2284-2294.	0.5	238
6	Hierarchical Assembly of Î²2-Microglobulin Amyloid In Vitro Revealed by Atomic Force Microscopy. Journal of Molecular Biology, 2003, 330, 785-797.	4.2	213
7	Î²2-microglobulin and its deamidated variant, N17D form amyloid fibrils with a range of morphologies in vitro. Journal of Molecular Biology, 2001, 313, 559-571.	4.2	186
8	Tuning the Elastic Modulus of Hydrated Collagen Fibrils. Biophysical Journal, 2009, 97, 2985-2992.	0.5	143
9	The yeast prion Ure2p retains its native alpha-helical conformation upon assembly into protein fibrils in vitro. EMBO Journal, 2002, 21, 2903-2911.	7.8	137
10	Biological applications of the AFM: From single molecules to organs. International Journal of Imaging Systems and Technology, 1997, 8, 151-161.	4.1	132
11	Reversible Binding of DNA to Mica for AFM Imaging. Langmuir, 1996, 12, 5905-5908.	3.5	122
12	Protein tracking and detection of protein motion using atomic force microscopy. Biophysical Journal, 1996, 70, 2421-2431.	0.5	113
13	Adsorption and Self-Assembly of Peptides on Mica Substrates. Angewandte Chemie - International Edition, 2005, 44, 1965-1968.	13.8	112
14	Micromechanical and structural properties of a pennate diatom investigated by atomic force microscopy. Journal of Microscopy, 2001, 202, 518-532.	1.8	111
15	Effects of hydration on the mechanical response of individual collagen fibrils. Applied Physics Letters, 2008, 92, .	3.3	111
16	The nature of the air-cleaved mica surface. Surface Science Reports, 2016, 71, 367-390.	7.2	103
17	Collision events between RNA polymerases in convergent transcription studied by atomic force microscopy. Nucleic Acids Research, 2006, 34, 5416-5425.	14.5	102
18	Methods for fabricating and characterizing a new generation of biomimetic materials. Materials Science and Engineering C, 1999, 7, 37-43.	7.3	101

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19	Phase imaging of moving DNA molecules and DNA molecules replicated in the atomic force microscope. Nucleic Acids Research, 1997, 25, 4379-4384.	14.5	95
20	A method to provide rapid in situ determination of tip radius in dynamic atomic force microscopy. Review of Scientific Instruments, 2012, 83, 043707.	1.3	81
21	Formation of Aminosilane-Functionalized Mica for Atomic Force Microscopy Imaging of DNA. Langmuir, 2005, 21, 7884-7891.	3.5	80
22	The Intrinsic Resolution Limit in the Atomic Force Microscope: Implications for Heights of Nano-Scale Features. PLoS ONE, 2011, 6, e23821.	2.5	80
23	Nucleotide Binding to DNA Gyrase Causes Loss of DNA Wrap. Journal of Molecular Biology, 2004, 337, 597-610.	4.2	70
24	Oriented, Active Escherichia coli RNA Polymerase: An Atomic Force Microscope Study. Biophysical Journal, 1999, 76, 1024-1033.	0.5	69
25	Small angle X-ray scattering of wheat seed-storage proteins: Î±-, Î³- and Ï‰-gliadins and the high molecular weight (HMW) subunits of glutenin. BBA - Proteins and Proteomics, 1999, 1430, 359-366.	2.1	65
26	The Circularization of Amyloid Fibrils Formed by Apolipoprotein C-II. Biophysical Journal, 2003, 85, 3979-3990.	0.5	62
27	Amyloid Under the Atomic Force Microscope. Protein and Peptide Letters, 2006, 13, 261-270.	0.9	60
28	Dynamic mechanical analysis of collagen fibrils at the nanoscale. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 5, 165-170.	3.1	60
29	Imaging the substructure of antibodies with tapping-mode AFM in air: the importance of a water layer on mica. Journal of Microscopy, 2005, 217, 193-199.	1.8	59
30	Investigating the structural properties of amyloid-like fibrils formedin vitro fromÎ²2-microglobulin using limited proteolysis and electrospray ionisation mass spectrometry. Rapid Communications in Mass Spectrometry, 2006, 20, 1628-1636.	1.5	58
31	Subâ€Nanometer Thick Gold Nanosheets as Highly Efficient Catalysts. Advanced Science, 2019, 6, 1900911.	11.2	56
