Gregory Francius

List of Publications by Year
in descending order

96 papers	3,596 citations	159585 30 h-index	144013 57 g-index
97 all docs	97 docs citations	97 times ranked	4814 citing authors

#	Article	IF	Citations
1	Polyelectrolyte Multilayers with a Tunable Young's Modulus:â€‰ Influence of Film Stiffness on Cell Adhesion. Langmuir, 2006, 22, 1193-1200.	3.5	297
2	Identification of a Gene Cluster for the Biosynthesis of a Long, Galactose-Rich Exopolysaccharide in Lactobacillus rhamnosus GG and Functional Analysis of the Priming Glycosyltransferase. Applied and Environmental Microbiology, 2009, 75, 3554-3563.	3.1	234
3	Direct Observation of Staphylococcus aureus Cell Wall Digestion by Lysostaphin. Journal of Bacteriology, 2008, 190, 7904-7909.	2.2	168
4	Detection, Localization, and Conformational Analysis of Single Polysaccharide Molecules on Live Bacteria. ACS Nano, 2008, 2, 1921-1929.	14.6	159
5	Multifunctional Polyelectrolyte Multilayer Films:Â Combining Mechanical Resistance, Biodegradability, and Bioactivity. Biomacromolecules, 2007, 8, 139-145.	5.4	127
6	Nanostructure and nanomechanics of live Phaeodactylum tricornutum morphotypes. Environmental Microbiology, 2008, 10, 1344-1356.	3.8	111
7	Control of drug accessibility on functional polyelectrolyte multilayer films. Biomaterials, 2006, 27, 4149-4156.	11.4	107
8	Stretching polysaccharides on live cells using single molecule force spectroscopy. Nature Protocols, 2009, 4, 939-946.	12.0	97
9	Effect of crosslinking on the elasticity of polyelectrolyte multilayer films measured by colloidal probe AFM. Microscopy Research and Technique, 2006, 69, 84-92.	2.2	88
10	Elasticity, biodegradability and cell adhesive properties of chitosan/hyaluronan multilayer films. Biomedical Materials (Bristol), 2007, 2, S45-S51.	3.3	88
11	Automated Force Volume Image Processing for Biological Samples. PLoS ONE, 2011, 6, e18887.	2.5	86
12	Non-DLVO adhesion of F-specific RNA bacteriophages to abiotic surfaces: Importance of surface roughness, hydrophobic and electrostatic interactions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 435, 178-187.	4.7	84
13	Isoelectric point is an inadequate descriptor of MS2, Phi X 174 and PRD1 phages adhesion on abiotic surfaces. Journal of Colloid and Interface Science, 2015, 446, 327-334.	9.4	81
14	Lactic acid bacteria in dairy food: Surface characterization and interactions with food matrix components. Advances in Colloid and Interface Science, 2014, 213, 21-35.	14.7	79
15	Interactions of oritavancin, a new lipoglycopeptide derived from vancomycin, with phospholipid bilayers: Effect on membrane permeability and nanoscale lipid membrane organization. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 1832-1840.	2.6	77
16	Cohesiveness and hydrodynamic properties of young drinking water biofilms. Water Research, 2012, 46, 1155-1166.	11.3	77
17	Bacterial Surface Appendages Strongly Impact Nanomechanical and Electrokinetic Properties of Escherichia coli Cells Subjected to Osmotic Stress. PLoS ONE, 2011, 6, e20066.	2.5	69
18	In vitro interactions between probiotic bacteria and milk proteins probed by atomic force microscopy. Colloids and Surfaces B: Biointerfaces, 2013, 104, 153-162.	5.0	67

