Mervyn John Miles

List of Publications by Year
in descending order

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86 papers	5,618 citations	147801 31 h-index	76900 74 g-index
86 all docs	86 docs citations	86 times ranked	5499 citing authors

#	Article	IF	Citations
1	The roles of amylose and amylopectin in the gelation and retrogradation of starch. Carbohydrate Research, 1985, 135, 271-281.	2.3	1,034
2	Self-Assembling Cages from Coiled-Coil Peptide Modules. Science, 2013, 340, 595-599.	12.6	451
3	The gelation and crystallisation of amylopectin. Carbohydrate Research, 1987, 162, 277-293.	2.3	390
4	Insulin Signaling to the Glomerular Podocyte Is Critical for Normal Kidney Function. Cell Metabolism, 2010, 12, 329-340.	16.2	376
5	Gelation of amylose. Carbohydrate Research, 1985, 135, 257-269.	2.3	322
6	Uniform patchy and hollow rectangular platelet micelles from crystallizable polymer blends. Science, 2016, 352, 697-701.	12.6	305
7	The effect of concentration and botanical source on the gelation and retrogradation of starch. Journal of the Science of Food and Agriculture, 1987, 39, 169-177.	3.5	203
8	X-Ray fibre-diffraction studies of synergistic, binary polysaccharide gels. Carbohydrate Research, 1987, 160, 411-423.	2.3	176
9	Human Plasma Fibrinogen Adsorption on Ultraflat Titanium Oxide Surfaces Studied with Atomic Force Microscopy. Langmuir, 2000, 16, 8167-8175.	3.5	169
10	Internal structure of the starch granule revealed by AFM. Carbohydrate Research, 2001, 330, 249-256.	2.3	140
11	Piconewton regime dynamic force microscopy in liquid. Applied Physics Letters, 2000, 77, 582-584.	3.3	137
12	High-Resolution Atomic Force Microscopy of NativeValoniaCellulose I Microcrystals. Journal of Structural Biology, 1997, 119, 129-138.	2.8	121
13	Ultrahigh-speed scanning near-field optical microscopy capable of over 100 frames per second. Applied Physics Letters, 2003, 83, 6-8.	3.3	112
14	â€œRed Tweezersâ€• Fast, customisable hologram generation for optical tweezers. Computer Physics Communications, 2014, 185, 268-273.	7.5	88
15	Evidence for intermolecular binding between xanthan and the glucomannan konjac mannan. Carbohydrate Research, 1988, 176, 329-334.	2.3	86
16	Aqueous dissolution of crystalline and amorphous amylose-alcohol complexes. International Journal of Biological Macromolecules, 1989, 11, 339-344.	7.5	80
17	Visualisation of human plasma fibrinogen adsorbed on titanium implant surfaces with different roughness. Surface Science, 2001, 491, 405-420.	1.9	80
18	An optical trapped microhand for manipulating micron-sized objects. Optics Express, 2006, 14, 12497.	3.4	75

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19	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
20	Rheology and microstructure of solutions of the microbial polysaccharide from Pseudomonas elodea. Carbohydrate Research, 1983, 114, 181-191.	2.3	62
21	Reorganization and Melting of Polyethylene Single Crystals:â€‰ Complementary TEM, DSC, and Real-Time AFM Studies. Macromolecules, 2004, 37, 4562-4572.	4.8	58
22	Exploring the consequences of attractive and repulsive interaction regimes in tapping mode atomic force microscopy of DNA. Nanotechnology, 2004, 15, S176-S183.	2.6	47
23	Holographic assembly workstation for optical manipulation. Journal of Optics, 2008, 10, 044009.	1.5	46
24	Glycopolymer charge density determines conformation in human ocular mucin gene products: an atomic force microscope study. Journal of Structural Biology, 2004, 145, 246-253.	2.8	43
25	Atomic Force Microscopy (AFM) Study of Interactions of HMW Subunits of Wheat Glutenin. Cereal Chemistry, 2000, 77, 107-110.	2.2	41
26	Conformation of a Single Polyacrylamide Molecule Adsorbed onto a Mica Surface Studied with Atomic Force Microscopy. Macromolecules, 2004, 37, 3799-3803.	4.8	39
27	Opportunities in Highâ€Speed Atomic Force Microscopy. Small, 2013, 9, 3201-3211.	10.0	39
28	Transformation and patterning of supermicelles using dynamic holographic assembly. Nature Communications, 2015, 6, 10009.	12.8	38
29	In Situ Surface Adsorption of the Protein C Hordein Using Atomic Force Microscopy. Langmuir, 2000, 16, 1463-1468.	3.5	37
30	Structural features distinguishing infectious ex vivo mammalian prions from non-infectious fibrillar assemblies generated in vitro. Scientific Reports, 2019, 9, 376.	3.3	37
31	Molecular origins of acetan solution properties. International Journal of Biological Macromolecules, 1989, 11, 326-328.	7.5	36
32	Human chromosome structure studied by scanning force microscopy after an enzymatic digestion of the covering cell material. Ultramicroscopy, 2000, 82, 245-251.	1.9	36
33	Characterization of Ultraflat Titanium Oxide Surfaces. Chemistry of Materials, 2002, 14, 777-789.	6.7	33
34	Comparison Between Shear Force and Tapping Mode AFM - High Resolution Imaging of DNA. Single Molecules, 2002, 3, 105-110.	0.9	30
35	Shear Response of Nanoconfined Water on Muscovite Mica: Role of Cations. Langmuir, 2011, 27, 10351-10355.	3.5	30
36	Selective Cleaning of the Cell Debris in Human Chromosome Preparations Studied by Scanning Force Microscopy. Journal of Structural Biology, 1999, 128, 200-210.	2.8	28

