

Philip M Williams

List of Publications by Year in descending order

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125
papers

5,724
citations

61984

43
h-index

85541

71
g-index

126
all docs

126
docs citations

126
times ranked

6285
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of cold plasma on the biomolecules and organoleptic properties of foods: A review. <i>Journal of Food Science</i> , 2021, 86, 3762-3777.	3.1	15
2	Protein identification by 3D OrbiSIMS to facilitate in situ imaging and depth profiling. <i>Nature Communications</i> , 2020, 11, 5832.	12.8	40
3	A novel DFP tripeptide motif interacts with the coagulation factor XI apple 2 domain. <i>Blood</i> , 2016, 127, 2915-2923.	1.4	17
4	Monitoring the Dissolution Mechanisms of Amorphous Bicalutamide Solid Dispersions via Real-Time Raman Mapping. <i>Molecular Pharmaceutics</i> , 2015, 12, 1512-1522.	4.6	26
5	Bacterial Attachment to Polymeric Materials Correlates with Molecular Flexibility and Hydrophilicity. <i>Advanced Healthcare Materials</i> , 2015, 4, 695-701.	7.6	62
6	Strategies for MCR image analysis of large hyperspectral data sets. <i>Surface and Interface Analysis</i> , 2013, 45, 466-470.	1.8	15
7	Blow fly <i>Lucilia sericata</i> nuclease digests DNA associated with wound slough/eschar and with <i>Pseudomonas aeruginosa</i> biofilm. <i>Medical and Veterinary Entomology</i> , 2012, 26, 432-439.	1.5	56
8	Protein Unfolding under Force: Crack Propagation in a Network. <i>Biophysical Journal</i> , 2011, 101, 736-744.	0.5	10
9	Substrate induced differentiation of human mesenchymal stem cells on hydrogels with modified surface chemistry and controlled modulus. <i>Soft Matter</i> , 2011, 7, 6501.	2.7	73
10	Biomembrane force probe investigation of RNA dissociation. <i>European Biophysics Journal</i> , 2011, 40, 247-257.	2.2	2
11	Patterning the mechanical properties of hydrogen silsesquioxane films using electron beam irradiation for application in mechano cell guidance. <i>Thin Solid Films</i> , 2011, 519, 2003-2010.	1.8	13
12	An assessment of beclomethasone dipropionate clathrate formation in a model suspension metered dose inhaler. <i>International Journal of Pharmaceutics</i> , 2010, 391, 98-106.	5.2	10
13	Interactions between Signal-Transducing Proteins Measured by Atomic Force Microscopy. <i>Analytical Chemistry</i> , 2009, 81, 3276-3284.	6.5	19
14	Measurement of Particle and Surface Interactions Using Force Microscopy. , 2009, , 31-80.		6
15	A Methodology for Investigating Protein Adhesion and Adsorption to Microarrayed Combinatorial Polymers. <i>Macromolecular Rapid Communications</i> , 2008, 29, 1298-1302.	3.9	32
16	Single-Molecule Studies of Protein Folding. <i>Annual Review of Biochemistry</i> , 2008, 77, 101-125.	11.1	299
17	Can an Atomic Force Microscope Sequence DNA Using a Nanopore?. <i>Biophysical Journal</i> , 2008, 94, 1233-1240.	0.5	13
18	Ultra-Resolution Imaging of a Self-Assembling Biomolecular System Using Robust Carbon Nanotube AFM Probes. <i>Langmuir</i> , 2007, 23, 3906-3911.	3.5	16

