

Georg E Fantner

List of Publications by Year in descending order

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Version: 2024-02-01

77
papers

5,265
citations

109137

35
h-index

85405

71
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87
all docs

87
docs citations

87
times ranked

6312
citing authors

#	ARTICLE	IF	CITATIONS
1	Engineering Optically Active Defects in Hexagonal Boron Nitride Using Focused Ion Beam and Water. ACS Nano, 2022, 16, 3695-3703.	7.3	28
2	Mechanical Properties of Soft Biological Membranes for Organ-on-a-Chip Assessed by Bulge Test and AFM. ACS Biomaterials Science and Engineering, 2021, 7, 2990-2997.	2.6	32
3	Instruments of change for academic tool development. Nature Physics, 2021, 17, 421-424.	6.5	4
4	Seeing and Touching the Mycomembrane at the Nanoscale. Journal of Bacteriology, 2021, 203, .	1.0	5
5	Self-Actuated Polymer-Based Cantilevers with Sharp Silicon Tips for High-Speed Atomic Force Microscopy. , 2021, , .		1
6	Tuning SAS-6 architecture with monobodies impairs distinct steps of centriole assembly. Nature Communications, 2021, 12, 3805.	5.8	3
7	Correlative 3D microscopy of single cells using super-resolution and scanning ion-conductance microscopy. Nature Communications, 2021, 12, 4565.	5.8	25
8	In-situ Correlative Analysis of electrical and magnetic properties of Ion-beam treated surfaces by combination of AFM and FIB. Microscopy and Microanalysis, 2021, 27, 1020-1020.	0.2	0
9	The role of convolutional neural networks in scanning probe microscopy: a review. Beilstein Journal of Nanotechnology, 2021, 12, 878-901.	1.5	18
10	Kinetic and structural roles for the surface in guiding SAS-6 self-assembly to direct centriole architecture. Nature Communications, 2021, 12, 6180.	5.8	10
11	Time-Resolved Scanning Ion Conductance Microscopy for Three-Dimensional Tracking of Nanoscale Cell Surface Dynamics. ACS Nano, 2021, 15, 17613-17622.	7.3	31
12	Cancer-cell stiffening via cholesterol depletion enhances adoptive T-cell immunotherapy. Nature Biomedical Engineering, 2021, 5, 1411-1425.	11.6	96
13	Overlapping and essential roles for molecular and mechanical mechanisms in mycobacterial cell division. Nature Physics, 2020, 16, 57-62.	6.5	24
14	Parietal Structures of Escherichia coli Can Impact the D-Cateslytin Antibacterial Activity. ACS Chemical Biology, 2020, 15, 2801-2814.	1.6	3
15	An atomic force microscope integrated with a helium ion microscope for correlative nanoscale characterization. Beilstein Journal of Nanotechnology, 2020, 11, 1272-1279.	1.5	8
16	Scratching the Surface: Bacterial Cell Envelopes at the Nanoscale. MBio, 2020, 11, .	1.8	25
17	High-Throughput Nanocapillary Filling Enabled by Microwave Radiation for Scanning Ion Conductance Microscopy Imaging. ACS Applied Nano Materials, 2020, 3, 7829-7834.	2.4	13
18	A biphasic growth model for cell pole elongation in mycobacteria. Nature Communications, 2020, 11, 452.	5.8	36

