

Gabriel Gomila

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3328890/publications.pdf>

Version: 2024-02-01

104
papers

3,274
citations

172457

29
h-index

155660

55
g-index

107
all docs

107
docs citations

107
times ranked

3566
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanoscale Mapping of the Conductivity and Interfacial Capacitance of an Electrolyte-Gated Organic Field-Effect Transistor under Operation. <i>Advanced Functional Materials</i> , 2021, 31, 2008032.	14.9	19
2	Depth mapping of metallic nanowire polymer nanocomposites by scanning dielectric microscopy. <i>Nanoscale</i> , 2021, 13, 10116-10126.	5.6	8
3	Fast Label-Free Nanoscale Composition Mapping of Eukaryotic Cells Via Scanning Dielectric Force Volume Microscopy and Machine Learning. <i>Small Methods</i> , 2021, 5, e2100279.	8.6	10
4	Dielectric Imaging of Fixed HeLa Cells by In-Liquid Scanning Dielectric Force Volume Microscopy. <i>Nanomaterials</i> , 2021, 11, 1402.	4.1	7
5	Dielectric properties and lamellarity of single liposomes measured by in-liquid scanning dielectric microscopy. <i>Journal of Nanobiotechnology</i> , 2021, 19, 167.	9.1	6
6	Efficient long-range conduction in cable bacteria through nickel protein wires. <i>Nature Communications</i> , 2021, 12, 3996.	12.8	32
7	Spatial Resolution and Capacitive Coupling in the Characterization of Nanowire Nanocomposites by Scanning Dielectric Microscopy. <i>Microscopy and Microanalysis</i> , 2021, 27, 1026-1034.	0.4	1
8	Electrical properties of outer membrane extensions from <i>Shewanella oneidensis</i> MR-1. <i>Nanoscale</i> , 2021, 13, 18754-18762.	5.6	1
9	Bioelectronic Recordings of Cardiomyocytes with Accumulation Mode Electrolyte Gated Organic Field Effect Transistors. <i>Biosensors and Bioelectronics</i> , 2020, 150, 111844.	10.1	36
10	Cholesterol Effect on the Specific Capacitance of Submicrometric DOPC Bilayer Patches Measured by in-Liquid Scanning Dielectric Microscopy. <i>Langmuir</i> , 2020, 36, 12963-12972.	3.5	7
11	Mapping the capacitance of self-assembled monolayers at metal/electrolyte interfaces at the nanoscale by in-liquid scanning dielectric microscopy. <i>Nanoscale</i> , 2020, 12, 20658-20668.	5.6	10
12	Dielectric nanotomography based on electrostatic force microscopy: A numerical analysis. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	10
13	Frequency-dependent force between ac-voltage-biased plates in electrolyte solutions. <i>Physical Review E</i> , 2019, 100, 022604.	2.1	10
14	Sizing single nanoscale objects from polarization forces. <i>Scientific Reports</i> , 2019, 9, 14142.	3.3	5
15	Mapping the dielectric constant of a single bacterial cell at the nanoscale with scanning dielectric force volume microscopy. <i>Nanoscale</i> , 2019, 11, 20809-20819.	5.6	12
16	Interdigitation in spin-coated lipid layers in air. <i>Colloids and Surfaces B: Biointerfaces</i> , 2018, 172, 400-406.	5.0	2
17	Dielectric constant of flagellin proteins measured by scanning dielectric microscopy. <i>Nanoscale</i> , 2018, 10, 19188-19194.	5.6	16
18	Anomalously low dielectric constant of confined water. <i>Science</i> , 2018, 360, 1339-1342.	12.6	627