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19	Drinking water biofilm cohesiveness changes under chlorination or hydrodynamic stress. Water Research, 2014, 55, 175-184.	11.3	64
20	Significance of bacterial surface molecules interactions with milk proteins to enhance microencapsulation of Lactobacillus rhamnosus GG. Food Hydrocolloids, 2014, 41, 60-70.	10.7	62
21	Stiffening of Soft Polyelectrolyte Architectures by Multilayer Capping Evidenced by Viscoelastic Analysis of AFM Indentation Measurements. Journal of Physical Chemistry C, 2007, 111, 8299-8306.	3.1	58
22	In situ and real time investigation of the evolution of a Pseudomonas fluorescens nascent biofilm in the presence of an antimicrobial peptide. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 75-84.	2.6	52
23	Effect of Cholesterol and Fatty Acids on the Molecular Interactions of Fengycin with Stratum Corneum Mimicking Lipid Monolayers. Langmuir, 2009, 25, 3029-3039.	3.5	44
24	Morphological properties of vermiculite particles in size-selected fractions obtained by sonication. Applied Clay Science, 2013, 77-78, 18-32.	5.2	44
25	Nanoscale membrane activity of surfactins: Influence of geometry, charge and hydrophobicity. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 2058-2068.	2.6	43
26	Elasticity and physico-chemical properties during drinking water biofilm formation. Biofouling, 2011, 27, 739-750.	2.2	43
27	Links between particle surface hardening and rehydration impairment during micellar casein powder storage. Food Hydrocolloids, 2016, 61, 277-285.	10.7	38
28	Shear mechanical anisotropy of side chain liquid-crystal elastomers: Influence of sample preparation. European Physical Journal E, 2006, 20, 369-78.	1.6	35
29	Adhesive interactions between milk fat globule membrane and Lactobacillus rhamnosus GG inhibit bacterial attachment to Caco-2 TC7 intestinal cell. Colloids and Surfaces B: Biointerfaces, 2018, 167, 44-53.	5.0	34
30	The surface properties of milk fat globules govern their interactions with the caseins: Role of homogenization and pH probed by AFM force spectroscopy. Colloids and Surfaces B: Biointerfaces, 2019, 182, 110363.	5.0	34
31	Glycated Polyelectrolyte Multilayer Films:â€‰ Differential Adhesion of Primary versus Tumor Cells. Biomacromolecules, 2006, 7, 2882-2889.	5.4	30
32	Impacts of pH-mediated EPS structure on probiotic bacterial piliâ€“whey proteins interactions. Colloids and Surfaces B: Biointerfaces, 2015, 134, 332-338.	5.0	30
33	D-Cateslytin, a new antimicrobial peptide with therapeutic potential. Scientific Reports, 2017, 7, 15199.	3.3	30
34	Immunomodulation with Self-Crosslinked Polyelectrolyte Multilayer-Based Coatings. Biomacromolecules, 2016, 17, 2189-2198.	5.4	29
35	Production of Extracellular Glycogen by Pseudomonas fluorescens: Spectroscopic Evidence and Conformational Analysis by Biomolecular Recognition. Biomacromolecules, 2012, 13, 2118-2127.	5.4	28
36	Double entrapment of growth factors by nanoparticles loaded into polyelectrolyte multilayer films. Journal of Materials Chemistry B, 2014, 2, 999.	5.8	28

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37	Pili of Lactobacillus rhamnosus GG mediate interaction with Î²-lactoglobulin. Food Hydrocolloids, 2016, 58, 35-41.	10.7	26
38	Anomalous Thickness Evolution of Multilayer Films Made from Poly-l-lysine and Mixtures of Hyaluronic Acid and Polystyrene Sulfonate. Langmuir, 2007, 23, 2602-2607.	3.5	25
39	AFM force spectroscopy of the fibrinogen adsorption process onto dental implants. Journal of Biomedical Materials Research - Part A, 2006, 78A, 466-472.	4.0	24
40	Biomimetic Cryptic Site Surfaces for Reversible Chemo- and Cyto-Mechanoresponsive Substrates. ACS Nano, 2013, 7, 3457-3465.	14.6	24
41	Morphological and Physical Analysis of Natural Phospholipids-Based Biomembranes. PLoS ONE, 2014, 9, e107435.	2.5	24
42	In Situ Analysis of Bacterial Extracellular Polymeric Substances from a Pseudomonas fluorescens Biofilm by Combined Vibrational and Single Molecule Force Spectroscopies. Journal of Physical Chemistry B, 2014, 118, 6702-6713.	2.6	24
43	Is it possible to modulate the structure of skim milk particle through drying process and parameters?. Journal of Food Engineering, 2014, 142, 179-189.	5.2	24
44	Human-derived extracellular matrix from Whartonâ€™s jelly: An untapped substrate to build up a standardized and homogeneous coating for vascular engineering. Acta Biomaterialia, 2017, 48, 227-237.	8.3	23
45	Direct Access to Polysaccharide-Based Vesicles with a Tunable Membrane Thickness in a Large Concentration Window via Polymerization-Induced Self-Assembly. Biomacromolecules, 2021, 22, 3128-3137.	5.4	23
46	Priming cells for their final destination: microenvironment controlled cell culture by a modular ECM-mimicking feeder film. Biomaterials Science, 2015, 3, 1302-1311.	5.4	22
47	Local modifications of whey protein isolate powder surface during high temperature storage. Journal of Food Engineering, 2016, 178, 39-46.	5.2	22
48	Adhesion of Lactobacillus rhamnosus GG surface biomolecules to milk proteins. Food Hydrocolloids, 2018, 82, 296-303.	10.7	22
49	Harnessing Whartonâ€™s jelly stem cell differentiation into bone-like nodule on calcium phosphate substrate without osteoinductive factors. Acta Biomaterialia, 2017, 49, 575-589.	8.3	21
50	AFM combined to ATR-FTIR reveals Candida cell wall changes under caspofungin treatment. Nanoscale, 2017, 9, 13731-13738.	5.6	20
51	Mesoporous silica templated-albumin nanoparticles with high doxorubicin payload for drug delivery assessed with a 3-D tumor cell model. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 332-341.	2.4	19
52	Role of active nanoliposomes in the surface and bulk mechanical properties of hybrid hydrogels. Materials Today Bio, 2020, 6, 100046.	5.5	19
53	Antibacterial activity of class IIa bacteriocin Cbn BM1 depends on the physiological state of the target bacteria. Research in Microbiology, 2012, 163, 323-331.	2.1	18
54	Macroporous carbon nanotube-carbon composite electrodes. Carbon, 2016, 109, 106-116.	10.3	18

