

Igor Igor Sokolov

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/603191/igor-igor-sokolov-publications-by-year.pdf>

Version: 2024-04-10

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

132 papers	5,279 citations	38 h-index	70 g-index
139 ext. papers	5,950 ext. citations	6.3 avg, IF	5.75 L-index

#	Paper	IF	Citations
132	Contact Problem in Indentation Measurements of Soft, Biological and Bioinspired Materials. <i>Biologically-inspired Systems</i> , 2022 , 31-49	0.7	1
131	Atomic Force Microscopy Detects the Difference in Cancer Cells of Different Neoplastic Aggressiveness via Machine Learning. <i>Advanced NanoBiomed Research</i> , 2021 , 1, 2000116	0	0
130	Quantitative measurement of interaction strength between kaolinite and different oil fractions via atomic force microscopy: Implications for clay-controlled oil mobility. <i>Marine and Petroleum Geology</i> , 2021 , 133, 105296	4.7	0
129	Ultrabright fluorescent nanothermometers. <i>Nanoscale Advances</i> , 2021 , 3, 5090-5101	5.1	1
128	Ultrabright Fluorescent Silica Nanoparticles for Multiplexed Detection. <i>Nanomaterials</i> , 2020 , 10,	5.4	3
127	In Vivo Targeting of Xenografted Human Cancer Cells with Functionalized Fluorescent Silica Nanoparticles in Zebrafish. <i>Journal of Visualized Experiments</i> , 2020 ,	1.6	3
126	Absorption of organic compounds by mesoporous silica discoids. <i>Microporous and Mesoporous Materials</i> , 2020 , 306, 110379	5.3	1
125	Difference in biophysical properties of cancer-initiating cells in melanoma mutated zebrafish. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020 , 107, 103746	4.1	2
124	Can AFM be used to measure absolute values of Young's modulus of nanocomposite materials down to the nanoscale?. <i>Nanoscale</i> , 2020 , 12, 12432-12443	7.7	10
123	Imaging of Molecular Coating on Nanoparticle Surface Using AFM Ringing Mode. <i>Microscopy and Microanalysis</i> , 2020 , 26, 3136-3138	0.5	1
122	High-resolution Viscoelastic Mapping of Cells with FT-NanoDMA Mode of AFM. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1962-1963	0.5	
121	Cellular energetics and mitochondrial uncoupling in canine aging. <i>GeroScience</i> , 2019 , 41, 229-242	8.9	16
120	Ultrabright fluorescent silica nanoparticles for in vivo targeting of xenografted human tumors and cancer cells in zebrafish. <i>Nanoscale</i> , 2019 , 11, 22316-22327	7.7	11
119	Ultrabright fluorescent cellulose acetate nanoparticles for imaging tumors through systemic and topical applications. <i>Materials Today</i> , 2019 , 23, 16-25	21.8	14
118	Data on ultrabright fluorescent cellulose acetate nanoparticles for imaging tumors through systemic and topical applications. <i>Data in Brief</i> , 2019 , 22, 383-391	1.2	8
117	Multidimensional Imaging of Surfaces with Ringing Mode of Atomic Force Microscopy. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1038-1039	0.5	
116	A comparison of methods to assess cell mechanical properties. <i>Nature Methods</i> , 2018 , 15, 491-498	21.6	265