#	ARTICLE	IF	CITATIONS
19	Direct mapping of the electric permittivity of heterogeneous non-planar thin films at gigahertz frequencies by scanning microwave microscopy. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 3884-3893.	2.8	17
20	Regulation of ribonucleotide synthesis by the <i>Pseudomonas aeruginosa</i> two-component system AlgR in response to oxidative stress. <i>Scientific Reports</i> , 2017, 7, 17892.	3.3	10
21	Internal Hydration Properties of Single Bacterial Endospores Probed by Electrostatic Force Microscopy. <i>ACS Nano</i> , 2016, 10, 11327-11336.	14.6	20
22	Nanoscale dielectric microscopy of non-planar samples by lift-mode electrostatic force microscopy. <i>Nanotechnology</i> , 2016, 27, 405706.	2.6	21
23	Nanoscale Electric Permittivity of Single Bacterial Cells at Gigahertz Frequencies by Scanning Microwave Microscopy. <i>ACS Nano</i> , 2016, 10, 280-288.	14.6	67
24	Quartz tuning fork-based conductive atomic force microscope with glue-free solid metallic tips. <i>Sensors and Actuators A: Physical</i> , 2015, 232, 259-266.	4.1	4
25	Nanoscale imaging of the growth and division of bacterial cells on planar substrates with the atomic force microscope. <i>Ultramicroscopy</i> , 2015, 154, 29-36.	1.9	18
26	Nanoscale electric polarizability of ultrathin bilayers on insulating substrates by electrostatic force microscopy. <i>Nanoscale</i> , 2015, 7, 18327-18336.	5.6	30
27	Finite-size effects and analytical modeling of electrostatic force microscopy applied to dielectric films. <i>Nanotechnology</i> , 2014, 25, 255702.	2.6	46
28	Calibrated complex impedance and permittivity measurements with scanning microwave microscopy. <i>Nanotechnology</i> , 2014, 25, 145703.	2.6	117
29	Quantitative electrostatic force microscopy with sharp silicon tips. <i>Nanotechnology</i> , 2014, 25, 495701.	2.6	22
30	Structural and nanomechanical effects of cholesterol in binary and ternary spin-coated single lipid bilayers in dry conditions. <i>Colloids and Surfaces B: Biointerfaces</i> , 2014, 116, 295-302.	5.0	13
31	High-speed counting and sizing of cells in an impedance flow microcytometer with compact electronic instrumentation. <i>Microfluidics and Nanofluidics</i> , 2014, 16, 91-99.	2.2	6
32	Batch fabrication of insulated conductive scanning probe microscopy probes with reduced capacitive coupling. <i>Microelectronic Engineering</i> , 2014, 119, 44-47.	2.4	1
33	Electric Polarization Properties of Single Bacteria Measured with Electrostatic Force Microscopy. <i>ACS Nano</i> , 2014, 8, 9843-9849.	14.6	52
34	Force measurements on natural membrane nanovesicles reveal a composition-independent, high Young's modulus. <i>Nanoscale</i> , 2014, 6, 2275.	5.6	61
35	Direct measurement of the dielectric polarization properties of DNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E3624-30.	7.1	160
36	Quantitative Dielectric Measurements of Biomembranes and Oxides in Electrolyte Solutions at High Frequencies. <i>Biophysical Journal</i> , 2014, 106, 512a.	0.5	1

#	ARTICLE	IF	CITATIONS
37	Optical visualization of ultrathin mica flakes on semitransparent gold substrates. <i>Nanoscale Research Letters</i> , 2013, 8, 305.	5.7	6
38	Theory of amplitude modulated electrostatic force microscopy for dielectric measurements in liquids at MHz frequencies. <i>Nanotechnology</i> , 2013, 24, 415709.	2.6	20
39	Nanoscale Measurement of the Dielectric Constant of Supported Lipid Bilayers in Aqueous Solutions with Electrostatic Force Microscopy. <i>Biophysical Journal</i> , 2013, 104, 1257-1262.	0.5	149
40	Quantification of the dielectric constant of single non-spherical nanoparticles from polarization forces: eccentricity effects. <i>Nanotechnology</i> , 2013, 24, 505713.	2.6	11
41	Dynamic electrostatic force microscopy in liquid media. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	32
42	Diffusion-controlled deposition of natural nanovesicles containing G-protein coupled receptors for biosensing platforms. <i>Soft Matter</i> , 2012, 8, 11632.	2.7	12
43	Label-free identification of single dielectric nanoparticles and viruses with ultraweak polarization forces. <i>Nature Materials</i> , 2012, 11, 808-816.	27.5	120
44	Quantifying the dielectric constant of thick insulators by electrostatic force microscopy: effects of the microscopic parts of the probe. <i>Nanotechnology</i> , 2012, 23, 205703.	2.6	63
45	Ultrathin Spin-Coated Dioleoylphosphatidylcholine Lipid Layers in Dry Conditions: A Combined Atomic Force Microscopy and Nanomechanical Study. <i>Langmuir</i> , 2011, 27, 13165-13172.	3.5	18
46	Human olfactory receptors immobilization on a mixed self assembled monolayer for the development of a bioelectronic nose. <i>Procedia Engineering</i> , 2010, 5, 786-789.	1.2	2
47	Quantifying the dielectric constant of thick insulators using electrostatic force microscopy. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	81
48	Three-dimensional manipulation of gold nanoparticles with electro-enhanced capillary forces. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	10
49	Quantitative Nanoscale Dielectric Microscopy of Single-Layer Supported Biomembranes. <i>Nano Letters</i> , 2009, 9, 1604-1608.	9.1	104
50	Quantitative dielectric constant measurement of thin films by DC electrostatic force microscopy. <i>Nanotechnology</i> , 2009, 20, 395702.	2.6	65
51	Nanobiosensors based on individual olfactory receptors. <i>Analog Integrated Circuits and Signal Processing</i> , 2008, 57, 197-203.	1.4	18
52	Immobilization of olfactory receptors onto gold electrodes for electrical biosensor. <i>Materials Science and Engineering C</i> , 2008, 28, 686-691.	7.3	8
53	High-speed particle detection in a micro-Coulter counter with two-dimensional adjustable aperture. <i>Biosensors and Bioelectronics</i> , 2008, 24, 290-296.	10.1	69
54	Nanoscale capacitance microscopy of thin dielectric films. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	82

