

# Mervyn John Miles

## List of Publications by Year in descending order

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86  
papers

5,618  
citations

147801

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h-index

76900

74  
g-index

86  
all docs

86  
docs citations

86  
times ranked

5499  
citing authors

#	ARTICLE	IF	CITATIONS
1	Real-Time Force Reconstruction in a Transverse Dynamic Force Microscope. IEEE Transactions on Industrial Electronics, 2022, 69, 11403-11413.	7.9	2
2	A Multimode Transverse Dynamic Force Microscope—Design, Identification, and Control. IEEE Transactions on Industrial Electronics, 2020, 67, 4729-4740.	7.9	2
3	A super-twisting observer for atomic-force reconstruction in a probe microscope. Control Engineering Practice, 2020, 94, 104191.	5.5	8
4	Structural features distinguishing infectious ex vivo mammalian prions from non-infectious fibrillar assemblies generated in vitro. Scientific Reports, 2019, 9, 376.	3.3	37
5	Manipulation and Deposition of Complex, Functional Block Copolymer Nanostructures Using Optical Tweezers. ACS Nano, 2019, 13, 3858-3866.	14.6	21
6	Real-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
7	Real-time tracking of metal nucleation via local perturbation of hydration layers. Nature Communications, 2017, 8, 971.	12.8	27
8	Uniform patchy and hollow rectangular platelet micelles from crystallizable polymer blends. Science, 2016, 352, 697-701.	12.6	305
9	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
10	Conductive AFM Patterning of Organic Semiconductors. Small, 2015, 11, 5054-5058.	10.0	13
11	Transformation and patterning of supermicelles using dynamic holographic assembly. Nature Communications, 2015, 6, 10009.	12.8	38
12	An adaptive non-raster scanning method in atomic force microscopy for simple sample shapes. Measurement Science and Technology, 2015, 26, 035401.	2.6	14
13	Fabricating microscopic tools: towards optically actuated micro-robotics. Proceedings of SPIE, 2015, , .	0.8	2
14	Cell paintballing using optically targeted coacervate microdroplets. Chemical Science, 2015, 6, 6106-6111.	7.4	18
15	“Red Tweezers”: Fast, customisable hologram generation for optical tweezers. Computer Physics Communications, 2014, 185, 268-273.	7.5	88
16	Self-Assembling Cages from Coiled-Coil Peptide Modules. Science, 2013, 340, 595-599.	12.6	451
17	High-Speed AFM with a Light Touch. Biophysical Journal, 2013, 104, 386a.	0.5	0
18	Opportunities in High-Speed Atomic Force Microscopy. Small, 2013, 9, 3201-3211.	10.0	39

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19	Optical binding of nanowires in counterpropagating beams. Proceedings of SPIE, 2013, , .	0.8	1
20	Fashioning microscopic tools. Proceedings of SPIE, 2013, , .	0.8	2
21	Shear force reconstruction in a vertically oriented probe microscope using a super-twisting observer. , 2013, , .		3
22	Shear Response of Nanoconfined Water on Muscovite Mica: Role of Cations. Langmuir, 2011, 27, 10351-10355.	3.5	30
23	Force spectroscopy of an elastic peptide: Effect of $D_2O$ and temperature on persistence length. Microscopy Research and Technique, 2011, 74, 170-176.	2.2	11
24	Direct real-time imaging of protein adsorption onto hydrophilic and hydrophobic surfaces. Biopolymers, 2010, 93, 74-84.	2.4	18
25	Non-conservative effects in optically trapped, low symmetry particles. , 2010, , .		1
26	Insulin Signaling to the Glomerular Podocyte Is Critical for Normal Kidney Function. Cell Metabolism, 2010, 12, 329-340.	16.2	376
27	Thermal motion of an optically trapped nanotool. , 2009, , .		0
28	Probing the nanoworld. Nanotechnology, 2009, 20, 430208-430208.	2.6	3
29	High-speed atomic force microscopy of dental enamel dissolution in citric acid. Archives of Histology and Cytology, 2009, 72, 209-215.	0.2	28
30	Fabrication of photonic crystal templates using holographic optical tweezers and adhesion via entropic attraction. Proceedings of SPIE, 2008, , .	0.8	0
31	Nanotechnology at the interface of cell biology, materials science and medicine. Nanotechnology, 2008, 19, 380201-380201.	2.6	3
32	Holographic assembly workstation for optical manipulation. Journal of Optics, 2008, 10, 044009.	1.5	46
33	Optically controlled, holographic micro-hand. , 2007, , .		0
34	The isolated MUC5AC gene product from human ocular mucin displays intramolecular conformational heterogeneity. Glycobiology, 2007, 17, 578-585.	2.5	24
35	A chlorite mineral surface actively drives the deposition of DNA molecules in stretched conformations. Nanotechnology, 2006, 17, 3897-3902.	2.6	25
36	An optical trapped microhand for manipulating micron-sized objects. Optics Express, 2006, 14, 12497.	3.4	75