115	Noninvasive diagnostic imaging using machine-learning analysis of nanoresolution images of cell surfaces: Detection of bladder cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 12920-12925	11.5	38
114	Improved Scanning Speed of AFM Subresonant Tapping Mode with Switched Dual-Actuator Control 2018 ,		1
113	Imaging of Soft and Biological Samples Using AFM Ringing Mode. <i>Methods in Molecular Biology</i> , 2018 , 1814, 469-482	1.4	6
112	AFM Indentation Analysis of Cells to Study Cell Mechanics and Pericellular Coat. <i>Methods in Molecular Biology</i> , 2018 , 1814, 449-468	1.4	8
111	Self-assembly of multi-hierarchically structured spongy mesoporous silica particles and mechanism of their formation. <i>Journal of Colloid and Interface Science</i> , 2017 , 491, 133-140	9.3	7
110	Ultrabright fluorescent silica particles with a large number of complex spectra excited with a single wavelength for multiplex applications. <i>Nanoscale</i> , 2017 , 9, 4881-4890	7.7	8
109	Fractal Analysis of Cancer Cell Surface. <i>Methods in Molecular Biology</i> , 2017 , 1530, 229-245	1.4	3
108	Control and formation mechanism of extended nanochannel geometry in colloidal mesoporous silica particles. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 1115-1121	3.6	2
107	AFM Study of Polymer Brush Grafted to Deformable Surfaces: Quantitative Properties of the Brush and Substrate Mechanics. <i>Macromolecules</i> , 2017 , 50, 275-282	5.5	13
106	Nanoscale compositional mapping of cells, tissues, and polymers with ringing mode of atomic force microscopy. <i>Scientific Reports</i> , 2017 , 7, 11828	4.9	16
105	Mechanical properties of cancer cells depend on number of passages: Atomic force microscopy indentation study. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 08LB01	1.4	10
104	Biophysical differences between chronic myelogenous leukemic quiescent and proliferating stem/progenitor cells. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2016 , 12, 2429-2437	6	5
103	Load Rate and Temperature Dependent Mechanical Properties of the Cortical Neuron and Its Pericellular Layer Measured by Atomic Force Microscopy. <i>Langmuir</i> , 2016 , 32, 1111-9	4	26
102	A study of molecular adsorption of a cationic surfactant on complex surfaces with atomic force microscopy. <i>Analyst, The</i> , 2016 , 141, 1017-26	5	7
101	AFM study shows prominent physical changes in elasticity and pericellular layer in human acute leukemic cells due to inadequate cell-cell communication. <i>Nanotechnology</i> , 2016 , 27, 494005	3.4	9
100	The nature of ultrabrightness of nanoporous fluorescent particles with physically encapsulated fluorescent dyes. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 2197-2210	7.1	17
99	Pericellular Brush and Mechanics of Guinea Pig Fibroblast Cells Studied with AFM. <i>Biophysical Journal</i> , 2016 , 111, 236-46	2.9	14
98	Towards early detection of cervical cancer: Fractal dimension of AFM images of human cervical epithelial cells at different stages of progression to cancer. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2015 , 11, 1667-75	6	26

97	High-resolution high-speed dynamic mechanical spectroscopy of cells and other soft materials with the help of atomic force microscopy. <i>Scientific Reports</i> , 2015 , 5, 12630	4.9	24
96	Emerging of fractal geometry on surface of human cervical epithelial cells during progression towards cancer. <i>New Journal of Physics</i> , 2015 , 17,	2.9	25
95	Recovery of aging-related size increase of skin epithelial cells: in vivo mouse and in vitro human study. <i>PLoS ONE</i> , 2015 , 10, e0122774	3.7	5
94	Ultrabright NIR fluorescent mesoporous silica nanoparticles. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 3107-3114	7.3	35
93	If cell mechanics can be described by elastic modulus: study of different models and probes used in indentation experiments. <i>Biophysical Journal</i> , 2014 , 107, 564-575	2.9	194
92	Mechanics of Biological Cells Studied with Atomic Force Microscopy. <i>Microscopy and Microanalysis</i> , 2014 , 20, 2076-2077	0.5	1
91	Ultrabright fluorescent mesoporous silica nanoparticles for prescreening of cervical cancer. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2013 , 9, 1255-62	6	26
90	Method for quantitative measurements of the elastic modulus of biological cells in AFM indentation experiments. <i>Methods</i> , 2013 , 60, 202-13	4.6	119
89	Quantitative study of the elastic modulus of loosely attached cells in AFM indentation experiments. <i>Biophysical Journal</i> , 2013 , 104, 2123-31	2.9	95
88	Functionalized Ultrabright Fluorescent Mesoporous Silica Nanoparticles. <i>Particle and Particle Systems Characterization</i> , 2013 , 30, 804-811	3.1	15
87	STUDY OF PHOTOINDUCED CHARGES WITH ATOMIC FORCE MICROSCOPY. <i>World Scientific Series in Nanoscience and Nanotechnology</i> , 2013 , 185-205	0.1	
86	Quantitative mapping of the elastic modulus of soft materials with HarmoniX and PeakForce QNM AFM modes. <i>Langmuir</i> , 2012 , 28, 16060-71	4	251
85	On averaging force curves over heterogeneous surfaces in atomic force microscopy. <i>Ultramicroscopy</i> , 2012 , 121, 16-24	3.1	11
84	A biochemical logic approach to biomarker-activated drug release. <i>Journal of Materials Chemistry</i> , 2012 , 22, 19709		40
83	On the Measurements of Rigidity Modulus of Soft Materials in Nanoindentation Experiments at Small Depth. <i>Macromolecules</i> , 2012 , 45, 4277-4288	5.5	107
82	Physical labeling of papillomavirus-infected, immortal, and cancerous cervical epithelial cells reveal surface changes at immortal stage. <i>Cell Biochemistry and Biophysics</i> , 2012 , 63, 109-16	3.2	8
81	Toward the nanoscale study of insect physiology using an atomic force microscopy-based nanostethoscope. <i>MRS Bulletin</i> , 2012 , 37, 522-527	3.2	3
80	AFM to Study Charging of Individual Quantum Dots with Light. <i>Microscopy and Microanalysis</i> , 2012 , 18, 880-881	0.5	

