Gleb E. Yakubov

List of Publications by Year
in descending order

84 papers	3,108 citations	126708 33 h-index	168136 53 g-index
88 all docs	88 docs citations	88 times ranked	3292 citing authors

#	Article	IF	Citations
1	Dynamic Effects on Force Measurements. 2. Lubrication and the Atomic Force Microscope. Langmuir, 2003, 19, 1227-1234.	1.6	171
2	Viscous Boundary Lubrication of Hydrophobic Surfaces by Mucin. Langmuir, 2009, 25, 2313-2321.	1.6	130
3	Interaction Forces between Hydrophobic Surfaces. Attractive Jump as an Indication of Formation of â€œStableâ€•Submicrocavities. Journal of Physical Chemistry B, 2000, 104, 3407-3410.	1.2	118
4	Surface roughness and hydrodynamic boundary conditions. Physical Review E, 2006, 73, 045302.	0.8	118
5	Wood hemicelluloses exert distinct biomechanical contributions to cellulose fibrillar networks. Nature Communications, 2020, 11, 4692.	5.8	117
6	Influence of ionic strength changes on the structure of pre-adsorbed salivary films. A response of a natural multi-component layer. Colloids and Surfaces B: Biointerfaces, 2010, 77, 31-39.	2.5	99
7	Interaction of human whole saliva and astringent dietary compounds investigated by interfacial shear rheology. Food Hydrocolloids, 2008, 22, 1068-1078.	5.6	96
8	Dynamic effects on force measurements. I. Viscous drag on the atomic force microscope cantilever. Review of Scientific Instruments, 2001, 72, 2330-2339.	0.6	88
9	Functional categorisation of dietary fibre in foods: Beyond â€˜solubleâ€™ vs â€˜insolubleâ€™. Trends in Food Science and Technology, 2019, 86, 563-568.	7.8	88
10	Multi-layer mucilage of Plantago ovata seeds: Rheological differences arise from variations in arabinoxylan side chains. Carbohydrate Polymers, 2017, 165, 132-141.	5.1	86
11	Molecular Structure and Rheological Properties of Short-Side-Chain Heavily Glycosylated Porcine Stomach Mucin. Biomacromolecules, 2007, 8, 3467-3477.	2.6	85
12	Mucin gel assembly is controlled by a collective action of non-mucin proteins, disulfide bridges, Ca2+-mediated links, and hydrogen bonding. Scientific Reports, 2018, 8, 5802.	1.6	84
13	Concentration of salivary protective proteins within the bound oral mucosal pellicle. Oral Diseases, 2014, 20, 707-713.	1.5	78
14	What interactions drive the salivary mucosal pellicle formation?. Colloids and Surfaces B: Biointerfaces, 2014, 120, 184-192.	2.5	74
15	Modeling the Impact of Microgravity at the Cellular Level: Implications for Human Disease. Frontiers in Cell and Developmental Biology, 2020, 8, 96.	1.8	69
16	Forces between polystyrene surfaces in waterâ€“electrolyte solutions: Long-range attraction of two types?. Journal of Chemical Physics, 2001, 114, 8124-8131.	1.2	68
17	Wetting and Interfacial Transitions in Dilute Solutions of Trisiloxane Surfactants. Langmuir, 1998, 14, 5023-5031.	1.6	67
18	Normal and Shear Forces between Surfaces Bearing Porcine Gastric Mucin, a High-Molecular-Weight Glycoprotein. Biomacromolecules, 2011, 12, 1041-1050.	2.6	61