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19	High-Speed Atomic Force Microscopy: Large-Range HS-AFM Imaging of DNA Self-Assembly through In Situ Data-Driven Control (Small Methods 7/2019). Small Methods, 2019, 3, 1970022.	4.6	1
20	Large-Range HS-AFM Imaging of DNA Self-Assembly through In Situ Data-Driven Control. Small Methods, 2019, 3, 1900031.	4.6	20
21	Single-molecule kinetics of pore assembly by the membrane attack complex. Nature Communications, 2019, 10, 2066.	5.8	74
22	Increased drug permeability of a stiffened mycobacterial outer membrane in cells lacking MFS transporter Rv1410 and lipoprotein LprG. Molecular Microbiology, 2019, 111, 1263-1282.	1.2	17
23	Model-based Q Factor Control for Photothermally Excited Microcantilevers. , 2019, , .		1
24	Integration of sharp silicon nitride tips into high-speed SU8 cantilevers in a batch fabrication process. Beilstein Journal of Nanotechnology, 2019, 10, 2357-2363.	1.5	4
25	Air and Water-Stable n-Type Doping and Encapsulation of Flexible MoS ₂ Devices with SU8. Advanced Electronic Materials, 2019, 5, 1800492.	2.6	18
26	Detecting topological variations of DNA at single-molecule level. Nature Communications, 2019, 10, 3.	5.8	59
27	A 0.1% THD, 1-M Ω to 1-G Ω Tunable, Temperature-Compensated Transimpedance Amplifier Using a Multi-Element Pseudo-Resistor. IEEE Journal of Solid-State Circuits, 2018, 53, 1913-1923.	3.5	54
28	Photothermal Off-Resonance Tapping for Rapid and Gentle Atomic Force Imaging of Live Cells. International Journal of Molecular Sciences, 2018, 19, 2984.	1.8	23
29	High-speed photothermal off-resonance atomic force microscopy reveals assembly routes of centriolar scaffold protein SAS-6. Nature Nanotechnology, 2018, 13, 696-701.	15.6	105
30	Reducing uncertainties in energy dissipation measurements in atomic force spectroscopy of molecular networks and cell-adhesion studies. Scientific Reports, 2018, 8, 9390.	1.6	2
31	Maturing Mycobacterium smegmatis peptidoglycan requires non-canonical crosslinks to maintain shape. ELife, 2018, 7, .	2.8	108
32	Microfluidic bacterial traps for simultaneous fluorescence and atomic force microscopy. Nano Research, 2017, 10, 3896-3908.	5.8	16
33	Division site selection linked to inherited cell surface wave troughs in mycobacteria. Nature Microbiology, 2017, 2, 17094.	5.9	61
34	Probing the Morphology and Evolving Dynamics of 3D Printed Nanostructures Using High-Speed Atomic Force Microscopy. ACS Applied Materials & Interfaces, 2017, 9, 24456-24461.	4.0	23
35	Components for high-speed atomic force microscopy optimized for low phase-lag. , 2017, , .		11
36	Digitally controlled analog proportional-integral-derivative (PID) controller for high-speed scanning probe microscopy. Review of Scientific Instruments, 2017, 88, 123712.	0.6	11

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37	Data-Driven Controller Design for Atomic-Force Microscopy. IFAC-PapersOnLine, 2017, 50, 10437-10442.	0.5	10
38	Single-molecule kinetic analysis of HP1-chromatin binding reveals a dynamic network of histone modification and DNA interactions. Nucleic Acids Research, 2017, 45, 10504-10517.	6.5	49
39	Design of a high-bandwidth tripod scanner for high speed atomic force microscopy. Scanning, 2016, 38, 889-900.	0.7	25
40	Direct-write nanoscale printing of nanogranular tunnelling strain sensors for sub-micrometre cantilevers. Nature Communications, 2016, 7, 12487.	5.8	40
41	Chronic inflammation imposes aberrant cell fate in regenerating epithelia through mechanotransduction. Nature Cell Biology, 2016, 18, 168-180.	4.6	127
42	Harnessing the damping properties of materials for high-speed atomic force microscopy. Nature Nanotechnology, 2016, 11, 147-151.	15.6	81
43	Correlated Atomic Force Microscopy and Single Molecule Localization Microscopy. Microscopy and Microanalysis, 2015, 21, 1625-1626.	0.2	0
44	Modeling and Design of high-speed FM-AFM driver electronics using Cadence Virtuoso® and Simulink®. IFAC-PapersOnLine, 2015, 48, 671-672.	0.5	1
45	Growth and Dissolution of Calcite in the Presence of Adsorbed Stearic Acid. Langmuir, 2015, 31, 7563-7571.	1.6	34
46	High-Resolution Correlative Microscopy: Bridging the Gap between Single Molecule Localization Microscopy and Atomic Force Microscopy. Nano Letters, 2015, 15, 4896-4904.	4.5	81
47	Studying biological membranes with extended range high-speed atomic force microscopy. Scientific Reports, 2015, 5, 11987.	1.6	38
48	A Compressible Scaffold for Minimally Invasive Delivery of Large Intact Neuronal Networks. Advanced Healthcare Materials, 2015, 4, 301-312.	3.9	69
49	High-frequency multimodal atomic force microscopy. Beilstein Journal of Nanotechnology, 2014, 5, 2459-2467.	1.5	30
50	High-speed imaging upgrade for a standard sample scanning atomic force microscope using small cantilevers. Review of Scientific Instruments, 2014, 85, 093702.	0.6	36
51	Single-Cycle-PLL Detection for Real-Time FM-AFM Applications. IEEE Transactions on Biomedical Circuits and Systems, 2014, 8, 206-215.	2.7	8
52	Analysis of local deformation effects in resistive strain sensing of a submicron-thickness AFM cantilever. Proceedings of SPIE, 2013, , .	0.8	3
53	Focused electron beam induced deposition: A perspective. Beilstein Journal of Nanotechnology, 2012, 3, 597-619.	1.5	214
54	Large-scale analysis of high-speed atomic force microscopy data sets using adaptive image processing. Beilstein Journal of Nanotechnology, 2012, 3, 747-758.	1.5	16