79	How to Obtain Rigidity Modulus of Biological Cells Using AFM. <i>Microscopy and Microanalysis</i> , 2012 , 18, 924-925	0.5	
78	Cell surface as a fractal: normal and cancerous cervical cells demonstrate different fractal behavior of surface adhesion maps at the nanoscale. <i>Physical Review Letters</i> , 2011 , 107, 028101	7.4	62
77	Synthesis of ultrabright nanoporous fluorescent silica discoids using an inorganic silica precursor. <i>Nanoscale</i> , 2011 , 3, 2036-43	7.7	20
76	On Possible Use of Capped Quantum Dots in Memory Devices. <i>Journal of Computational and Theoretical Nanoscience</i> , 2011 , 8, 516-519	0.3	2
75	A modified in vitro stripping method to automate the calculation of geometry of corneocytes imaged with fluorescent microscopy: example of moisturizer treatment. <i>Skin Research and Technology</i> , 2011 , 17, 213-9	1.9	10
74	Towards nano-physiology of insects with atomic force microscopy. <i>Journal of Insect Physiology</i> , 2011 , 57, 260-4	2.4	5
73	Ultrabright Fluorescent Silica Mesoporous Silica Nanoparticles: Control of Particle Size and Dye Loading. <i>Advanced Functional Materials</i> , 2011 , 21, 3129-3135	15.6	69
72	Detection of cancerous cervical cells using physical adhesion of fluorescent silica particles and centripetal force. <i>Analyst, The</i> , 2011 , 136, 1502-6	5	24
71	Influence of adhesion of silica and ceria abrasive nanoparticles on Chemical Mechanical Planarization of silica surfaces. <i>Applied Surface Science</i> , 2011 , 257, 8518-8524	6.7	25
70	Atomic force microscopy characterization of corneocytes: effect of moisturizer on their topology, rigidity, and friction. <i>Skin Research and Technology</i> , 2010 , 16, 275-82	1.9	11
69	Atomic force microscopy study of nano-physiological response of ladybird beetles to photostimuli. <i>PLoS ONE</i> , 2010 , 5, e12834	3.7	9
68	Atomic Force Microscopy Helps to Develop Methods for Physical Detection of Cancerous Cells 2010		1
67	Atomic force microscopy study of immunosensor surface to scale down the size of ELISA-type sensors. <i>Nanotechnology</i> , 2010 , 21, 145503	3.4	12
66	Ultrabright fluorescent mesoporous silica particles. <i>Journal of Materials Chemistry</i> , 2010 , 20, 4247		43
65	Atomic force microscopy to detect internal live processes in insects. <i>Applied Physics Letters</i> , 2010 , 96, 043701	3.4	5
64	Towards understanding of shape formation mechanism of mesoporous silica particles. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 341-4	3.6	16
63	Ultrabright fluorescent mesoporous silica nanoparticles. <i>Small</i> , 2010 , 6, 2314-9	11	64
62	Addressable photocharging of single quantum dots assisted with atomic force microscopy probe. <i>Applied Physics Letters</i> , 2009 , 95, 173105	3.4	10