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37	High-speed atomic force microscopy of dental enamel dissolution in citric acid. Archives of Histology and Cytology, 2009, 72, 209-215.	0.2	28
38	Real-time tracking of metal nucleation via local perturbation of hydration layers. Nature Communications, 2017, 8, 971.	12.8	27
39	Scanning probe microscopy of collagen I and pN-collagen I assemblies and the relevance to scanning tunnelling microscopy contrast generation in proteins. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 2589.	1.7	25
40	Analysis off cereal chromosomes by atomic force microscopy. Genome, 1996, 39, 439-444.	2.0	25
41	Identification of Microphases in Mixed Î±- and Ï‰-Gliadin Protein Films Investigated by Atomic Force Microscopy. Journal of Agricultural and Food Chemistry, 1999, 47, 5093-5099.	5.2	25
42	A chlorite mineral surface actively drives the deposition of DNA molecules in stretched conformations. Nanotechnology, 2006, 17, 3897-3902.	2.6	25
43	Biomolecular scrutiny by the STM. Physics World, 1990, 3, 28-33.	0.0	24
44	The isolated MUC5AC gene product from human ocular mucin displays intramolecular conformational heterogeneity. Glycobiology, 2007, 17, 578-585.	2.5	24
45	Influence of properties of layered silicate minerals on adsorbed DNA surface affinity, self-assembly and nanopatterning. Philosophical Magazine Letters, 2004, 84, 539-545.	1.2	23
46	Some recent developments in SPM of crystalline polymers. Macromolecular Symposia, 2001, 167, 1-14.	0.7	21
47	An Atomic Force Microscopy Observation of Poly(Vinylidene Fluoride) Banded Spherulites. Journal of Macromolecular Science - Physics, 2003, 42, 753-760.	1.0	21
48	Manipulation and Deposition of Complex, Functional Block Copolymer Nanostructures Using Optical Tweezers. ACS Nano, 2019, 13, 3858-3866.	14.6	21
49	Structure, Assembly and Targeting of Wheat Storage Proteins. Journal of Plant Physiology, 1995, 145, 620-625.	3.5	20
50	Scanning Probe Microscopesâ€”Applications in Cereal Science. Cereal Chemistry, 1997, 74, 193-199.	2.2	18
51	Direct realâ€time imaging of protein adsorption onto hydrophilic and hydrophobic surfaces. Biopolymers, 2010, 93, 74-84.	2.4	18
52	Cell paintballing using optically targeted coacervate microdroplets. Chemical Science, 2015, 6, 6106-6111.	7.4	18
53	Hydrolysis of the NafionÂ® precursor studied by X-ray scattering and in-situ atomic force microscopy. E-Polymers, 2001, 1, .	3.0	16
54	An adaptive non-raster scanning method in atomic force microscopy for simple sample shapes. Measurement Science and Technology, 2015, 26, 035401.	2.6	14

