Tilman E SchÃ¤ffer

List of Publications by Year
in descending order

104 papers	7,252 citations	71061 41 h-index	56687 83 g-index
107 all docs	107 docs citations	107 times ranked	7961 citing authors

#	Article	IF	Citations
1	Platelet ACKR3/CXCR7 favors antiplatelet lipids over anÂatherothrombotic lipidome and regulates thromboinflammation. Blood, 2022, 139, 1722-1742.	0.6	17
2	ACKR3 regulates platelet activation and ischemia-reperfusion tissue injury. Nature Communications, 2022, 13, 1823.	5.8	13
3	Characterization of GPVI- or GPVI-CD39-Coated Nanoparticles and Their Impact on In Vitro Thrombus Formation. International Journal of Molecular Sciences, 2022, 23, 11.	1.8	4
4	Reduced platelet forces underlie impaired hemostasis in mouse models of MYH9 -related disease. Science Advances, 2022, 8, eabn2627.	4.7	21
5	Mechanics of migrating platelets investigated with scanning ion conductance microscopy. Nanoscale, 2022, 14, 8192-8199.	2.8	6
6	Spatial correlation of cell stiffness and traction forces in cancer cells measured with combined SICM and TFM. RSC Advances, 2021, 11, 13951-13956.	1.7	13
7	Spatial organization of Dps and DNAâ€“Dps complexes. Journal of Molecular Biology, 2021, 433, 166930.	2.0	17
8	Comprehensive Analysis of Human Cytomegalovirus- and HIV-Mediated Plasma Membrane Remodeling in Macrophages. MBio, 2021, 12, e0177021.	1.8	5
9	Effect of Oxidized LDL on Platelet Shape, Spreading, and Migration Investigated with Deep Learning Platelet Morphometry. Cells, 2021, 10, 2932.	1.8	5
10	The effect of finite sample thickness in scanning ion conductance microscopy stiffness measurements. Applied Physics Letters, 2020, 117, .	1.5	11
11	Evidence of (anti)metamorphic properties of modified graphitic surfaces obtained in real time at a single-molecule level. Colloids and Surfaces B: Biointerfaces, 2020, 193, 111077.	2.5	4
12	In Situ Single-Molecule AFM Investigation of Surface-Induced Fibrinogen Unfolding on Graphite. Langmuir, 2019, 35, 9732-9739.	1.6	13
13	Combined atomic force microscopy (AFM) and traction force microscopy (TFM) reveals a correlation between viscoelastic material properties and contractile prestress of living cells. Soft Matter, 2019, 15, 1721-1729.	1.2	61
14	Ultrafast Imaging of Cardiomyocyte Contractions by Combining Scanning Ion Conductance Microscopy with a Microelectrode Array. Analytical Chemistry, 2019, 91, 9648-9655.	3.2	18
15	Mapping the creep compliance of living cells with scanning ion conductance microscopy reveals a subcellular correlation between stiffness and fluidity. Nanoscale, 2019, 11, 6982-6989.	2.8	18
16	High-speed scanning ion conductance microscopy for sub-second topography imaging of live cells. Nanoscale, 2019, 11, 8579-8587.	2.8	43
17	Biomechanical and biomolecular characterization of extracellular matrix structures in human colon carcinomas. Matrix Biology, 2018, 68-69, 180-193.	1.5	121
18	Macro-SICM: A Scanning Ion Conductance Microscope for Large-Range Imaging. Analytical Chemistry, 2018, 90, 5048-5054.	3.2	13