61	Self-Healing Epoxy Composites Based on the Use of Nanoporous Silica Capsules. <i>International Journal of Fracture</i> , 2009 , 159, 101-102	2.3	18
60	Enzyme-functionalized mesoporous silica for bioanalytical applications. <i>Analytical and Bioanalytical Chemistry</i> , 2009 , 393, 543-54	4.4	182
59	Towards nonspecific detection of malignant cervical cells with fluorescent silica beads. <i>Small</i> , 2009 , 5, 2277-84	11	30
58	Atomic force microscopy detects differences in the surface brush of normal and cancerous cells. <i>Nature Nanotechnology</i> , 2009 , 4, 389-93	28.7	257
57	A novel in vitro stripping method to study geometry of corneocytes with fluorescent microscopy: example of aging skin. <i>Skin Research and Technology</i> , 2009 , 15, 379-83	1.9	10
56	Logic networks based on immunorecognition processes. <i>Journal of Physical Chemistry B</i> , 2009 , 113, 12154-9	4.9	37
55	High sensitivity molecular detection with enzyme-linked immuno-sorbent assay (ELISA)-type immunosensing. <i>Nanotechnology</i> , 2008 , 19, 375502	3.4	18
54	Silica nanoparticles to polish tooth surfaces for caries prevention. <i>Journal of Dental Research</i> , 2008 , 87, 980-3	8.1	38
53	Computational modeling of nano-structured glass fibers. <i>Computational Materials Science</i> , 2008 , 44, 622-3	627	4
52	Ultrabright Fluorescent Silica Particles: Physical Entrapment of Fluorescent Dye Rhodamine 640 in Nanochannels. <i>ACS Symposium Series</i> , 2008 , 214-224	0.4	6
51	Dynamics of molecular diffusion of rhodamine 6G in silica nanochannels. <i>Journal of Chemical Physics</i> , 2008 , 128, 151102	3.9	43
50	Novel fluorescent silica nanoparticles: towards ultrabright silica nanoparticles. <i>Small</i> , 2008 , 4, 934-9	11	87
49	Synthesis of mesoporous silica fibers and discoids endowed with circular pore architecture using disodium trioxosilicate as silica source. <i>Microporous and Mesoporous Materials</i> , 2008 , 116, 581-585	5.3	8
48	Detection of surface brush on biological cells in vitro with atomic force microscopy. <i>Applied Physics Letters</i> , 2007 , 91, 023902	3.4	75
47	Morphology Control of Mesoporous Silica Particles. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 11168-11173	1.3	51
46	Room temperature synthesis of nanoporous silica spheres and their formation mechanism. <i>Solid State Communications</i> , 2007 , 144, 437-440	1.6	12
45	Attachment of nanoparticles to the AFM tips for direct measurements of interaction between a single nanoparticle and surfaces. <i>Journal of Colloid and Interface Science</i> , 2007 , 310, 385-90	9.3	61
44	Self-assembly of ultrabright fluorescent silica particles. <i>Small</i> , 2007 , 3, 419-23	11	78

43	Fluorescent silica colloids for study and visualization of skin care products. <i>Skin Research and Technology</i> , 2007 , 13, 317-22	1.9	3
42	Polyelectrolyte Stabilized Nanowires from Fe ₃ O ₄ Nanoparticles via Magnetic Field Induced Self-Assembly. <i>Chemistry of Materials</i> , 2006 , 18, 591-593	9.6	111
41	Change in rigidity in the activated form of the glucose/galactose receptor from Escherichia coli: a phenomenon that will be key to the development of biosensors. <i>Biophysical Journal</i> , 2006 , 90, 1055-63	2.9	32
40	Recovery of elasticity of aged human epithelial cells in vitro. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2006 , 2, 31-6	6	71
39	AFM study of forces between silica, silicon nitride and polyurethane pads. <i>Journal of Colloid and Interface Science</i> , 2006 , 300, 475-81	9.3	72
38	Self-assembly of uniform nanoporous silica fibers. <i>IEEE Nanotechnology Magazine</i> , 2005 , 4, 490-494	2.6	32
37	Human epithelial cells increase their rigidity with ageing in vitro: direct measurements. <i>Physics in Medicine and Biology</i> , 2005 , 50, 81-92	3.8	151
36	Visualization of cytoskeletal elements by the atomic force microscope. <i>Ultramicroscopy</i> , 2005 , 102, 189-98	3.1	50
35	3D design of self-assembled nanoporous colloids. <i>Studies in Surface Science and Catalysis</i> , 2005 , 433-442	1.8	17
34	Nanosurgery: observation of peptidoglycan strands in Lactobacillus helveticus cell walls. <i>Ultramicroscopy</i> , 2004 , 101, 105-9	3.1	51
33	Pseudo-non-contact mode: why it can give true atomic resolution. <i>Applied Surface Science</i> , 2003 , 210, 37-42	6.7	8
32	In Situ AFM Study of Surface Layer Removal during Copper CMP. <i>Electrochemical and Solid-State Letters</i> , 2003 , 6, G91		18
31	Anomalous Increase of Friction in the Vicinity of Nano-Size Defects. <i>Tribology Letters</i> , 2002 , 12, 131-134	2.8	7
30	Simulation of the observability of atomic defects by atomic force microscopy in contact and non-contact modes. <i>Surface Science</i> , 2002 , 499, 135-140	1.8	8
29	Cell surface electrochemical heterogeneity of the Fe(III)-reducing bacteria Shewanella putrefaciens. <i>Environmental Science & Technology</i> , 2001 , 35, 341-7	10.3	115
28	Atomic resolution imaging using the electric double layer technique: friction vs. height contrast mechanisms. <i>Applied Surface Science</i> , 2000 , 157, 302-307	6.7	5
27	Model dependence of AFM simulations in non-contact mode. <i>Surface Science</i> , 2000 , 457, 267-272	1.8	18
26	The height dependence of image contrast when imaging by non-contact AFM. <i>Surface Science</i> , 2000 , 464, L745-L751	1.8	3