#	ARTICLE	IF	CITATIONS
55	Probing Electrical Transport Properties at the Nanoscale by Current-Sensing Atomic Force Microscopy. , 2008, , 421-450.		1
56	Deflectionâ€“voltage curve modelling in atomic force microscopy and its use in DC electrostatic manipulation of gold nanoparticles. Nanotechnology, 2007, 18, 015503.	2.6	17
57	Electron transport through supported biomembranes at the nanoscale by conductive atomic force microscopy. Nanotechnology, 2007, 18, 465503.	2.6	34
58	Impedance field and transition from thermal to shot noise inCd1â”xZnxTese semi-insulating Ohmic detectors. Physical Review B, 2007, 75, .	3.2	1
59	Nanoscale electrical conductivity of the purple membrane monolayer. Physical Review E, 2007, 76, 041919.	2.1	32
60	Dielectric-constant measurement of thin insulating films at low frequency by nanoscale capacitance microscopy. Applied Physics Letters, 2007, 91, .	3.3	127
61	Nondestructive thickness measurement of biological layers at the nanoscale by simultaneous topography and capacitance imaging. Applied Physics Letters, 2007, 91, 063111.	3.3	18
62	AC and DC electrical imaging of biosamples at the nanoscale by Atomic Force Microscopy. Journal of Physics: Conference Series, 2007, 61, 185-189.	0.4	0
63	A novel detection strategy for odorant molecules based on controlled bioengineering of rat olfactory receptor I7. Biosensors and Bioelectronics, 2007, 22, 1550-1555.	10.1	95
64	Low cost micro-Coulter counter with hydrodynamic focusing. Microfluidics and Nanofluidics, 2007, 3, 171-176.	2.2	74
65	Electrical Characterization and Analysis of Carbon Nanotube-Peptide Nucleic Acid Conjugates. Journal of Nanoelectronics and Optoelectronics, 2007, 2, 205-208.	0.5	0
66	Nanoembossed polymer substrates for biomedical surface interaction studies. Journal of Nanoscience and Nanotechnology, 2007, 7, 4588-94.	0.9	1
67	Advances in the production, immobilization, and electrical characterization of olfactory receptors for olfactory nanobiosensor development. Sensors and Actuators B: Chemical, 2006, 116, 66-71.	7.8	42
68	All-polymer microfluidic particle size sorter for biomedical applications. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1476-1480.	1.8	4
69	Nanoscale capacitance imaging with attofarad resolution using ac current sensing atomic force microscopy. Nanotechnology, 2006, 17, 4581-4587.	2.6	76
70	Modelization of Thermal Fluctuations in G Protein-Coupled Receptors. AIP Conference Proceedings, 2005, , .	0.4	3
71	Thermal Fluctuations Of A GPCR: A Two Force Constant Model. AIP Conference Proceedings, 2005, , .	0.4	6
72	Nanoscale electronic noise measurements. AIP Conference Proceedings, 2005, , .	0.4	2