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19	Skewness of the height distribution in cell topography images is a measure of cell shape. Japanese Journal of Applied Physics, 2018, 57, 08NB02.	0.8	4
20	Resonance compensating chirp mode for mapping the rheology of live cells by high-speed atomic force microscopy. Applied Physics Letters, 2018, 113, .	1.5	17
21	Functional Relevance of the Anaphylatoxin Receptor C3aR for Platelet Function and Arterial Thrombus Formation Marks an Intersection Point Between Innate Immunity and Thrombosis. Circulation, 2018, 138, 1720-1735.	1.6	77
22	Viscoelastic properties of normal and cancerous human breast cells are affected differently by contact to adjacent cells. Acta Biomaterialia, 2017, 55, 239-248.	4.1	58
23	Regulation of oxidized platelet lipidome: implications for coronary artery disease. European Heart Journal, 2017, 38, 1993-2005.	1.0	92
24	An Accurate Model for the Ion Currentâ€“Distance Behavior in Scanning Ion Conductance Microscopy Allows for Calibration of Pipet Tip Geometry and Tipâ€“Sample Distance. Analytical Chemistry, 2017, 89, 11875-11880.	3.2	20
25	Time-Lapse Single-Biomolecule Atomic Force Microscopy Investigation on Modified Graphite in Solution. Langmuir, 2017, 33, 10027-10034.	1.6	14
26	Neurons, Erythrocytes and Beyond â€“The Diverse Functions of Chorein. NeuroSignals, 2017, 25, 117-126.	0.5	17
27	Thrombin-induced cytoskeleton dynamics in spread human platelets observed with fast scanning ion conductance microscopy. Scientific Reports, 2017, 7, 4810.	1.6	42
28	Hematopoietic Stem and Progenitor Cell Expansion in Contact with Mesenchymal Stromal Cells in a Hanging Drop Model Uncovers Disadvantages of 3D Culture. Stem Cells International, 2016, 2016, 1-13.	1.2	27
29	Nanotemplate-directed DNA segmental thermal motion. RSC Advances, 2016, 6, 79584-79592.	1.7	8
30	LeftyA decreases Actin Polymerization and Stiffness in Human Endometrial Cancer Cells. Scientific Reports, 2016, 6, 29370.	1.6	32
31	Comparative morphology analysis of live blood platelets using scanning ion conductance and robotic dark-field microscopy. Platelets, 2016, 27, 541-546.	1.1	16
32	Imaging the elastic modulus of human platelets during thrombininduced activation using scanning ion conductance microscopy. Thrombosis and Haemostasis, 2015, 113, 305-311.	1.8	33
33	Platelet-derived HMGB1 is a critical mediator of thrombosis. Journal of Clinical Investigation, 2015, 125, 4638-4654.	3.9	281
34	Comparison of Atomic Force Microscopy and Scanning Ion Conductance Microscopy for Live Cell Imaging. Langmuir, 2015, 31, 6807-6813.	1.6	84
35	Intraoperative model based identification of tissue properties based on multimodal and multiscale measurements. Proceedings of SPIE, 2015, , .	0.8	0
36	Intraoperative model based identification of tissue properties using a multimodal and multiscale elastographic measurement approach. , 2015, , .		0

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37	Imaging viscoelastic properties of live cells by AFM: power-law rheology on the nanoscale. Soft Matter, 2015, 11, 4584-4591.	1.2	140
38	Lateral Resolution and Image Formation in Scanning Ion Conductance Microscopy. Analytical Chemistry, 2015, 87, 7117-7124.	3.2	43
39	High-frequency ultrasound-guided disruption of glycoprotein VI-targeted microbubbles targets atheroprogressison in mice. Biomaterials, 2015, 36, 80-89.	5.7	25
40	Atomic force microscopy crosslinks interdisciplinary eye research. Medical Hypothesis, Discovery, and Innovation in Ophthalmology, 2015, 4, 1-4.	0.4	3
41	Note: Artificial neural networks for the automated analysis of force map data in atomic force microscopy. Review of Scientific Instruments, 2014, 85, 056104.	0.6	7
42	Optical knife-edge displacement sensor for high-speed atomic force microscopy. Applied Physics Letters, 2014, 104, 103101.	1.5	18
43	High-speed force mapping on living cells with a small cantilever atomic force microscope. Review of Scientific Instruments, 2014, 85, 073703.	0.6	40
44	Creep compliance mapping by atomic force microscopy. Polymer, 2014, 55, 219-225.	1.8	32
45	Engineering of a bio-functionalized hybrid off-the-shelf heart valve. Biomaterials, 2014, 35, 2130-2139.	5.7	96
46	Effect of Sample Slope on Image Formation in Scanning Ion Conductance Microscopy. Analytical Chemistry, 2014, 86, 9838-9845.	3.2	37
47	Bacterial interactions with proteins and cells relevant to the development of life-threatening endocarditis studied by use of a quartz-crystal microbalance. Analytical and Bioanalytical Chemistry, 2014, 406, 3395-3406.	1.9	14
48	Distribution of Young's Modulus in Porcine Corneas after Riboflavin/UVA-Induced Collagen Cross-Linking as Measured by Atomic Force Microscopy. PLoS ONE, 2014, 9, e88186.	1.1	55
49	Mapping the mechanical stiffness of live cells with the scanning ion conductance microscope. Soft Matter, 2013, 9, 3230.	1.2	87
50	Structural Insight into the Giant Ca2+-Binding Adhesin SiiE: Implications for the Adhesion of Salmonella enterica to Polarized Epithelial Cells. Structure, 2013, 21, 741-752.	1.6	46
51	Oxidative stress-induced posttranslational modifications of alpha-synuclein: Specific modification of alpha-synuclein by 4-hydroxy-2-nonenal increases dopaminergic toxicity. Molecular and Cellular Neurosciences, 2013, 54, 71-83.	1.0	143
52	Nanomechanics of Molecules and Living Cells with Scanning Ion Conductance Microscopy. Analytical Chemistry, 2013, 85, 6988-6994.	3.2	30
53	Chorein Sensitivity of Actin Polymerization, Cell Shape and Mechanical Stiffness of Vascular Endothelial Cells. Cellular Physiology and Biochemistry, 2013, 32, 728-742.	1.1	46
54	Evaluation of Lamina Cribrosa and Peripapillary Sclera Stiffness in Pseudoexfoliation and Normal Eyes by Atomic Force Microscopy. , 2012, 53, 2960.		103