25	Layer-by-Layer Self-Assembly of Organic/Organometallic Polymer Electrostatic Superlattices Using Poly(ferrocenylsilanes). <i>Langmuir</i> , 2000 , 16, 9609-9614	4	62
24	Morphokinetics: Growth of Mesoporous Silica Curved Shapes. <i>Advanced Materials</i> , 1999 , 11, 52-55	24	73
23	Radial Patterns in Mesoporous Silica. <i>Advanced Materials</i> , 1999 , 11, 636-642	24	60
22	Formation of Hollow Helicoids in Mesoporous Silica: Supramolecular Origami. <i>Advanced Materials</i> , 1999 , 11, 1427-1431	24	115
21	Tin Sulfide Mesh: AFM Imaging of Lamellae and Mesopores. <i>Advanced Materials</i> , 1998 , 10, 942-946	24	13
20	Synthesis of mesoporous silica spheres under quiescent aqueous acidic conditions. <i>Journal of Materials Chemistry</i> , 1998 , 8, 743-750		166
19	Free-standing mesoporous silica films; morphogenesis of channel and surface patterns. <i>Journal of Materials Chemistry</i> , 1997 , 7, 1755-1761		69
18	Blueprints for inorganic materials with natural form: inorganic liquid crystals and a language of inorganic shape. <i>Journal of the Chemical Society Dalton Transactions</i> , 1997 , 3941-3952		42
17	Effect of microgravity on the crystallization of a self-assembling layered material. <i>Nature</i> , 1997 , 388, 857-860	50.4	23
16	Registered growth of mesoporous silica films on graphite. <i>Journal of Materials Chemistry</i> , 1997 , 7, 1285-1290		100
15	Shell mimetics. <i>Advanced Materials</i> , 1997 , 9, 662-667	24	92
14	Beyond the hemicylindrical micellar monolayer on graphite: AFM evidence for a lyotropic liquid crystal film. <i>Advanced Materials</i> , 1997 , 9, 917-921	24	27
13	Does Microgravity Influence Self-Assembly??. <i>Advanced Materials</i> , 1997 , 9, 1133-1149	24	18
12	Free-standing and oriented mesoporous silica films grown at the air/water interface. <i>Nature</i> , 1996 , 381, 589-592	50.4	493
11	The Casimir effect as a possible source of cosmic energy. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1996 , 223, 163-166	2.3	3
10	On the strengthening of restrictions on hypothetical Yukawa-type forces with extremely small range of action. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994 , 187, 35-39	2.3	25
9	On the limits of the spectroscopic ability of AFM and the interaction between an AFM tip and a sample. <i>Surface Science</i> , 1994 , 311, 287-294	1.8	32
8	Hypothetical long-range interactions and restrictions on their parameters from force measurements. <i>Physical Review D</i> , 1993 , 47, 2882-2891	4.9	27

7	Anisotropy of cosmic background radiation and initial conditions for quantum inflaton field. <i>Classical and Quantum Gravity</i> , 1992 , 9, L61-L67	3.3	8
6	Stronger restrictions on the constants of long-range forces decreasing as r-n. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1990 , 146, 373-374	2.3	10
5	New restrictions on the parameters of the spin-1 antigraviton following from the Casimir effect, Eötvös and Cavendish experiments. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988 , 132, 313-315	2.3	25
4	Force dependences for the definition of the atomic force microscopy spatial resolution. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988 , 132, 354-358	2.3	47
3	Energy-momentum tensor of intermediate vector bosons in an external electromagnetic field. <i>Theoretical and Mathematical Physics(Russian Federation)</i> , 1988 , 74, 137-142	0.7	
2	The Casimir effect leads to new restrictions on long-range force constants. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987 , 125, 405-408	2.3	47
1	Interaction between Silica Particles and Human Epithelial Cells: Atomic Force Microscopy and Fluorescence Study69-95		2