

Georg E Fantner

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

78
papers

4,261
citations

31
h-index

65
g-index

87
ext. papers

4,880
ext. citations

9.2
avg, IF

5.14
L-index

#	Paper	IF	Citations
78	Time-Resolved Scanning Ion Conductance Microscopy for Three-Dimensional Tracking of Nanoscale Cell Surface Dynamics. <i>ACS Nano</i> , 2021 ,	16.7	10
77	Kinetic and structural roles for the surface in guiding SAS-6 self-assembly to direct centriole architecture. <i>Nature Communications</i> , 2021 , 12, 6180	17.4	3
76	Mechanical Properties of Soft Biological Membranes for Organ-on-a-Chip Assessed by Bulge Test and AFM. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 2990-2997	5.5	10
75	Tuning SAS-6 architecture with monobodies impairs distinct steps of centriole assembly. <i>Nature Communications</i> , 2021 , 12, 3805	17.4	2
74	Correlative 3D microscopy of single cells using super-resolution and scanning ion-conductance microscopy. <i>Nature Communications</i> , 2021 , 12, 4565	17.4	10
73	In-situ Correlative Analysis of electrical and magnetic properties of Ion-beam treated surfaces by combination of AFM and FIB. <i>Microscopy and Microanalysis</i> , 2021 , 27, 1020-1020	0.5	
72	The role of convolutional neural networks in scanning probe microscopy: a review. <i>Beilstein Journal of Nanotechnology</i> , 2021 , 12, 878-901	3	4
71	Cancer-cell stiffening via cholesterol depletion enhances adoptive T-cell immunotherapy. <i>Nature Biomedical Engineering</i> , 2021 ,	19	14
70	Scratching the Surface: Bacterial Cell Envelopes at the Nanoscale. <i>MBio</i> , 2020 , 11,	7.8	14
69	High-Throughput Nanocapillary Filling Enabled by Microwave Radiation for Scanning Ion Conductance Microscopy Imaging. <i>ACS Applied Nano Materials</i> , 2020 , 3, 7829-7834	5.6	9
68	A biphasic growth model for cell pole elongation in mycobacteria. <i>Nature Communications</i> , 2020 , 11, 452	17.4	12
67	Overlapping and essential roles for molecular and mechanical mechanisms in mycobacterial cell division. <i>Nature Physics</i> , 2020 , 16, 57-62	16.2	13
66	Parietal Structures of Can Impact the D-Cateslytin Antibacterial Activity. <i>ACS Chemical Biology</i> , 2020 , 15, 2801-2814	4.9	3
65	An atomic force microscope integrated with a helium ion microscope for correlative nanoscale characterization. <i>Beilstein Journal of Nanotechnology</i> , 2020 , 11, 1272-1279	3	4
64	Large-Range HS-AFM Imaging of DNA Self-Assembly through In Situ Data-Driven Control. <i>Small Methods</i> , 2019 , 3, 1900031	12.8	11
63	Single-molecule kinetics of pore assembly by the membrane attack complex. <i>Nature Communications</i> , 2019 , 10, 2066	17.4	42
62	High-Speed Atomic Force Microscopy: Large-Range HS-AFM Imaging of DNA Self-Assembly through In Situ Data-Driven Control (Small Methods 7/2019). <i>Small Methods</i> , 2019 , 3, 1970022	12.8	0