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55	Imaging Bacterial Cell Death Induced by Antimicrobial Peptides in Real Time Using High Speed AFM. <i>Microscopy and Microanalysis</i> , 2010, 16, 466-467.	0.2	7
56	Kinetics of antimicrobial peptide activity measured on individual bacterial cells using high-speed atomic force microscopy. <i>Nature Nanotechnology</i> , 2010, 5, 280-285.	15.6	308
57	Virus-Templated Assembly of Porphyrins into Light-Harvesting Nanoantennae. <i>Journal of the American Chemical Society</i> , 2010, 132, 1462-1463.	6.6	181
58	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, .	0.9	28
59	Effect of Ca ²⁺ Ions on the Adhesion and Mechanical Properties of Adsorbed Layers of Human Osteopontin. <i>Biophysical Journal</i> , 2008, 95, 2939-2950.	0.2	51
60	The role of calcium and magnesium in the concrete tubes of the sandcastle worm. <i>Journal of Experimental Biology</i> , 2007, 210, 1481-1488.	0.8	63
61	Nanoscale Ion Mediated Networks in Bone: Osteopontin Can Repeatedly Dissipate Large Amounts of Energy. <i>Nano Letters</i> , 2007, 7, 2491-2498.	4.5	123
62	Protective coatings on extensible biofibres. <i>Nature Materials</i> , 2007, 6, 669-672.	13.3	206
63	Sacrificial Bonds and Hidden Length: Unraveling Molecular Mesostructures in Tough Materials. <i>Biophysical Journal</i> , 2006, 90, 1411-1418.	0.2	273
64	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.	3.8	66
65	Components for high speed atomic force microscopy. <i>Ultramicroscopy</i> , 2006, 106, 881-887.	0.8	220
66	APPLIED PHYSICS: High-Speed Atomic Force Microscopy. <i>Science</i> , 2006, 314, 601-602.	6.0	169
67	High-speed photography of the development of microdamage in trabecular bone during compression. <i>Journal of Materials Research</i> , 2006, 21, 1093-1100.	1.2	23
68	Bone diagnostic instrument. <i>Review of Scientific Instruments</i> , 2006, 77, 075105.	0.6	52
69	Sacrificial bonds and hidden length dissipate energy as mineralized fibrils separate during bone fracture. <i>Nature Materials</i> , 2005, 4, 612-616.	13.3	829
70	Data acquisition system for high speed atomic force microscopy. <i>Review of Scientific Instruments</i> , 2005, 76, 026118.	0.6	75
71	Automated wafer-scale fabrication of electron beam deposited tips for atomic force microscopes using pattern recognition. <i>Nanotechnology</i> , 2004, 15, 1131-1134.	1.3	20
72	Rigid design of fast scanning probe microscopes using finite element analysis. <i>Ultramicroscopy</i> , 2004, 100, 259-265.	0.8	110

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73	High-resolution AFM imaging of intact and fractured trabecular bone. <i>Bone</i> , 2004, 35, 4-10.	1.4	243
74	Influence of the degradation of the organic matrix on the microscopic fracture behavior of trabecular bone. <i>Bone</i> , 2004, 35, 1013-1022.	1.4	113
75	Force Spectroscopy of Collagen Fibers to Investigate Their Mechanical Properties and Structural Organization. <i>Biophysical Journal</i> , 2004, 86, 3186-3193.	0.2	111
76	Investigations into the polymorphism of rat tail tendon fibrils using atomic force microscopy. <i>Biochemical and Biophysical Research Communications</i> , 2003, 303, 508-513.	1.0	38
77	Evidence that Collagen Fibrils in Tendons Are Inhomogeneously Structured in a Tubelike Manner. <i>Biophysical Journal</i> , 2003, 84, 2593-2598.	0.2	109