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37	Following Processes in Synthetic Polymers with Scanning Probe Microscopy. ACS Symposium Series, 2005, , 194-206.	0.5	4
38	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
39	SPM 2003. Ultramicroscopy, 2004, 100, iii.	1.9	0
40	Conformation of a Single Polyacrylamide Molecule Adsorbed onto a Mica Surface Studied with Atomic Force Microscopy. Macromolecules, 2004, 37, 3799-3803.	4.8	39
41	Reorganization and Melting of Polyethylene Single Crystals: Complementary TEM, DSC, and Real-Time AFM Studies. Macromolecules, 2004, 37, 4562-4572.	4.8	58
42	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
43	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
44	Tour de force microscopy. Materials Today, 2003, 6, 30-37.	14.2	7
45	Ultrahigh-speed scanning near-field optical microscopy capable of over 100 frames per second. Applied Physics Letters, 2003, 83, 6-8.	3.3	112
46	An Atomic Force Microscopy Observation of Poly(Vinylidene Fluoride) Banded Spherulites. Journal of Macromolecular Science - Physics, 2003, 42, 753-760.	1.0	21
47	Scanning Probe Microscopy for Chromosomal Research.. Archives of Histology and Cytology, 2002, 65, 369-376.	0.2	8
48	Pulling Single Chains out of a Collapsed Polymer Monolayer in Bad-Solvent Conditions. Materials Research Society Symposia Proceedings, 2002, 734, 161.	0.1	4
49	Characterization of Ultraflat Titanium Oxide Surfaces. Chemistry of Materials, 2002, 14, 777-789.	6.7	33
50	Comparison Between Shear Force and Tapping Mode AFM - High Resolution Imaging of DNA. Single Molecules, 2002, 3, 105-110.	0.9	30
51	Visualisation of human plasma fibrinogen adsorbed on titanium implant surfaces with different roughness. Surface Science, 2001, 491, 405-420.	1.9	80
52	Hydrolysis of the Nafion® precursor studied by X-ray scattering and in-situ atomic force microscopy. E-Polymers, 2001, 1, .	3.0	16
53	Some recent developments in SPM of crystalline polymers. Macromolecular Symposia, 2001, 167, 1-14.	0.7	21
54	Internal structure of the starch granule revealed by AFM. Carbohydrate Research, 2001, 330, 249-256.	2.3	140