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19	Quantitative structural organisation model for wheat endosperm cell walls: Cellulose as an important constituent. Carbohydrate Polymers, 2018, 196, 199-208.	5.1	61
20	Aqueous lubrication by fractionated salivary proteins: Synergistic interaction of mucin polymer brush with low molecular weight macromolecules. Tribology International, 2015, 89, 34-45.	3.0	60
21	Influence of ionic strength on the tribological properties of pre-adsorbed salivary films. Tribology International, 2011, 44, 956-962.	3.0	59
22	Contact angles on hydrophobic microparticles at waterâ€“air and waterâ€“hexadecane interfaces. Journal of Adhesion Science and Technology, 2000, 14, 1783-1799.	1.4	54
23	Collective Dynamics of an End-Grafted Polymer Brush in Solvents of Varying Quality. Physical Review Letters, 2004, 92, 115501.	2.9	51
24	Charge and Interfacial Behavior of Short Side-Chain Heavily Glycosylated Porcine Stomach Mucin. Biomacromolecules, 2007, 8, 3791-3799.	2.6	51
25	Attractive Forces between Hydrophobic Solid Surfaces Measured by AFM on the First Approach in Salt Solutions and in the Presence of Dissolved Gases. Langmuir, 2015, 31, 1941-1949.	1.6	49
26	SIgA Binding to Mucosal Surfaces Is Mediated by Mucin-Mucin Interactions. PLoS ONE, 2015, 10, e0119677.	1.1	48
27	Tribology of particle suspensions in rolling-sliding soft contacts. Biotribology, 2015, 3, 1-10.	0.9	45
28	Double-Globular Structure of Porcine Stomach Mucin: A Small-Angle X-ray Scattering Study. Biomacromolecules, 2008, 9, 3216-3222.	2.6	40
29	The role of saliva in oral processing: Reconsidering the breakdown path paradigm. Journal of Texture Studies, 2020, 51, 67-77.	1.1	40
30	Understanding glycoprotein behaviours using Raman and Raman optical activity spectroscopies: Characterising the entanglement induced conformational changes in oligosaccharide chains of mucin. Advances in Colloid and Interface Science, 2013, 199-200, 66-77.	7.0	38
31	Interpreting atomic force microscopy nanoindentation of hierarchical biological materials using multi-regime analysis. Soft Matter, 2015, 11, 1281-1292.	1.2	38
32	Temperature fractionation, physicochemical and rheological analysis of psyllium seed husk heteroxylan. Food Hydrocolloids, 2020, 104, 105737.	5.6	36
33	Mitochondrial displacements in response to nanomechanical forces. Journal of Molecular Recognition, 2008, 21, 30-36.	1.1	35
34	Rheological and structural properties of complex arabinoxylans from Plantago ovata seed mucilage under non-gelled conditions. Carbohydrate Polymers, 2018, 193, 179-188.	5.1	35
35	Mapping nano-scale mechanical heterogeneity of primary plant cell walls. Journal of Experimental Botany, 2016, 67, 2799-2816.	2.4	34
36	Complex Desorption of Mucin from Silica. Langmuir, 2007, 23, 7096-7100.	1.6	33

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37	Experimental and Theoretical Studies on the Binding of Epigallocatechin Gallate to Purified Porcine Gastric Mucin. Journal of Physical Chemistry B, 2012, 116, 13010-13016.	1.2	33
38	Lubrication and load-bearing properties of human salivary pellicles adsorbed ex vivo on molecularly smooth substrata. Biofouling, 2012, 28, 843-856.	0.8	28
39	Structural hysteresis and hierarchy in adsorbed glycoproteins. Journal of Chemical Physics, 2008, 129, 071102.	1.2	27
40	Charge reversal by salt-induced aggregation in aqueous lactoferrin solutions. Colloids and Surfaces B: Biointerfaces, 2010, 78, 53-60.	2.5	27
41	Mucoadhesive functionality of cell wall structures from fruits and grains: Electrostatic and polymer network interactions mediated by soluble dietary polysaccharides. Scientific Reports, 2017, 7, 15794.	1.6	26
42	Multi-scale assembly of hydrogels formed by highly branched arabinoxylans from Plantago ovata seed mucilage studied by USANS/SANS and rheology. Carbohydrate Polymers, 2019, 207, 333-342.	5.1	24
43	Interaction of Tea Polyphenols and Food Constituents with Model Gut Epithelia: The Protective Role of the Mucus Gel Layer. Journal of Agricultural and Food Chemistry, 2012, 60, 3318-3328.	2.4	23
44	Probing adhesion between nanoscale cellulose fibres using AFM lateral force spectroscopy: The effect of hemicelluloses on hydrogen bonding. Carbohydrate Polymers, 2019, 208, 97-107.	5.1	22
45	Investigating the influence of pectin content and structure on its functionality in bio-flocculant extracted from okra. Carbohydrate Polymers, 2020, 241, 116414.	5.1	22
46	Glycaemic, gastrointestinal, hormonal and appetitive responses to pearl millet or oats porridge breakfasts: a randomised, crossover trial in healthy humans. British Journal of Nutrition, 2019, 122, 1142-1154.	1.2	21
47	Dynamic Tribology Protocol (DTP): Response of salivary pellicle to dairy protein interactions validated against sensory perception. Food Hydrocolloids, 2021, 113, 106478.	5.6	20
48	Policy, toxicology and physicochemical considerations on the inhalation of high concentrations of food flavour. Npj Science of Food, 2020, 4, 15.	2.5	18
49	Tailored nanocellulose-grafted polymer brush applications. Journal of Materials Chemistry A, 2021, 9, 17173-17188.	5.2	18
50	The Mechanosensory Role of Osteocytes and Implications for Bone Health and Disease States. Frontiers in Cell and Developmental Biology, 2021, 9, 770143.	1.8	18
51	Lubrication by biomacromolecules: mechanisms and biomimetic strategies. Bioinspiration and Biomimetics, 2019, 14, 051001.	1.5	17
52	A Study of the Linear Tension Effect on the Polystyrene Microsphere Wettability with Water. Colloid Journal, 2001, 63, 518-525.	0.5	15
53	Cell nanomechanics and focal adhesions are regulated by retinol and conjugated linoleic acid in a dose-dependent manner. Nanotechnology, 2009, 20, 285103.	1.3	14
54	Friction, lubrication, and in situ mechanics of poroelastic cellulose hydrogels. Soft Matter, 2017, 13, 3592-3601.	1.2	14

