Vladimir A Baulin

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8179857/publications.pdf

Version: 2024-02-01

81

papers

5,427

citations

136740

32

h-index

82410

72

g-index

86

all docs

86

docs citations

86

times ranked

5827

citing authors

#	Article	IF	Citations
1	Natural Bactericidal Surfaces: Mechanical Rupture of <i>Pseudomonas aeruginosa</i> Cells by Cicada Wings. Small, 2012, 8, 2489-2494.	5.2	742
2	Bactericidal activity of black silicon. Nature Communications, 2013, 4, 2838.	5.8	731
3	Biophysical Model of Bacterial Cell Interactions with Nanopatterned Cicada Wing Surfaces. Biophysical Journal, 2013, 104, 835-840.	0.2	496
4	Graphene Induces Formation of Pores That Kill Spherical and Rod-Shaped Bacteria. ACS Nano, 2015, 9, 8458-8467.	7.3	322
5	Selective bactericidal activity of nanopatterned superhydrophobic cicada Psaltoda claripennis wing surfaces. Applied Microbiology and Biotechnology, 2013, 97, 9257-9262.	1.7	270
6	Mechano-bactericidal actions of nanostructured surfaces. Nature Reviews Microbiology, 2021, 19, 8-22.	13.6	264
7	High Aspect Ratio Nanostructures Kill Bacteria <i>via</i> Storage and Release of Mechanical Energy. ACS Nano, 2018, 12, 6657-6667.	7.3	120
8	The multi-faceted mechano-bactericidal mechanism of nanostructured surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12598-12605.	3.3	119
9	Lipid oxidation induces structural changes in biomimetic membranes. Soft Matter, 2014, 10, 4241.	1.2	104
10	Can a Carbon Nanotube Pierce through a Phospholipid Bilayer?. ACS Nano, 2010, 4, 5293-5300.	7.3	103
11	Antibacterial Action of Nanoparticles by Lethal Stretching of Bacterial Cell Membranes. Advanced Materials, 2020, 32, e2005679.	11.1	102
12	Direct proof of spontaneous translocation of lipid-covered hydrophobic nanoparticles through a phospholipid bilayer. Science Advances, 2016, 2, e1600261.	4.7	99
13	â€œRace for the Surfaceâ€: Eukaryotic Cells Can Win. ACS Applied Materials & Interfaces, 2016, 8, 22025-22031.	4.0	95
14	Nanoparticle-Induced Permeability of Lipid Membranes. ACS Nano, 2012, 6, 10555-10561.	7.3	90
15	Self-consistent field theory of brushes of neutral water-soluble polymers. Journal of Chemical Physics, 2003, 119, 10977-10988.	1.2	83
16	Signatures of a Concentration-Dependent FloryÏ‡ Parameter: Swelling and Collapse of Coils and Brushes. Macromolecular Theory and Simulations, 2003, 12, 549-559.	0.6	79
17	Differential attraction and repulsion of Staphylococcus aureus and Pseudomonas aeruginosa on molecularly smooth titanium films. Scientific Reports, 2011, 1, 165.	1.6	76
18	Concentration Dependence of the Flory Ï‡ Parameter within Two-State Models. Macromolecules, 2002, 35, 6432-6438.	2.2	71