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19	Dendron Arrays for the Force-Based Detection of DNA Hybridization Events. <i>Journal of the American Chemical Society</i> , 2007, 129, 9349-9355.	13.7	51
20	Alignment of Aromatic Peptide Tubes in Strong Magnetic Fields. <i>Advanced Materials</i> , 2007, 19, 4474-4479.	21.0	87
21	Accurate velocity measurements of AFM-cantilever vibrations by Doppler interferometry. <i>Journal of Experimental Nanoscience</i> , 2006, 1, 51-62.	2.4	11
22	Three-dimensional flow due to a microcantilever oscillating near a wall: an unsteady slender-body analysis. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2006, 462, 913-933.	2.1	40
23	Simulations of multi-directional forced unfolding of titin I27. <i>Journal of Molecular Graphics and Modelling</i> , 2006, 24, 396-403.	2.4	17
24	Stochastic Elastohydrodynamics of a Microcantilever Oscillating Near a Wall. <i>Physical Review Letters</i> , 2006, 96, 050801.	7.8	39
25	Atomic Force Microscopy Study of Human Amylin (20-29) Fibrils. <i>Protein and Peptide Letters</i> , 2005, 12, 79-83.	0.9	15
26	Molecular Level Investigations of the Inter- and Intramolecular Interactions of pH-Responsive Artificial Triblock Proteins. <i>Biomacromolecules</i> , 2005, 6, 1266-1271.	5.4	31
27	The drag on a microcantilever oscillating near a wall. <i>Journal of Fluid Mechanics</i> , 2005, 545, 397.	3.4	55
28	Direct atomic force microscopy observations of monovalent ion induced binding of DNA to mica. <i>Journal of Microscopy</i> , 2004, 215, 297-301.	1.8	28
29	The effect of poly(ethylene glycol) molecular architecture on cellular interaction and uptake of DNA complexes. <i>Journal of Controlled Release</i> , 2004, 97, 143-156.	9.9	118
30	An Atomic Force Microscopy Study of the Effect of Nanoscale Contact Geometry and Surface Chemistry on the Adhesion of Pharmaceutical Particles. <i>Pharmaceutical Research</i> , 2004, 21, 953-961.	3.5	60
31	pH-Dependent Behavior of Surface-immobilized Artificial Leucine Zipper Proteins. <i>Langmuir</i> , 2004, 20, 7747-7752.	3.5	41
32	Influence of Architecture on the Kinetic Stability of Molecular Assemblies. <i>Journal of the American Chemical Society</i> , 2004, 126, 1318-1319.	13.7	38
33	Single-Molecule Investigations of RNA Dissociation. <i>Biophysical Journal</i> , 2004, 86, 3811-3821.	0.5	33
34	Characterization of particle-interactions by atomic force microscopy: effect of contact area. <i>Pharmaceutical Research</i> , 2003, 20, 508-514.	3.5	56
35	Porous Polymer and Cell Composites That Self-Assemble In Situ. <i>Advanced Materials</i> , 2003, 15, 210-213.	21.0	103
36	Analytical descriptions of dynamic force spectroscopy: behaviour of multiple connections. <i>Analytica Chimica Acta</i> , 2003, 479, 107-115.	5.4	134

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37	Bifunctional atomic force microscopy probes for molecular screening applications. <i>Analytica Chimica Acta</i> , 2003, 479, 77-85.	5.4	11
38	Electrostatic interactions observed when imaging proteins with the atomic force microscope. <i>Ultramicroscopy</i> , 2003, 96, 37-46.	1.9	20
39	Hidden complexity in the mechanical properties of titin. <i>Nature</i> , 2003, 422, 446-449.	27.8	268
40	Direct real-time molecular scale visualisation of the degradation of condensed DNA complexes exposed to DNase I. <i>Nucleic Acids Research</i> , 2003, 31, 4001-4005.	14.5	129
41	Spatial Confinement of Neurite Regrowth from Dorsal Root Ganglia within Nonporous Microconduits. <i>Tissue Engineering</i> , 2003, 9, 201-208.	4.6	20
42	Investigating the Interfacial Properties of Single-Liquid Nanodroplets by Atomic Force Microscopy. <i>Langmuir</i> , 2002, 18, 1719-1728.	3.5	32
43	Compositional Mapping of Self-Assembled Monolayers Derivatized within Microfluidic Networks. <i>Langmuir</i> , 2002, 18, 3151-3158.	3.5	16
44	The Development, Characterization, and Demonstration of a Versatile Immobilization Strategy for Biomolecular Force Measurements. <i>Langmuir</i> , 2002, 18, 6659-6665.	3.5	28
45	Direct measurement of drug-enzyme interactions by atomic force microscopy; dihydrofolate reductase and methotrexate. <i>Perkin Transactions II RSC</i> , 2002, , 1722-1727.	1.1	7
46	Interactions of 3T3 fibroblasts and endothelial cells with defined pore features. <i>Journal of Biomedical Materials Research Part B</i> , 2002, 61, 212-217.	3.1	195
47	Differential scanning calorimetry and scanning thermal microscopy analysis of pharmaceutical materials. <i>International Journal of Pharmaceutics</i> , 2002, 243, 71-82.	5.2	42
48	Synthesis and Characterisation of a Degradable Poly(lactic acid)-Poly(ethylene glycol) Copolymer with Biotinylated End Groups. <i>Biomacromolecules</i> , 2001, 2, 575-580.	5.4	81
49	Investigation of microcontact transfer of proteins from a selectively plasma treated elastomer stamp by fluorescence microscopy and force microscopy. <i>Analyst</i> , The, 2001, 126, 1100-1104.	3.5	4
50	Molecular patterning on carbon based surfaces through photobiotin activation. <i>Analyst</i> , The, 2001, 126, 195-198.	3.5	16
51	Atomic Force Microscope and Surface Plasmon Resonance Investigation of Polymer Blends of Poly([2-(methacryloyloxy)ethyl]phosphorylcholine-co-lauryl methacrylate) and Poly(lauryl) Tj ETQq1 1 0.784314 rgBTs/Overlock 10 Tf 50		
52	A Simple Method for Biocompatible Polymer Based Spatially Controlled Adsorption of Blood Plasma Proteins to a Surface. <i>Langmuir</i> , 2001, 17, 7402-7405.	3.5	46
53	Force-induced melting of a short DNA double helix. <i>European Biophysics Journal</i> , 2001, 30, 53-62.	2.2	77
54	Mapping the Surface Characteristics of Polystyrene Microtiter Wells by a Multimode Scanning Force Microscopy Approach. <i>Journal of Colloid and Interface Science</i> , 2001, 242, 470-476.	9.4	7