61	Correlative Microscopy Using Scanning Probe Microscopes 2019 , 99-118		1
60	Increased drug permeability of a stiffened mycobacterial outer membrane in cells lacking MFS transporter Rv1410 and lipoprotein LprG. <i>Molecular Microbiology</i> , 2019 , 111, 1263-1282	4.1	10
59	Integration of sharp silicon nitride tips into high-speed SU8 cantilevers in a batch fabrication process. <i>Beilstein Journal of Nanotechnology</i> , 2019 , 10, 2357-2363	3	2
58	Air and Water-Stable n-Type Doping and Encapsulation of Flexible MoS ₂ Devices with SU8. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800492	6.4	11
57	Detecting topological variations of DNA at single-molecule level. <i>Nature Communications</i> , 2019 , 10, 3	17.4	31
56	A 0.1% THD, 1-M Ω to 1-G Ω Tunable, Temperature-Compensated Transimpedance Amplifier Using a Multi-Element Pseudo-Resistor. <i>IEEE Journal of Solid-State Circuits</i> , 2018 , 53, 1913-1923	5.5	26
55	Reducing uncertainties in energy dissipation measurements in atomic force spectroscopy of molecular networks and cell-adhesion studies. <i>Scientific Reports</i> , 2018 , 8, 9390	4.9	2
54	Maturing peptidoglycan requires non-canonical crosslinks to maintain shape. <i>ELife</i> , 2018 , 7,	8.9	57
53	Photothermal Off-Resonance Tapping for Rapid and Gentle Atomic Force Imaging of Live Cells. <i>International Journal of Molecular Sciences</i> , 2018 , 19,	6.3	14
52	High-speed photothermal off-resonance atomic force microscopy reveals assembly routes of centriolar scaffold protein SAS-6. <i>Nature Nanotechnology</i> , 2018 , 13, 696-701	28.7	71
51	Single-molecule kinetic analysis of HP1-chromatin binding reveals a dynamic network of histone modification and DNA interactions. <i>Nucleic Acids Research</i> , 2017 , 45, 10504-10517	20.1	34
50	Microfluidic bacterial traps for simultaneous fluorescence and atomic force microscopy. <i>Nano Research</i> , 2017 , 10, 3896-3908	10	13
49	Division site selection linked to inherited cell surface wave troughs in mycobacteria. <i>Nature Microbiology</i> , 2017 , 2, 17094	26.6	40
48	Probing the Morphology and Evolving Dynamics of 3D Printed Nanostructures Using High-Speed Atomic Force Microscopy. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 24456-24461	9.5	19
47	Components for high-speed atomic force microscopy optimized for low phase-lag 2017 ,		8
46	Digitally controlled analog proportional-integral-derivative (PID) controller for high-speed scanning probe microscopy. <i>Review of Scientific Instruments</i> , 2017 , 88, 123712	1.7	6
45	Data-Driven Controller Design for Atomic-Force Microscopy. <i>IFAC-PapersOnLine</i> , 2017 , 50, 10437-10442	0.7	6
44	Direct-write nanoscale printing of nanogranular tunnelling strain sensors for sub-micrometre cantilevers. <i>Nature Communications</i> , 2016 , 7, 12487	17.4	30

43	Chronic inflammation imposes aberrant cell fate in regenerating epithelia through mechanotransduction. <i>Nature Cell Biology</i> , 2016 , 18, 168-80	23.4	82
42	Harnessing the damping properties of materials for high-speed atomic force microscopy. <i>Nature Nanotechnology</i> , 2016 , 11, 147-51	28.7	62
41	Design of a high-bandwidth tripod scanner for high speed atomic force microscopy. <i>Scanning</i> , 2016 , 38, 889-900	1.6	18
40	Growth and Dissolution of Calcite in the Presence of Adsorbed Stearic Acid. <i>Langmuir</i> , 2015 , 31, 7563-714		29
39	High-Resolution Correlative Microscopy: Bridging the Gap between Single Molecule Localization Microscopy and Atomic Force Microscopy. <i>Nano Letters</i> , 2015 , 15, 4896-904	11.5	66
38	Studying biological membranes with extended range high-speed atomic force microscopy. <i>Scientific Reports</i> , 2015 , 5, 11987	4.9	26
37	A compressible scaffold for minimally invasive delivery of large intact neuronal networks. <i>Advanced Healthcare Materials</i> , 2015 , 4, 301-12	10.1	52
36	Correlated Atomic Force Microscopy and Single Molecule Localization Microscopy. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1625-1626	0.5	
35	Modeling and Design of high-speed FM-AFM driver electronics using Cadence Virtuoso [®] and Simulink [®] . <i>IFAC-PapersOnLine</i> , 2015 , 48, 671-672	0.7	1
34	Single-cycle-PLL detection for real-time FM-AFM applications. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2014 , 8, 206-15	5.1	7
33	High-frequency multimodal atomic force microscopy. <i>Beilstein Journal of Nanotechnology</i> , 2014 , 5, 2459-67		26
32	High-speed imaging upgrade for a standard sample scanning atomic force microscope using small cantilevers. <i>Review of Scientific Instruments</i> , 2014 , 85, 093702	1.7	33
31	Analysis of local deformation effects in resistive strain sensing of a submicron-thickness AFM cantilever 2013 ,		3
30	Large-scale analysis of high-speed atomic force microscopy data sets using adaptive image processing. <i>Beilstein Journal of Nanotechnology</i> , 2012 , 3, 747-58	3	12
29	Focused electron beam induced deposition: A perspective. <i>Beilstein Journal of Nanotechnology</i> , 2012 , 3, 597-619	3	180
28	Kinetics of antimicrobial peptide activity measured on individual bacterial cells using high-speed atomic force microscopy. <i>Nature Nanotechnology</i> , 2010 , 5, 280-5	28.7	253
27	Virus-templated assembly of porphyrins into light-harvesting nanoantennae. <i>Journal of the American Chemical Society</i> , 2010 , 132, 1462-3	16.4	166
26	Imaging Bacterial Cell Death Induced by Antimicrobial Peptides in Real Time Using High Speed AFM. <i>Microscopy and Microanalysis</i> , 2010 , 16, 466-467	0.5	2