32	Real Space Imaging of Nanoparticle Assembly at Liquidâ€“Liquid Interfaces with Nanoscale Resolution. Nano Letters, 2016, 16, 5463-5468.	9.1	55
33	Measuring the true height of water films on surfaces. Nanotechnology, 2011, 22, 465705.	2.6	54
34	Multi-scale mechanical characterization of highly swollen photo-activated collagen hydrogels. Journal of the Royal Society Interface, 2015, 12, 20141079.	3.4	53
35	The substructure of immunoglobulin G resolved to 25kDa using amplitude modulation AFM in air. Ultramicroscopy, 2005, 105, 103-110.	1.9	48
36	Poly(ethylene glycol) Lipid-Shelled Microbubbles: Abundance, Stability, and Mechanical Properties. Langmuir, 2014, 30, 5557-5563.	3.5	48

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37	A Structural Model for Apolipoprotein C-II Amyloid Fibrils: Experimental Characterization and Molecular Dynamics Simulations. Journal of Molecular Biology, 2011, 405, 1246-1266.	4.2	45
38	Ultrasound-triggered therapeutic microbubbles enhance the efficacy of cytotoxic drugs by increasing circulation and tumor drug accumulation and limiting bioavailability and toxicity in normal tissues. Theranostics, 2020, 10, 10973-10992.	10.0	45
39	Bi-stability of amplitude modulation AFM in air: deterministic and stochastic outcomes for imaging biomolecular systems. Nanotechnology, 2010, 21, 225710.	2.6	39
40	Nanomechanics of Lipid Encapsulated Microbubbles with Functional Coatings. Langmuir, 2013, 29, 4096-4103.	3.5	36
41	Stability, resolution, and ultra-low wear amplitude modulation atomic force microscopy of DNA: Small amplitude small set-point imaging. Applied Physics Letters, 2013, 103, .	3.3	35
42	Atomic Force Microscopy of Cationic Liposomes. Langmuir, 2000, 16, 4813-4818.	3.5	33
43	Surface characterisation and biomechanical analysis of the sclera by atomic force microscopy. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 535-540.	3.1	31
44	Side-Chain Supramolecular Polymers Employing Conformer Independent Triple Hydrogen Bonding Arrays. Macromolecules, 2013, 46, 9634-9641.	4.8	29
45	How localized are energy dissipation processes in nanoscale interactions?. Nanotechnology, 2011, 22, 345401.	2.6	28
46	Nested genes: Biological implications and use of AFM for analysis. Gene, 2005, 350, 15-23.	2.2	27
47	Single-molecule studies of DNA transcription using atomic force microscopy. Physical Biology, 2012, 9, 021001.	1.8	26
48	Energy dissipation in a dynamic nanoscale contact. Applied Physics Letters, 2011, 98, .	3.3	25
49	Second harmonic atomic force microscopy of living Staphylococcus aureus bacteria. Applied Physics Letters, 2009, 94, 043901.	3.3	24
50	Molecular Effects of Glycerol on Lipid Monolayers at the Gasâ€“Liquid Interface: Impact on Microbubble Physical and Mechanical Properties. Langmuir, 2019, 35, 10097-10105.	3.5	24
51	Improvement of the pore trapping method to immobilize vital coccoid bacteria for highâ€resolution AFM: a study of Staphylococcus aureus. Journal of Microscopy, 2010, 238, 102-110.	1.8	23
52	Atomic force microscopy of DNA at high humidity: irreversible conformational switching of supercoiled molecules. Physical Chemistry Chemical Physics, 2010, 12, 14727.	2.8	21
53	Structure, Assembly and Targeting of Wheat Storage Proteins. Journal of Plant Physiology, 1995, 145, 620-625.	3.5	20
54	Hydrophilicity of a Single DNA Molecule. Journal of Physical Chemistry C, 2012, 116, 2807-2818.	3.1	20

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55	DNA G-segment bending is not the sole determinant of topology simplification by type II DNA topoisomerases. Scientific Reports, 2014, 4, 6158.	3.3	19
56	Scanning Probe Microscopesâ€"Applications in Cereal Science. Cereal Chemistry, 1997, 74, 193-199.	2.2	18