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55	Probing DNA Duplex Formation and DNA-Drug Interactions by the Quartz Crystal Microbalance Technique. <i>Langmuir</i> , 2001, 17, 8300-8304.	3.5	35
56	An in situ dissolution study of aspirin crystal planes (100) and (001) by atomic force microscopy. <i>Pharmaceutical Research</i> , 2001, 18, 299-303.	3.5	67
57	Simulating the dynamic strength of molecular interactions. <i>Journal of Chemical Physics</i> , 2001, 114, 3208-3214.	3.0	18
58	Atomic force microscopy of gastric mucin and chitosan mucoadhesive systems. <i>Biochemical Journal</i> , 2000, 348, 557.	3.7	34
59	Atomic force microscopy studies of intercalation-induced changes in plasmid DNA tertiary structure. <i>Journal of Microscopy</i> , 2000, 199, 68-78.	1.8	60
60	The discrimination of drug polymorphic forms from single crystals using atomic force microscopy. <i>Pharmaceutical Research</i> , 2000, 17, 887-890.	3.5	31
61	Atomic Force Microscopy of Cationic Liposomes. <i>Langmuir</i> , 2000, 16, 4813-4818.	3.5	33
62	Printing patterns of biospecifically-adsorbed protein. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2000, 11, 319-331.	3.5	61
63	A High Resolution Atomic Force Microscopy Study of Poly(lactic acid-co-ethylene glycol). <i>Polymer Journal</i> , 2000, 32, 444-446.	2.7	1
64	Hydrodynamic damping of tip oscillation in pulsed-force atomic force microscopy. <i>Applied Physics Letters</i> , 2000, 77, 3462-3464.	3.3	5
65	Observation of DNA-polymer condensate formation in real time at a molecular level. <i>FEBS Letters</i> , 2000, 480, 106-112.	2.8	80
66	Optimizing phase imaging via dynamic force curves. <i>Surface Science</i> , 2000, 460, 292-300.	1.9	69
67	Investigation of the Hydration Kinetics of Novel Poly(ethylene oxide) Containing Polyurethanes. <i>Langmuir</i> , 2000, 16, 2744-2750.	3.5	23
68	Probing protein-peptide-protein molecular architecture by atomic force microscopy and surface plasmon resonance. <i>Analyst</i> , 2000, 125, 245-250.	3.5	15
69	On the dynamic behaviour of the forced dissociation of ligand-receptor pairs. <i>Perkin Transactions II RSC</i> , 2000, , 5-8.	1.1	16
70	Surface Mobility of 2-Methacryloyloxyethyl Phosphorylcholine-co-Lauryl Methacrylate Polymers. <i>Langmuir</i> , 2000, 16, 5116-5122.	3.5	43
71	Polymorphic Discrimination Using Atomic Force Microscopy: Distinguishing between Two Polymorphs of the Drug Cimetidine. <i>Langmuir</i> , 2000, 16, 866-870.	3.5	46
72	Surface Characterization of Aspirin Crystal Planes by Dynamic Chemical Force Microscopy. <i>Analytical Chemistry</i> , 2000, 72, 3419-3422.	6.5	48