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55	Contour and persistence length of Corynebacterium diphtheriae pili by atomic force microscopy. European Biophysics Journal, 2012, 41, 561-570.	1.2	19
56	Focal Adhesion Kinase Stabilizes the Cytoskeleton. Biophysical Journal, 2011, 101, 2131-2138.	0.2	87
57	Comparison of Scanning Ion Conductance Microscopy with Atomic Force Microscopy for Cell Imaging. Langmuir, 2011, 27, 697-704.	1.6	134
58	Corynebacterium diphtheriae invasion-associated protein (DIP1281) is involved in cell surface organization, adhesion and internalization in epithelial cells. BMC Microbiology, 2010, 10, 2.	1.3	64
59	Strain-specific differences in pili formation and the interaction of Corynebacterium diphtheriae with host cells. BMC Microbiology, 2010, 10, 257.	1.3	41
60	Scanning Ion Conductance Microscopy. , 2010, , 433-460.		0
61	High-speed atomic force microscopy for large scan sizes using small cantilevers. Nanotechnology, 2010, 21, 225705.	1.3	63
62	The influence of Pyk2 on the mechanical properties in fibroblasts. Biochemical and Biophysical Research Communications, 2010, 393, 694-697.	1.0	14
63	Scanning Ion Conductance Microscopy. , 2010, , 295-323.		0
64	Image formation, resolution, and height measurement in scanning ion conductance microscopy. Journal of Applied Physics, 2009, 105, .	1.1	95
65	Imaging and Patterning of Pore-Suspending Membranes with Scanning Ion Conductance Microscopy. Langmuir, 2009, 25, 3022-3028.	1.6	57
66	Noncontact Measurement of the Local Mechanical Properties of Living Cells Using Pressure Applied via a Pipette. Biophysical Journal, 2008, 95, 3017-3027.	0.2	112
67	Scanning ion conductance microscopy with distance-modulated shear force control. Nanotechnology, 2007, 18, 145505.	1.3	33
68	AFM combines functional and morphological analysis of peripheral myelinated and demyelinated nerve fibers. NeuroImage, 2007, 37, 1218-1226.	2.1	37
69	Scanning Ion Conductance Microscopy. Imaging & Microscopy, 2007, 9, 30-32.	0.1	0
70	Structure and interactions of calcite spherulites with Î±-chitin in the brown shrimp (Penaeus aztecus) shell. Materials Science and Engineering C, 2007, 27, 8-13.	3.8	16
71	Vacuolar structures can be identified by AFM elasticity mapping. Ultramicroscopy, 2007, 107, 895-901.	0.8	36
72	Low-Noise Methods for Optical Measurements of Cantilever Deflections. Nanoscience and Technology, 2007, , 51-74.	1.5	2