#	ARTICLE	IF	CITATIONS
73	Study of Langmuir and Langmuir-Blodgett Films of Odorant-Binding Protein/Amphiphile for Odorant Biosensors. <i>Langmuir</i> , 2005, 21, 4058-4065.	3.5	55
74	Immobilization of native membrane-bound rhodopsin on biosensor surfaces. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2005, 1724, 324-332.	2.4	37
75	Noise temperature reduction by doping in ballistic n-nanodiodes. <i>Semiconductor Science and Technology</i> , 2004, 19, S209-S211.	2.0	0
76	Shot Noise in Linear Macroscopic Resistors. <i>Physical Review Letters</i> , 2004, 92, 226601.	7.8	17
77	Fluctuations of complex networks: electrical properties of single-protein nanodevices. , 2004, 5472, 172.		6
78	Unipolar transport and shot noise in metal-semiconductor-metal structures. <i>Journal of Applied Physics</i> , 2003, 93, 375-383.	2.5	4
79	Role of energy correlations on Coulomb suppression of shot noise in ballistic conductors contacted to degenerate reservoirs. <i>Physical Review B</i> , 2003, 68, .	3.2	1
80	On the origin of shot noise in CdTe detectors. <i>Applied Physics Letters</i> , 2003, 83, 2450-2452.	3.3	6
81	Electronic transport and noise in ballistic semiconductor nanodiodes. <i>Nanotechnology</i> , 2003, 14, 172-176.	2.6	1
82	Semiclassical theory of shot noise in ballistic semiconductor structures: Relevance of Pauli and long-range Coulomb correlations. <i>Physical Review B</i> , 2002, 66, .	3.2	21
83	Shot-noise anomalies in nondegenerate elastic diffusive conductors. <i>Physical Review B</i> , 2002, 66, .	3.2	3
84	Size effects on generation-recombination noise. <i>Applied Physics Letters</i> , 2002, 81, 4380-4382.	3.3	12
85	Noise properties of ballistic excludons: dimensionality effects. <i>Physica B: Condensed Matter</i> , 2002, 314, 141-144.	2.7	1
86	Enhanced shot-noise in mesoscopic non-degenerate diffusive semiconductors. <i>Physica B: Condensed Matter</i> , 2002, 314, 189-192.	2.7	0
87	Fractional exclusion statistics and shot noise in ballistic conductors. <i>Physical Review B</i> , 2001, 63, .	3.2	5
88	The role of boundary conditions in shot noise in elastic diffusive conductors. <i>Semiconductor Science and Technology</i> , 2000, 15, 829-835.	2.0	6
89	Anomalous crossover between thermal and shot noise in macroscopic diffusive conductors. <i>Physical Review B</i> , 2000, 62, 8068-8071.	3.2	11
90	Shot-noise suppression in Schottky barrier diodes. <i>Journal of Applied Physics</i> , 2000, 88, 3079-3081.	2.5	4

#	ARTICLE	IF	CITATIONS
91	Effects of interface states on the non-stationary transport properties of Schottky contacts and metal-insulator-semiconductor tunnel diodes. Journal Physics D: Applied Physics, 1999, 32, 64-71.	2.8	13
92	Effects of the epitaxial layer thickness on the noise properties of Schottky barrier diodes. Journal of Applied Physics, 1999, 86, 1004-1012.	2.5	7
93	Fluctuations generated at semiconductor interfaces. Physica A: Statistical Mechanics and Its Applications, 1998, 258, 17-31.	2.6	2
94	Extension of the impedance field method to the noise analysis of a semiconductor junction: Analytical approach. Journal of Applied Physics, 1998, 83, 2610-2618.	2.5	15
95	Local noise analysis of a Schottky contact: Combined thermionic-emission "diffusion theory. Journal of Applied Physics, 1998, 83, 2619-2630.	2.5	12
96	Stochastic Resonance in Noisy Nondynamical Systems. Physical Review Letters, 1998, 81, 14-17.	7.8	44
97	Relation for the nonequilibrium population of the interface states: Effects on the bias dependence of the ideality factor. Journal of Applied Physics, 1997, 81, 2674-2681.	2.5	40
98	Stationary states and phase diagram for a model of the Gunn effect under realistic boundary conditions. Physical Review E, 1997, 56, 1490-1499.	2.1	5
99	Spatial correlations across n+n semiconductor junctions. Applied Physics Letters, 1997, 70, 3248-3250.	3.3	7
100	Asymptotic analysis of the Gunn effect with realistic boundary conditions. Physical Review E, 1997, 56, 1500-1510.	2.1	19
101	Non-equilibrium thermodynamic description of junctions in semiconductor devices. Physica A: Statistical Mechanics and Its Applications, 1997, 234, 851-871.	2.6	4
102	Non-equilibrium thermodynamics of thermionic emission processes in abrupt semiconductor junctions, including the effects of surface states. Physica A: Statistical Mechanics and Its Applications, 1996, 233, 208-220.	2.6	14
103	Electronic transport and noise in nanoelectronic ballistic N/sup +/-N/sup +/- diodes. , 0, , .		0
104	Development of an artificial nose integrating NEMS and biological olfactory receptors. , 0, , .		2