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73	Quantifying surface topography and scanning probe image reconstruction. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 273.	1.6	19
74	Intercalation-induced changes in DNA supercoiling observed in real-time by atomic force microscopy. Analytica Chimica Acta, 1999, 400, 27-32.	5.4	27
75	A ¹³ C CP/MAS NMR spectroscopy and AFM study of the structure of Glucagelâ„¢, a gelling β -glucan from barley. Carbohydrate Research, 1999, 315, 169-179.	2.3	37
76	Screening the Biointeractions of Submicron Sized Particles Intended for Site-Specific Delivery Using Surface Plasmon Resonance. Journal of Colloid and Interface Science, 1999, 218, 456-461.	9.4	8
77	Analyzing the origins of receptorâ€“ligand adhesion forces measured by the scanning force microscope. Journal of the Chemical Society Perkin Transactions II, 1999, , 419-424.	0.9	3
78	Surface Engineering and Surface Analysis of a Biodegradable Polymer with Biotinylated End Groups. Langmuir, 1999, 15, 3157-3161.	3.5	83
79	Atomic Force Microscopic Analysis of Highly Defined Protein Patterns Formed by Microfluidic Networks. Langmuir, 1999, 15, 7252-7257.	3.5	36
80	Shear Force and Phase Imaging of Protein Boundaries. Langmuir, 1999, 15, 5433-5436.	3.5	2
81	Molecular Interactions of Biomolecules with Surface-Engineered Interfaces Using Atomic Force Microscopy and Surface Plasmon Resonance. Langmuir, 1999, 15, 5136-5140.	3.5	55
82	Morphological Development of β (1-40) Amyloid Fibrils. Experimental Neurology, 1999, 158, 437-443.	4.1	37
83	The influence of epitope availability on atomic-force microscope studies of antigenâ€“antibody interactions. Biochemical Journal, 1999, 341, 173.	3.7	33
84	The application of force microscopy to immunodiagnostic systems: imaging and biomolecular adhesion measurements. Applied Physics A: Materials Science and Processing, 1998, 66, S255-S261.	2.3	12
85	A scanning probe microscopy study of the physisorption and chemisorption of protein molecules onto carboxylate terminated self-assembled monolayers. Applied Physics A: Materials Science and Processing, 1998, 66, S569-S574.	2.3	69
86	Application of protein-coated scanning force microscopy probes in measurements of surface affinity to protein adsorption. Applied Physics A: Materials Science and Processing, 1998, 66, S631-S634.	2.3	16
87	Noise-compliant tip-shape derivation. Applied Physics A: Materials Science and Processing, 1998, 66, S911-S914.	2.3	7
88	Effects of glycosylation on fragments of tumour associated human epithelial mucin MUC1. Bioorganic and Medicinal Chemistry, 1998, 6, 1531-1545.	3.0	51
89	Interpretation of tapping mode atomic force microscopy data using amplitude-phase-distance measurements. Ultramicroscopy, 1998, 75, 171-181.	1.9	93
90	An enthalpic approach to the analysis of the scanning force ligand rupture experiment. Journal of the Chemical Society Perkin Transactions II, 1998, , 253-258.	0.9	4

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91	Chemical and Morphological Analysis of Surface Enrichment in a Biodegradable Polymer Blend by Phase-Detection Imaging Atomic Force Microscopy. <i>Macromolecules</i> , 1998, 31, 2278-2283.	4.8	77
92	Effect of scanning force microscope scanner geometry on probe-sample contact force. <i>Review of Scientific Instruments</i> , 1997, 68, 1773-1775.	1.3	0
93	Data Analysis Using the Internet: the World Wide Web Scanning Probe Microscopy Data Analysis System. <i>Analyst, The</i> , 1997, 122, 1001-1006.	3.5	4
94	Recognition of Protein Adsorption onto Polymer Surfaces by Scanning Force Microscopy and Probe-Surface Adhesion Measurements with Protein-Coated Probes. <i>Langmuir</i> , 1997, 13, 4106-4111.	3.5	71
95	STM of Insulators with the Probe in Contact with an Aqueous Layer. <i>Journal of Physical Chemistry B</i> , 1997, 101, 5138-5142.	2.6	20
96	In Situ Surface Plasmon Resonance Analysis of Dextran Monolayer Degradation by Dextranase. <i>Langmuir</i> , 1997, 13, 7115-7120.	3.5	25
97	High-Resolution Atomic Force Microscopy of Dextran Monolayer Hydration. <i>Langmuir</i> , 1997, 13, 4795-4798.	3.5	18
98	Detection of Antigen-Antibody Binding Events with the Atomic Force Microscope. <i>Biochemistry</i> , 1997, 36, 7457-7463.	2.5	340
99	Immobilization of Protein Molecules onto Homogeneous and Mixed Carboxylate-Terminated Self-Assembled Monolayers. <i>Langmuir</i> , 1997, 13, 6485-6490.	3.5	332
100	Atomic force microscopy in analytical biotechnology. <i>Trends in Biotechnology</i> , 1997, 15, 101-105.	9.3	45
101	Surface Analysis of Biodegradable Polymer Blends of Poly(sebacic anhydride) and Poly(dl-lactic acid). <i>Macromolecules</i> , 1996, 29, 2205-2212.	4.8	92
102	Dynamic Surface Events Measured by Simultaneous Probe Microscopy and Surface Plasmon Detection. <i>Analytical Chemistry</i> , 1996, 68, 1451-1455.	6.5	27
103	In situ observation of streptavidin-biotin binding on an immunoassay well surface using an atomic force microscope. <i>FEBS Letters</i> , 1996, 390, 161-164.	2.8	73
104	Toward True Surface Recovery: Studying Distortions in Scanning Probe Microscopy Image Data. <i>Langmuir</i> , 1996, 12, 3468-3471.	3.5	24
105	The discrimination of IgM and IgG type antibodies and Fab and F(ab) ₂ antibody fragments on an industrial substrate using scanning force microscopy. <i>Ultramicroscopy</i> , 1996, 62, 149-155.	1.9	30
106	A novel organic solvent-based coupling method for the preparation of covalently immobilized proteins on gold. <i>Protein Science</i> , 1996, 5, 2329-2332.	7.6	13
107	Blind reconstruction of scanning probe image data. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996, 14, 1557.	1.6	109
108	Combined surface plasmon resonance and scanning force microscope instrument. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996, 14, 1582.	1.6	5