#	ARTICLE	IF	CITATIONS
19	The susceptibility of Staphylococcus aureus CIP 65.8 and Pseudomonas aeruginosa ATCC 9721 cells to the bactericidal action of nanostructured Calopteryx haemorrhoidalis damselfly wing surfaces. Applied Microbiology and Biotechnology, 2017, 101, 4683-4690.	1.7	71
20	Subtle Variations in Surface Properties of Black Silicon Surfaces Influence the Degree of Bactericidal Efficiency. Nano-Micro Letters, 2018, 10, 36.	14.4	68
21	Coupled Concentration Polarization and Electroosmotic Circulation near Micro/Nanointerfaces: Taylorâ€“Aris Model of Hydrodynamic Dispersion and Limits of Its Applicability. Langmuir, 2011, 27, 11710-11721.	1.6	56
22	Apatite nanoparticles strongly improve red blood cell cryopreservation by mediating trehalose delivery via enhanced membrane permeation. Biomaterials, 2017, 140, 138-149.	5.7	55
23	Microplastics destabilize lipid membranes by mechanical stretching. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	55
24	Surface Patterning of Carbon Nanotubes Can Enhance Their Penetration through a Phospholipid Bilayer. ACS Nano, 2011, 5, 1141-1146.	7.3	52
25	Tunable morphological changes of asymmetric titanium nanosheets with bactericidal properties. Journal of Colloid and Interface Science, 2020, 560, 572-580.	5.0	51
26	Accurate Critical Micelle Concentrations from a Microscopic Surfactant Model. Journal of Physical Chemistry B, 2011, 115, 3434-3443.	1.2	45
27	Nanotopography as a trigger for the microscale, autogenous and passive lysis of erythrocytes. Journal of Materials Chemistry B, 2014, 2, 2819-2826.	2.9	45
28	Homo-polymers with balanced hydrophobicity translocate through lipid bilayers and enhance local solvent permeability. Soft Matter, 2012, 8, 11714.	1.2	44
29	Mechano-bactericidal mechanism of graphene nanomaterials. Interface Focus, 2018, 8, 20170060.	1.5	43
30	Bactericidal activity of self-assembled palmitic and stearic fatty acid crystals on highly ordered pyrolytic graphite. Acta Biomaterialia, 2017, 59, 148-157.	4.1	42
31	Collision induced spatial organization of microtubules. Biophysical Chemistry, 2007, 128, 231-244.	1.5	40
32	Coarse-grained models of phospholipid membranes within the single chain mean field theory. Soft Matter, 2010, 6, 2216.	1.2	37
33	Simulations of Protein Adsorption on Nanostructured Surfaces. Scientific Reports, 2019, 9, 4694.	1.6	34
34	Peroxidised phospholipid bilayers: insight from coarse-grained molecular dynamics simulations. Soft Matter, 2016, 12, 263-271.	1.2	32
35	Critical adsorption controls translocation of polymer chains through lipid bilayers and permeation of solvent. Europhysics Letters, 2012, 98, 18003.	0.7	31
36	Bacterial attachment on sub-nanometrically smooth titanium substrata. Biofouling, 2013, 29, 163-170.	0.8	31

#	ARTICLE	IF	CITATIONS
37	The Effect of Coatings and Nerve Growth Factor on Attachment and Differentiation of Pheochromocytoma Cells. Materials, 2018, 11, 60.	1.3	30
38	Adsorption of Human Plasma Albumin and Fibronectin onto Nanostructured Black Silicon Surfaces. Langmuir, 2016, 32, 10744-10751.	1.6	27
39	Antifungal versus antibacterial defence of insect wings. Journal of Colloid and Interface Science, 2021, 603, 886-897.	5.0	27
40	Biomolecule Surface Patterning May Enhance Membrane Association. ACS Nano, 2012, 6, 1308-1313.	7.3	26
41	The Bioeffects Resulting from Prokaryotic Cells and Yeast Being Exposed to an 18 GHz Electromagnetic Field. PLoS ONE, 2016, 11, e0158135.	1.1	26
42	The idiosyncratic self-cleaning cycle of bacteria on regularly arrayed mechano-bactericidal nanostructures. Nanoscale, 2019, 11, 16455-16462.	2.8	26
43	Nematic ordering of rigid rods in a gravitational field. Physical Review E, 1999, 60, 2973-2977.	0.8	25
44	Self-assembly of spherical interpolyelectrolyte complexes from oppositely charged polymers. Soft Matter, 2012, 8, 6755.	1.2	25
45	General model of phospholipid bilayers in fluid phase within the single chain mean field theory. Journal of Chemical Physics, 2014, 140, 174903.	1.2	25
46	Nanomaterial interactions with biomembranes: Bridging the gap between soft matter models and biological context. Biointerphases, 2018, 13, 028501.	0.6	23
47	Self-organised nanoarchitecture of titanium surfaces influences the attachment of Staphylococcus aureus and Pseudomonas aeruginosa bacteria. Applied Microbiology and Biotechnology, 2015, 99, 6831-6840.	1.7	22
48	Tension-Induced Translocation of an Ultrashort Carbon Nanotube through a Phospholipid Bilayer. ACS Nano, 2018, 12, 12042-12049.	7.3	20
49	Imaging the air-water interface: Characterising biomimetic and natural hydrophobic surfaces using in situ atomic force microscopy. Journal of Colloid and Interface Science, 2019, 536, 363-371.	5.0	20
50	Pillars of Life: Is There a Relationship between Lifestyle Factors and the Surface Characteristics of Dragonfly Wings?. ACS Omega, 2018, 3, 6039-6046.	1.6	19
51	Interaction of Giant Unilamellar Vesicles with the Surface Nanostructures on Dragonfly Wings. Langmuir, 2019, 35, 2422-2430.	1.6	18
52	Sliding Grafted Polymer Layers. Macromolecules, 2005, 38, 1434-1441.	2.2	17
53	The effect of a high frequency electromagnetic field in the microwave range on red blood cells. Scientific Reports, 2017, 7, 10798.	1.6	17
54	The pyrrolopyrimidine colchicine-binding site agent PP-13 reduces the metastatic dissemination of invasive cancer cells in vitro and in vivo. Biochemical Pharmacology, 2019, 160, 1-13.	2.0	17