25	DMCMN: In Depth Characterization and Control of AFM Cantilevers With Integrated Sensing and Actuation. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2009 , 131,	1.6	27
24	Effect of Ca ²⁺ ions on the adhesion and mechanical properties of adsorbed layers of human osteopontin. <i>Biophysical Journal</i> , 2008 , 95, 2939-50	2.9	48
23	Nanoscale ion mediated networks in bone: osteopontin can repeatedly dissipate large amounts of energy. <i>Nano Letters</i> , 2007 , 7, 2491-8	11.5	116
22	Protective coatings on extensible biofibres. <i>Nature Materials</i> , 2007 , 6, 669-72	27	186
21	The role of calcium and magnesium in the concrete tubes of the sandcastle worm. <i>Journal of Experimental Biology</i> , 2007 , 210, 1481-8	3	61
20	Applied physics. High-speed atomic force microscopy. <i>Science</i> , 2006 , 314, 601-2	33.3	148
19	High-speed photography of the development of microdamage in trabecular bone during compression. <i>Journal of Materials Research</i> , 2006 , 21, 1093-1100	2.5	23
18	Bone diagnostic instrument. <i>Review of Scientific Instruments</i> , 2006 , 77, 075105	1.7	46
17	Sacrificial bonds and hidden length: unraveling molecular mesostructures in tough materials. <i>Biophysical Journal</i> , 2006 , 90, 1411-8	2.9	237
16	Hierarchical interconnections in the nano-composite material bone: Fibrillar cross-links resist fracture on several length scales. <i>Composites Science and Technology</i> , 2006 , 66, 1205-1211	8.6	59
15	Components for high speed atomic force microscopy. <i>Ultramicroscopy</i> , 2006 , 106, 881-7	3.1	196
14	Sacrificial bonds and hidden length dissipate energy as mineralized fibrils separate during bone fracture. <i>Nature Materials</i> , 2005 , 4, 612-6	27	723
13	Data acquisition system for high speed atomic force microscopy. <i>Review of Scientific Instruments</i> , 2005 , 76, 026118	1.7	62
12	Automated wafer-scale fabrication of electron beam deposited tips for atomic force microscopes using pattern recognition. <i>Nanotechnology</i> , 2004 , 15, 1131-1134	3.4	20
11	Rigid design of fast scanning probe microscopes using finite element analysis. <i>Ultramicroscopy</i> , 2004 , 100, 259-65	3.1	101
10	High-resolution AFM imaging of intact and fractured trabecular bone. <i>Bone</i> , 2004 , 35, 4-10	4.7	222
9	Influence of the degradation of the organic matrix on the microscopic fracture behavior of trabecular bone. <i>Bone</i> , 2004 , 35, 1013-22	4.7	102
8	Force spectroscopy of collagen fibers to investigate their mechanical properties and structural organization. <i>Biophysical Journal</i> , 2004 , 86, 3186-93	2.9	96

7	Investigations into the polymorphism of rat tail tendon fibrils using atomic force microscopy. <i>Biochemical and Biophysical Research Communications</i> , 2003 , 303, 508-13	3-4	37
6	Evidence that collagen fibrils in tendons are inhomogeneously structured in a tubelike manner. <i>Biophysical Journal</i> , 2003 , 84, 2593-8	2-9	99
5	Surface-catalyzed SAS-6 self-assembly directs centriole formation through kinetic and structural mechanisms		5
4	Correlative 3D microscopy of single cells using super-resolution and scanning ion-conductance microscopy		1
3	Maturing Mycobacterial Peptidoglycan Requires Non-canonical Crosslinks to Maintain Shape		2
2	Single-molecule kinetics of pore assembly by the membrane attack complex		1
1	Time-resolved scanning ion conductance microscopy for three-dimensional tracking of nanoscale cell surface dynamics		1