57	Cantilever dynamics in amplitude modulation AFM: continuous and discontinuous transitions. Journal Physics D: Applied Physics, 2010, 43, 275401.	2.8	17
58	Liquidâ€"Liquid Interfacial Imaging Using Atomic Force Microscopy. Advanced Materials Interfaces, 2017, 4, 1700203.	3.7	17
59	RepD-mediated recruitment of PcrA helicase at the Staphylococcus aureus pC221 plasmid replication origin, oriD. Nucleic Acids Research, 2010, 38, 1874-1888.	14.5	13
60	Ion Exchange and DNA Molecular Dip Sticks: Studying the Nanoscale Surface Wetting of Muscovite Mica. Journal of Physical Chemistry C, 2014, 118, 4695-4701.	3.1	12
61	Scanning probe microscopy studies of cereal seed storage protein structures. Scanning, 1999, 21, 293-298.	1.5	11
62	Large fluctuations in the disassembly rate of microtubules revealed by atomic force microscopy. Ultramicroscopy, 2003, 97, 239-247.	1.9	10
63	Influence of 4-vinylbenzylation on the rheological and swelling properties of photo-activated collagen hydrogels. MRS Advances, 2016, 1, 533-538.	0.9	10
64	Setup for observing living cells using a commercial atomic force microscope. Review of Scientific Instruments, 2000, 71, 4338.	1.3	9
65	Studying silane mobility on hydrated mica using ambient AFM. Ultramicroscopy, 2006, 106, 765-770.	1.9	9
66	Investigation of Nanoscale Interactions by Means of Subharmonic Excitation. Journal of Physical Chemistry Letters, 2012, 3, 2125-2129.	4.6	9
67	Imaging RNA polymerase-amelogenin gene complexes with single molecule resolution using atomic force microscopy. European Journal of Oral Sciences, 2006, 114, 133-138.	1.5	8
68	Energy dissipation in the presence of sub-harmonic excitation in dynamic atomic force microscopy. Europhysics Letters, 2012, 99, 56002.	2.0	8
69	Spatial horizons in amplitude and frequency modulation atomic force microscopy. Nanoscale, 2012, 4, 2463.	5.6	7
70	On-chip pressure measurements and channel deformation after oil absorption. SN Applied Sciences, 2020, 2, 1.	2.9	6
71	Single-stranded loops as end-label polarity markers for double-stranded linear DNA templates in atomic force microscopy. Nucleic Acids Research, 2012, 40, e99-e99.	14.5	5
72	Single-stranded DNA loops as fiducial markers for exploring DNAâ€"protein interactions in single molecule imaging. Methods, 2013, 60, 122-130.	3.8	5

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73	Atomic Force Microscopy Imaging of Macromolecular Complexes. Methods in Molecular Biology, 2013, 950, 315-341.	0.9	4
74	Effect of heparin and heparan sulphate on open promoter complex formation for a simple tandem gene model using ex situ atomic force microscopy. Methods, 2017, 120, 91-102.	3.8	4
75	STM investigations of an alkane-metal-system (C32H66/In). Polymer Bulletin, 1994, 33, 687-691.	3.3	3
76	Three-channel false colour AFM images for improved interpretation of complex surfaces: A study of filamentous cyanobacteria. Ultramicroscopy, 2010, 110, 718-722.	1.9	3
77	High Resolution Imaging of Immunoglobulin G Antibodies and Other Biomolecules Using Amplitude Modulation Atomic Force Microscopy in Air. Methods in Molecular Biology, 2011, 736, 61-79.	0.9	3
78	Atomic Force Microscopy of DNA Structure and Interactions. Nanoscience and Technology, 2007, , 127-164.	1.5	3
79	Multiple RNA Polymerase Transactions on Single DNA Templates. Biophysical Journal, 2013, 104, 365a.	0.5	1
80	Subâ€Nanometer Thick Gold Nanosheets: Subâ€Nanometer Thick Gold Nanosheets as Highly Efficient Catalysts (Adv. Sci. 21/2019). Advanced Science, 2019, 6, 1970129.	11.2	0
81	Atomic Force Microscopy of DNA Structure and Interactions. , 2010, , 389-426.		0
82	Atomic Force Microscopy of Isolated Nanostructures: Biomolecular Imaging in Hydrated Environments â€“ Status and Future Prospects. Nanoscience and Technology, 2012, , 99-135.	1.5	0