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73	Practical implementation of dynamic methods for measuring atomic force microscope cantilever spring constants. Nanotechnology, 2006, 17, 2135-2145.	1.3	165
74	Scanning Ion Conductance Microscopy. Nanoscience and Technology, 2006, , 91-119.	1.5	6
75	In vitro differentiation of human dental follicle cells with dexamethasone and insulin. Cell Biology International, 2005, 29, 567-575.	1.4	101
76	Optimized detection of normal vibration modes of atomic force microscope cantilevers with the optical beam deflection method. Journal of Applied Physics, 2005, 97, 083524.	1.1	46
77	Gradient of Rigidity in the Lamellipodia of Migrating Cells Revealed by Atomic Force Microscopy. Biophysical Journal, 2005, 89, 667-675.	0.2	158
78	Influence of Hydrocortisone on the Mechanical Properties of the Cerebral Endothelium In Vitro. Biophysical Journal, 2005, 89, 3904-3910.	0.2	46
79	Calculation of thermal noise in an atomic force microscope with a finite optical spot size. Nanotechnology, 2005, 16, 664-670.	1.3	55
80	Finite optical spot size and position corrections in thermal spring constant calibration. Nanotechnology, 2004, 15, 1344-1350.	1.3	209
81	Accurate Height and Volume Measurements on Soft Samples with the Atomic Force Microscope. Langmuir, 2004, 20, 10038-10045.	1.6	98
82	Analyzing Heat Capacity Profiles of Peptide-Containing Membranes: Cluster Formation of Gramicidin A. Biophysical Journal, 2003, 84, 2427-2439.	0.2	68
83	Magnetic force gradient mapping. Journal of Applied Physics, 2003, 94, 6525-6532.	1.1	9
84	Force spectroscopy with a large dynamic range using small cantilevers and an array detector. Journal of Applied Physics, 2002, 91, 4739-4746.	1.1	32
85	Lipoconjugates for the Noncovalent Generation of Microarrays in Biochemical and Cellular Assays. ChemBioChem, 2002, 3, 1183-1191.	1.3	10
86	Dynamic interactions of p53 with DNA in solution by time-lapse atomic force microscopy. Journal of Molecular Biology, 2001, 314, 233-243.	2.0	88
87	Control of size of PbI2 nanocrystals using Langmuirâ€“Blodgett films of n-octadecyl succinic acid. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 181, 115-121.	2.3	7
88	Array detector for the atomic force microscope. Applied Physics Letters, 2000, 76, 3644-3646.	1.5	15
89	Microfabricated small metal cantilevers with silicon tip for atomic force microscopy. Journal of Microelectromechanical Systems, 2000, 9, 112-116.	1.7	46
90	Fast imaging and fast force spectroscopy of single biopolymers with a new atomic force microscope designed for small cantilevers. Review of Scientific Instruments, 1999, 70, 4300-4303.	0.6	246

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91	Molecular mechanistic origin of the toughness of natural adhesives, fibres and composites. Nature, 1999, 399, 761-763.	13.7	1,153
92	Small cantilevers for force spectroscopy of single molecules. Journal of Applied Physics, 1999, 86, 2258-2262.	1.1	368
93	Characterization and optimization of the detection sensitivity of an atomic force microscope for small cantilevers. Journal of Applied Physics, 1998, 84, 4661-4666.	1.1	70
94	<title>Atomic force microscope for small cantilevers</title>. , 1997, 3009, 48.		32
95	<title>Atomic force microscopy using small cantilevers</title>. , 1997, , .		18
96	Does Abalone Nacre Form by Heteroepitaxial Nucleation or by Growth through Mineral Bridges?. Chemistry of Materials, 1997, 9, 1731-1740.	3.2	387
97	A New Phase of Oriented Mesoporous Silicate Thin Films. Chemistry of Materials, 1997, 9, 1962-1967.	3.2	189
98	Studies of vibrating atomic force microscope cantilevers in liquid. Journal of Applied Physics, 1996, 80, 3622-3627.	1.1	266
99	Assembly of submicrometre ferromagnets in gallium arsenide semiconductors. Nature, 1995, 377, 707-710.	13.7	81
100	Magnetic force microscopy of the submicron magnetic assembly in a magnetotactic bacterium. Applied Physics Letters, 1995, 66, 2582-2584.	1.5	133
101	Probing oscillatory hydration potentials using thermal-mechanical noise in an atomic-force microscope. Physical Review B, 1995, 52, R8692-R8695.	1.1	143
102	High-Speed Atomic Force Microscopy of Biomolecules in Motion. , 0, , 221-247.		4
103	Shear-Force-Controlled Scanning Ion Conductance Microscopy. , 0, , 197-212.		0
104	Combined Highâ€Speed Atomic Force and Optical Microscopy Shows That Viscoelastic Properties of Melanoma Cancer Cells Change during the Cell Cycle. Advanced Materials Technologies, 0, , 2101000.	3.0	1