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55	Bioinspired Nanofeatured Substrates: Suitable Environment for Bone Regeneration. ACS Applied Materials & Interfaces, 2017, 9, 12791-12801.	8.0	18
56	Polyethyleneimine-mediated flocculation of Shewanella oneidensis MR-1: Impacts of cell surface appendage and polymer concentration. Water Research, 2012, 46, 1838-1846.	11.3	17
57	Nanoscale investigation of the interaction of colistin with model phospholipid membranes by Langmuir technique, and combined infrared and force spectroscopies. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 2592-2602.	2.6	17
58	Diffusion of Fluorescently Labeled Bacteriocin from Edible Nanomaterials and Embedded Nano-Bioactive Coatings. ACS Applied Materials & Interfaces, 2016, 8, 21618-21631.	8.0	17
59	Curcumin Loaded Nanoliposomes Localization by Nanoscale Characterization. International Journal of Molecular Sciences, 2020, 21, 7276.	4.1	17
60	Effects of Bioactive Marine-Derived Liposomes on Two Human Breast Cancer Cell Lines. Marine Drugs, 2020, 18, 211.	4.6	17
61	Auxiliary Biomembranes as a Directional Delivery System To Control Biological Events in Cell-Laden Tissue-Engineering Scaffolds. ACS Omega, 2017, 2, 918-929.	3.5	16
62	Determination of the matrix indentation modulus of Meuse/Haute-Marne argillite. Applied Clay Science, 2011, 52, 266-269.	5.2	15
63	Accumulation of MS2, GA, and QÎ² phages on high density polyethylene (HDPE) and drinking water biofilms under flow/non-flow conditions. Water Research, 2012, 46, 6574-6584.	11.3	15
64	Atomic force microscopy analysis of IgG films at hydrophobic surfaces: A promising method to probe IgG orientations and optimize ELISA tests performance. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 138-145.	2.3	15
65	Origin of the Differential Nanoscale Reactivity of Biologically and Chemically Formed Green Rust Crystals Investigated by Chemical Force Spectroscopy. Journal of Physical Chemistry C, 2014, 118, 5978-5987.	3.1	14
66	The dynamics and pH-dependence of Ag43 adhesinsâ€™ self-association probed by atomic force spectroscopy. Nanoscale, 2014, 6, 12665-12681.	5.6	14
67	DDB2 (damaged-DNA binding 2) protein: a new modulator of nanomechanical properties and cell adhesion of breast cancer cells. Nanoscale, 2016, 8, 5268-5279.	5.6	14
68	Dynamic Modulation of Fimbrial Extension and FimH-Mannose Binding Force on Live Bacteria Under pH Changes: A Molecular Atomic Force Microscopy Analysis. Journal of Biomedical Nanotechnology, 2014, 10, 3361-3372.	1.1	13
69	Probing peptideâ€“membrane interactions using AFM. Surface and Interface Analysis, 2008, 40, 151-156.	1.8	12
70	Remarkable Structure and Elasticity Relaxation Dynamics of Poly(diallyldimethylammonium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142 T	3.1	12
71	Discrepancies between Cyclic and Linear Antimicrobial Peptide Actions on the Spectrochemical and Nanomechanical Fingerprints of a Young Biofilm. ACS Omega, 2017, 2, 5861-5872.	3.5	12
72	Adhesive Interactions Between Lactic Acid Bacteria and Î²-Lactoglobulin: Specificity and Impact on Bacterial Location in Whey Protein Isolate. Frontiers in Microbiology, 2019, 10, 1512.	3.5	12