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109	The Role of Scanning Probe Microscopy in Drug Delivery Research. <i>Critical Reviews in Therapeutic Drug Carrier Systems</i> , 1996, 13, 225-256.	2.2	10
110	Real-Space Differentiation of IgG and IgM Antibodies Deposited on Microtiter Wells by Scanning Force Microscopy. <i>Langmuir</i> , 1995, 11, 1822-1826.	3.5	45
111	In Situ Atomic Force Microscopy Visualization of the Degradation of Melt-Crystallized Poly(sebacic) Tj ETQq1 1 0.784314 rgBT /Overlo 4.8 44	4.8	44
112	Relating the phase morphology of a biodegradable polymer blend to erosion kinetics using simultaneous in situ atomic force microscopy and surface plasmon resonance analysis. <i>Langmuir</i> , 1995, 11, 3921-3927.	3.5	38
113	Scanning tunnelling microscopy studies of β -amyloid fibril structure and assembly. <i>FEBS Letters</i> , 1995, 371, 25-28.	2.8	20
114	Release of Protein from a Poly(ortho ester) Film during Surface Erosion Studied by in Situ Atomic Force Microscopy. <i>Langmuir</i> , 1995, 11, 2547-2553.	3.5	15
115	Degradation of a Thin Polymer Film Studied by Simultaneous in Situ Atomic Force Microscopy and Surface Plasmon Resonance Analysis. <i>The Journal of Physical Chemistry</i> , 1995, 99, 11537-11542.	2.9	32
116	Structural refinement and measurement of biomolecules using novel software algorithms and methodologies. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1994, 12, 1456.	1.6	8
117	Conformational differences in two mutant hinge IgG4 antibodies observed by scanning tunneling microscopy. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1994, 12, 1517.	1.6	8
118	Atomic force microscopy and scanning tunnelling microscopy: Refining techniques for studying biomolecules. <i>Trends in Biotechnology</i> , 1994, 12, 127-132.	9.3	27
119	The use of a polymer film to estimate AFM probe profile. <i>Surface Science</i> , 1994, 318, L1219-L1224.	1.9	12
120	Use of Scanning Probe Microscopy and Surface Plasmon Resonance as Analytical Tools in the Study of Antibody-Coated Microtiter Wells. <i>Langmuir</i> , 1994, 10, 2654-2661.	3.5	59
121	Approaches to the immobilization of proteins at surfaces for analysis by scanning tunneling microscopy. <i>Langmuir</i> , 1993, 9, 2356-2362.	3.5	80
122	Studies of covalently immobilized protein molecules by scanning tunneling microscopy: the role of water in image contrast formation. <i>The Journal of Physical Chemistry</i> , 1993, 97, 8852-8854.	2.9	29
123	Observation of a superlattice periodic feature on gold with a scanning tunneling microscope. <i>Applied Physics Letters</i> , 1992, 60, 1436-1437.	3.3	6
124	Controlled nanometre-scale line and symbol formation on graphite in air using a scanning tunnelling microscope. <i>Journal of Physics Condensed Matter</i> , 1991, 3, 7213-7216.	1.8	9
125	Making video presentations from the Evans and Sutherland PS390. <i>Journal of Molecular Graphics</i> , 1990, 8, 31-33.	1.1	1