#	ARTICLE	IF	CITATIONS
55	Dynamic studies of the interaction of a pH responsive, amphiphilic polymer with a DOPC lipid membrane. Soft Matter, 2017, 13, 3690-3700.	1.2	16
56	Equilibrium Insertion of Nanoscale Objects into Phospholipid Bilayers. Current Nanoscience, 2011, 7, 721-726.	0.7	14
57	Pheochromocytoma (PC12) Cell Response on Mechanobactericidal Titanium Surfaces. Materials, 2018, 11, 605.	1.3	14
58	Self-assembled aggregates in the gravitational field: Growth and nematic order. Journal of Chemical Physics, 2003, 119, 2874-2885.	1.2	13
59	Micellization of Sliding Polymer Surfactants. Macromolecules, 2006, 39, 871-876.	2.2	13
60	Macromolecular inversion-driven polymer insertion into model lipid bilayer membranes. Journal of Colloid and Interface Science, 2019, 542, 483-494.	5.0	13
61	High-throughput 3D visualization of nanoparticles attached to the surface of red blood cells. Nanoscale, 2019, 11, 2282-2288.	2.8	12
62	Protein corona modulates interaction of spiky nanoparticles with lipid bilayers. Journal of Colloid and Interface Science, 2021, 603, 550-558.	5.0	12
63	Structure and Chemical Organization in Damselfly Calopteryx haemorrhoidalis Wings: A Spatially Resolved FTIR and XRF Analysis with Synchrotron Radiation. Scientific Reports, 2018, 8, 8413.	1.6	11
64	Lethal Interactions of Atomically Precise Gold Nanoclusters and <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> Bacterial Cells. ACS Applied Materials & Interfaces, 2022, 14, 32634-32645.	4.0	11
65	Tailoring the SWIR emission of gold nanoclusters by surface ligand rigidification and their application in 3D bioimaging. Chemical Communications, 2022, 58, 2967-2970.	2.2	10
66	Thermal Tunneling of Homopolymers through Amphiphilic Membranes. ACS Macro Letters, 2017, 6, 247-251.	2.3	9
67	Polymerâ€“surfactant complexes: solubilization of polymeric globule by surfactants. Computational and Theoretical Polymer Science, 2000, 10, 165-175.	1.1	8
68	Degradation versus Self-Assembly of Block Co-polymer Micelles. Langmuir, 2012, 28, 3071-3076.	1.6	8
69	GPU implementation of the Rosenbluth generation method for static Monte Carlo simulations. Computer Physics Communications, 2017, 216, 95-101.	3.0	7
70	Unexpected Cholesterol-Induced Destabilization of Lipid Membranes near Transmembrane Carbon Nanotubes. Physical Review Letters, 2020, 124, 038001.	2.9	7
71	Mechanism of dynamic reorientation of cortical microtubules due to mechanical stress. Biophysical Chemistry, 2015, 207, 82-89.	1.5	6
72	Shape-Adaptive Single-Chain Nanoparticles Interacting with Lipid Membranes. Macromolecules, 2019, 52, 9578-9584.	2.2	6

#	Article	IF	Citations
73	Deep learning: step forward to highâ€resolution in vivo shortwave infrared imaging. Journal of Biophotonics, 2021, 14, e202100102.	1.1	6
74	Topological Changes in Telechelic Micelles: Flowers versus Stars. Macromolecules, 2022, 55, 517-522.	2.2	6
75	Aggregation of amphiphilic polymers in the presence of adhesive small colloidal particles. Journal of Chemical Physics, 2010, 133, 174905.	1.2	5
76	Neural network learns physical rules for copolymer translocation through amphiphilic barriers. Npj Computational Materials, 2020, 6, .	3.5	5
77	IPEC Solver: Numerical simulation tool to study inter-polyelectrolyte complexation. Computer Physics Communications, 2013, 184, 2221-2229.	3.0	3
78	Bridging molecular simulation models and elastic theories for amphiphilic membranes. Journal of Chemical Physics, 2018, 149, 014902.	1.2	2
79	Study of melanin localization in the mature male<i>Calopteryx haemorrhoidalis</i>damselfly wings. Journal of Synchrotron Radiation, 2018, 25, 874-877.	1.0	1
80	Designing Membrane-Active Nanoparticles: What are the Control Parameters?. , 0, , .		0
81	Design of Hydrophobic Nanoparticles for Spontaneous Translocation through Lipid Membranes. , 0, , .		0