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73	Nano-exploration of organic conditioning film formed on polymeric surfaces exposed to drinking water. Water Research, 2017, 109, 155-163.	11.3	10
74	Design of Flexible Free Standing Plasma Polymer-Based Films As Hosts for Enzyme Immobilization. Journal of Physical Chemistry C, 2012, 116, 21356-21365.	3.1	9
75	Bacterial repopulation of drinking water pipe walls after chlorination. Biofouling, 2016, 32, 925-934.	2.2	9
76	Structural and morphological changes of breast cancer cells induced by iron(<scp>ii</scp>) complexes. Nanoscale, 2022, 14, 2735-2749.	5.6	8
77	Multivalency: influence of the residence time and the retraction rate on rupture forces measured by AFM. Journal of Materials Chemistry B, 2015, 3, 1801-1812.	5.8	7
78	Deciphering the aggregation mechanism of bacteria (Shewanella oneidensis MR1) in the presence of polyethyleneimine: Effects of the exopolymeric superstructure and polymer molecular weight. Colloids and Surfaces B: Biointerfaces, 2016, 139, 285-293.	5.0	7
79	Chemical Functionalization of the Zinc Selenide Surface and Its Impact on Lactobacillus rhamnosus GG Biofilms. ACS Applied Materials & Interfaces, 2020, 12, 14933-14945.	8.0	7
80	Bone marrow mesenchymal stem cells offer an immune-privileged niche to Cutibacterium acnes in case of implant-associated osteomyelitis. Acta Biomaterialia, 2022, 137, 305-315.	8.3	7
81	Surface properties of bacteria sensitive and resistant to the class IIa carnobacteriocin Cbn BM1. Journal of Applied Microbiology, 2012, 112, 372-382.	3.1	6
82	On the Infectivity of Bacteriophages in Polyelectrolyte Multilayer Films: Inhibition or Preservation of Their Bacteriolytic Activity?. ACS Applied Materials & Interfaces, 2018, 10, 33545-33555.	8.0	6
83	Impacts of Mechanical Stiffness of Bacteriophage-Loaded Hydrogels on Their Antibacterial Activity. ACS Applied Bio Materials, 2021, 4, 2614-2627.	4.6	5
84	Nanomicrobiology. Nanoscale Research Letters, 2007, 2, 365-372.	5.7	4
85	Thermo-Regulated Adhesion of the Streptococcus thermophilusÎ”rgg0182 Strain. Langmuir, 2013, 29, 4847-4856.	3.5	4
86	On the strong connection between nanoscale adhesion of Yad fimbriae and macroscale attachment of Yad-decorated bacteria to glycosylated, hydrophobic and hydrophilic surfaces. Nanoscale, 2021, 13, 1257-1272.	5.6	4
87	Atomic force microscopy nanoscale analysis: Impact of storage conditions on surface properties of whey protein powders. Food Hydrocolloids, 2021, 118, 106801.	10.7	4
88	Parietal Structures of Escherichia coli Can Impact the D-Cateslytin Antibacterial Activity. ACS Chemical Biology, 2020, 15, 2801-2814.	3.4	3
89	Surface properties associated with the production of polysaccharides in the food bacteria Propionibacterium freudenreichii. Food Microbiology, 2020, 92, 103579.	4.2	3
90	Imaging Chemical Groups and Molecular Recognition Sites on Live Cells Using AFM. Nanoscience and Technology, 2009, , 33-48.	1.5	2

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91	Get closer to the intrinsic properties of Ni²⁺salen polymer semiconductors accessed by chain isolation inside silica nanochannels. Journal of Materials Chemistry C, 0, , .	5.5	2
92	Characterization of an Innovative Biomaterial Derived From Human Whartonâ€™s Jelly as a New Promising Coating for Tissue Engineering Applications. Frontiers in Bioengineering and Biotechnology, 0, 10, .	4.1	2
93	Low Biotinyl Glycogen: A Model for Single-Molecule Force Analysis of Branched Biological Macromolecules. Journal of Bionanoscience, 2014, 8, 445-454.	0.4	0
94	Correction: Multivalency: influence of the residence time and the retraction rate on rupture forces measured by AFM. Journal of Materials Chemistry B, 2015, 3, 3098-3098.	5.8	0
95	Stability of Plasma Treated Non-vulcanized Polybutadiene Surfaces: Role of Plasma Parameters and Influence of Additives. Plasma Chemistry and Plasma Processing, 2016, 36, 627-650.	2.4	0
96	Formation and Mechanical Properties of Membranes Formed at the Surface of Walnut Stain Extract Solutions. Journal of Bionanoscience, 2014, 8, 437-444.	0.4	0