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55	Polyphenol Control of Cell Spreading on Glycoprotein Substrata. Journal of Biomaterials Science, Polymer Edition, 2009, 20, 841-851.	1.9	13
56	Lubrication of starch in ionic liquidâ€“water mixtures: Soluble carbohydrate polymers form a boundary film on hydrophobic surfaces. Carbohydrate Polymers, 2015, 133, 507-516.	5.1	12
57	Enabling the Rational Design of Low-Fat Snack Foods: Insights from In Vitro Oral Processing. Journal of Agricultural and Food Chemistry, 2019, 67, 8725-8734.	2.4	12
58	Mucin immobilization in calcium alginate: A possible mucus mimetic tool for evaluating mucoadhesion and retention of flavour. International Journal of Biological Macromolecules, 2019, 138, 831-836.	3.6	12
59	Understanding the lost functionality of ethanol in non-alcoholic beer using sensory evaluation, aroma release and molecular hydrodynamics. Scientific Reports, 2020, 10, 20855.	1.6	12
60	Surface/interfacial tension dynamics of vesicle-forming surfactants. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1995, 101, 251-260.	2.3	11
61	Temperature Dependence of Mucin Adsorption. Langmuir, 2008, 24, 902-905.	1.6	10
62	The Effect of Dissolved Gases on the Short-Range Attractive Force between Hydrophobic Surfaces in the Absence of Nanobubble Bridging. Langmuir, 2020, 36, 9987-9992.	1.6	9
63	Viscoelastic behaviour of rapid and slow self-healing hydrogels formed by densely branched arabinoxylans from Plantago ovata seed mucilage. Carbohydrate Polymers, 2021, 269, 118318.	5.1	9
64	Creating polysaccharide-protein complexes to control aqueous lubrication. Food Hydrocolloids, 2021, 119, 106826.	5.6	9
65	Lubrication. Monographs in Oral Science, 2014, 24, 71-87.	0.9	8
66	Surface rearrangement of adsorbed EGCGâ€“mucin complexes on hydrophilic surfaces. International Journal of Biological Macromolecules, 2017, 95, 704-712.	3.6	8
67	Responsive polysaccharide-grafted surfaces for biotribological applications. Biotribology, 2019, 18, 100092.	0.9	8
68	Flavour compounds affect protein structure: The effect of methyl anthranilate on bovine serum albumin conformation. Food Chemistry, 2022, 388, 133013.	4.2	8
69	Probing the effect of aroma compounds on the hydrodynamic properties of mucin glycoproteins. European Biophysics Journal, 2020, 49, 799-808.	1.2	7
70	From Rheology to Tribology: Multiscale Dynamics of Biofluids, Food Emulsions and Soft Matter. AIP Conference Proceedings, 2008, , .	0.3	6
71	Formation and tribology of fucoidan/chitosan polyelectrolyte multilayers on PDMS substrates. Biotribology, 2017, 12, 15-23.	0.9	6
72	Structural Insights into the Mechanism of Heatâ€Set Gel Formation of Polyisocyanopeptide Polymers. Macromolecular Rapid Communications, 2020, 41, e2000304.	2.0	6

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73	Viscoelasticity of non-colloidal hydrogel particle suspensions at the liquidâ€“solid transition. Soft Matter, 2021, 17, 5073-5083.	1.2	6
74	Depletion of HP1Î± alters the mechanical properties of MCF7 nuclei. Biophysical Journal, 2021, 120, 2631-2643.	0.2	6
75	Tracking displacements of intracellular organelles in response to nanomechanical forces. , 2008, , .		5
76	Dip-and-Drag Lateral Force Spectroscopy for Measuring Adhesive Forces between Nanofibers. Langmuir, 2016, 32, 13340-13348.	1.6	5
77	How hydrocolloids can control the viscoelastic properties of acid-swollen collagen pastes. Food Hydrocolloids, 2022, 126, 107486.	5.6	5
78	Heterodyne Brillouin microscopy for biomechanical imaging. Biomedical Optics Express, 2021, 12, 6259.	1.5	4
79	Food biotechnology. Current Opinion in Chemical Engineering, 2020, 30, 53-59.	3.8	3
80	Instrumental characterization of xanthan gum and scleroglucan solutions: Comparison of rotational rheometry, capillary breakup extensional rheometry and soft-contact tribology. Food Hydrocolloids, 2022, 130, 107681.	5.6	3
81	Development of a separated-dough method and flour/starch replacement in gluten free crackers by cellulose and fibrillated cellulose. Food and Function, 2021, 12, 8425-8439.	2.1	2
82	Rheology, microstructure and diffusion in soft gelatin nanocomposites packed with anionic nanogels. Food Structure, 2021, 30, 100216.	2.3	2
83	The thermodynamic equation for the dissolution of solids in liquids.. Journal of Molecular Liquids, 2001, 91, 33-46.	2.3	0
84	Brush-Like Polysaccharides With Motif-Specific Interactions. , 2018, , .		0