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55	Human chromosome structure studied by scanning force microscopy after an enzymatic digestion of the covering cell material. <i>Ultramicroscopy</i> , 2000, 82, 245-251.	1.9	36
56	Piconewton regime dynamic force microscopy in liquid. <i>Applied Physics Letters</i> , 2000, 77, 582-584.	3.3	137
57	Atomic Force Microscopy (AFM) Study of Interactions of HMW Subunits of Wheat Glutenin. <i>Cereal Chemistry</i> , 2000, 77, 107-110.	2.2	41
58	In Situ Surface Adsorption of the Protein C Hordein Using Atomic Force Microscopy. <i>Langmuir</i> , 2000, 16, 1463-1468.	3.5	37
59	Human Plasma Fibrinogen Adsorption on Ultraflat Titanium Oxide Surfaces Studied with Atomic Force Microscopy. <i>Langmuir</i> , 2000, 16, 8167-8175.	3.5	169
60	Scanning probe microscopy studies of cereal seed storage protein structures. <i>Scanning</i> , 1999, 21, 293-298.	1.5	11
61	Small angle X-ray scattering of wheat seed-storage proteins: $\alpha$ - and $\beta$ -gliadins and the high molecular weight (HMW) subunits of glutenin. <i>BBA - Proteins and Proteomics</i> , 1999, 1430, 359-366.	2.1	65
62	Identification of Microphases in Mixed $\alpha$ - and $\beta$ -Gliadin Protein Films Investigated by Atomic Force Microscopy. <i>Journal of Agricultural and Food Chemistry</i> , 1999, 47, 5093-5099.	5.2	25
63	Selective Cleaning of the Cell Debris in Human Chromosome Preparations Studied by Scanning Force Microscopy. <i>Journal of Structural Biology</i> , 1999, 128, 200-210.	2.8	28
64	Scanning Probe Microscopes' Applications in Cereal Science. <i>Cereal Chemistry</i> , 1997, 74, 193-199.	2.2	18
65	High-Resolution Atomic Force Microscopy of Native Valonia Cellulose I Microcrystals. <i>Journal of Structural Biology</i> , 1997, 119, 129-138.	2.8	121
66	Analysis of cereal chromosomes by atomic force microscopy. <i>Genome</i> , 1996, 39, 439-444.	2.0	25
67	<title>Examining polymeric materials with near-field optics</title>. , 1995, , .		1
68	<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
69	Structure, Assembly and Targeting of Wheat Storage Proteins. <i>Journal of Plant Physiology</i> , 1995, 145, 620-625.	3.5	20
70	Atomic force microscopy of the banded structure of lyotropic polymers. <i>Macromolecular Rapid Communications</i> , 1994, 15, 815-821.	3.9	11
71	Scanning probe microscopy of collagen I and pN-collagen I assemblies and the relevance to scanning tunnelling microscopy contrast generation in proteins. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1993, 89, 2589.	1.7	25
72	Biomolecular scrutiny by the STM. <i>Physics World</i> , 1990, 3, 28-33.	0.0	24

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73	Biologically engineered polymers 1989. International Journal of Biological Macromolecules, 1990, 12, 66.	7.5	0
74	Molecular origins of acetan solution properties. International Journal of Biological Macromolecules, 1989, 11, 326-328.	7.5	36
75	Aqueous dissolution of crystalline and amorphous amylose-alcohol complexes. International Journal of Biological Macromolecules, 1989, 11, 339-344.	7.5	80
76	Evidence for intermolecular binding between xanthan and the glucomannan konjac mannan. Carbohydrate Research, 1988, 176, 329-334.	2.3	86
77	The gelation and crystallisation of amylopectin. Carbohydrate Research, 1987, 162, 277-293.	2.3	390
78	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
79	X-Ray fibre-diffraction studies of synergistic, binary polysaccharide gels. Carbohydrate Research, 1987, 160, 411-423.	2.3	176
80	Biologically-engineered polymers conference, 21-23 July 1986, churchill college, cambridge, UK. Carbohydrate Polymers, 1987, 7, 241-242.	10.2	0
81	Biologically engineered polymers. International Journal of Biological Macromolecules, 1986, 8, 322.	7.5	0
82	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
83	Gelation of amylose. Carbohydrate Research, 1985, 135, 257-269.	2.3	322
84	The roles of amylose and amylopectin in the gelation and retrogradation of starch. Carbohydrate Research, 1985, 135, 271-281.	2.3	1,034
85	Rheology and microstructure of solutions of the microbial polysaccharide from Pseudomonas elodea. Carbohydrate Research, 1983, 114, 181-191.	2.3	62
86	Effects of environment on the mechanical properties of plastics under high pressure. Polymer Engineering and Science, 1978, 18, 1235-1239.	3.1	7