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55	Conductiveâ€AFM Patterning of Organic Semiconductors. Small, 2015, 11, 5054-5058.	10.0	13
56	X-Ray fibre diffraction results from Alcaligenes (ATCC 31555) microbial polysaccharide S-130 and a comparison with gellan gum. Carbohydrate Research, 1986, 148, c1-c4.	2.3	12
57	Atomic force microscopy of the banded structure of lyotropic polymers. Macromolecular Rapid Communications, 1994, 15, 815-821.	3.9	11
58	Scanning probe microscopy studies of cereal seed storage protein structures. Scanning, 1999, 21, 293-298.	1.5	11
59	Force spectroscopy of an elastic peptide: Effect of D₂O and temperature on persistence length. Microscopy Research and Technique, 2011, 74, 170-176.	2.2	11
60	Realâ€Time Sliding Mode Observer Scheme for Shear Force Estimation in a Transverse Dynamic Force Microscope. Asian Journal of Control, 2018, 20, 1317-1328.	3.0	10
61	Scanning Probe Microscopy for Chromosomal Research.. Archives of Histology and Cytology, 2002, 65, 369-376.	0.2	8
62	A super-twisting observer for atomic-force reconstruction in a probe microscope. Control Engineering Practice, 2020, 94, 104191.	5.5	8
63	Effects of environment on the mechanical properties of plastics under high pressure. Polymer Engineering and Science, 1978, 18, 1235-1239.	3.1	7
64	Tour de force microscopy. Materials Today, 2003, 6, 30-37.	14.2	7
65	Detection and photothermal actuation of microcantilever oscillations in air and liquid using a modified DVD optical pickup. Sensors and Actuators A: Physical, 2016, 248, 6-9.	4.1	7
66	Pulling Single Chains out of a Collapsed Polymer Monolayer in Bad-Solvent Conditions. Materials Research Society Symposia Proceedings, 2002, 734, 161.	0.1	4
67	Following Processes in Synthetic Polymers with Scanning Probe Microscopy. ACS Symposium Series, 2005, , 194-206.	0.5	4
68	Nanotechnology at the interface of cell biology, materials science and medicine. Nanotechnology, 2008, 19, 380201-380201.	2.6	3
69	Probing the nanoworld. Nanotechnology, 2009, 20, 430208-430208.	2.6	3
70	Shear force reconstruction in a vertically oriented probe microscope using a super-twisting observer. , 2013, , .		3
71	<title>Application of scanning force microscopy and near-field optical microscopy to liquid crystalline systems: observing free surfaces, smectic structural forces, and molecular orientation</title>. , 1995, 2384, 60.		2
72	Fashioning microscopic tools. Proceedings of SPIE, 2013, , .	0.8	2

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73	Fabricating microscopic tools: towards optically actuated micro-robotics. Proceedings of SPIE, 2015, , .	0.8	2
74	A Multimode Transverse Dynamic Force Microscopeâ€"Design, Identification, and Control. IEEE Transactions on Industrial Electronics, 2020, 67, 4729-4740.	7.9	2
75	Real-Time Force Reconstruction in a Transverse Dynamic Force Microscope. IEEE Transactions on Industrial Electronics, 2022, 69, 11403-11413.	7.9	2
76	‹title›Examining polymeric materials with near-field optics‹/title›. , 1995, , .		1
77	Non-conservative effects in optically trapped, low symmetry particles. , 2010, , .		1
78	Optical binding of nanowires in counterpropagating beams. Proceedings of SPIE, 2013, , .	0.8	1
79	Biologically engineered polymers. International Journal of Biological Macromolecules, 1986, 8, 322.	7.5	0
80	Biologically-engineered polymers conference, 21â€"23 July 1986, churchill college, cambridge, UK. Carbohydrate Polymers, 1987, 7, 241-242.	10.2	0
81	Biologically engineered polymers 1989. International Journal of Biological Macromolecules, 1990, 12, 66.	7.5	0
82	SPM 2003. Ultramicroscopy, 2004, 100, iii.	1.9	0
83	Optically controlled, holographic micro-hand. , 2007, , .		0
84	Fabrication of photonic crystal templates using holographic optical tweezers and adhesion via entropic attraction. Proceedings of SPIE, 2008, , .	0.8	0
85	Thermal motion of an optically trapped nanotool. , 2009, , .		0
86	High-Speed AFM with a Light Touch. Biophysical Journal, 2013, 104, 386a.	0.5	0