

Ralf P Richter

List of Publications by Year in descending order

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papers

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81434

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all docs

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docs citations

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times ranked

8358
citing authors

#	ARTICLE	IF	CITATIONS
1	A quartz crystal microbalance method to quantify the size of hyaluronan and other glycosaminoglycans on surfaces. <i>Scientific Reports</i> , 2022, 12, .	1.6	9
2	Strong Reduction of the Chain Rigidity of Hyaluronan by Selective Binding of Ca ²⁺ Ions. <i>Macromolecules</i> , 2021, 54, 1137-1146.	2.2	12
3	Membrane binding controls ordered self-assembly of animal septins. <i>ELife</i> , 2021, 10, .	2.8	30
4	Polymer Brush in a Nanopore: Effects of Solvent Strength and Macromolecular Architecture Studied by Self-Consistent Field and Scaling Theory. <i>Polymers</i> , 2021, 13, 3929.	2.0	3
5	A Method to Quantify Molecular Diffusion within Thin Solvated Polymer Films: A Case Study on Films of Natively Unfolded Nucleoporins. <i>ACS Nano</i> , 2020, 14, 9938-9952.	7.3	2
6	Impact of Antigen Density on Recognition by Monoclonal Antibodies. <i>Analytical Chemistry</i> , 2020, 92, 5396-5403.	3.2	9
7	Electroresponsive Polyelectrolyte Brushes Studied by Self-Consistent Field Theory. <i>Polymers</i> , 2020, 12, 898.	2.0	9
8	Reversible Membrane Tethering by ZipA Determines FtsZ Polymerization in Two and Three Dimensions. <i>Biochemistry</i> , 2019, 58, 4003-4015.	1.2	6
9	Multivalent Recognition at Fluid Surfaces: The Interplay of Receptor Clustering and Superselectivity. <i>Journal of the American Chemical Society</i> , 2019, 141, 2577-2588.	6.6	41
10	Single-molecule kinetics of pore assembly by the membrane attack complex. <i>Nature Communications</i> , 2019, 10, 2066.	5.8	74
11	Effect of calcium ions and pH on the morphology and mechanical properties of hyaluronan brushes. <i>Interface Focus</i> , 2019, 9, 20180061.	1.5	13
12	An integrated assay to probe endothelial glycocalyx-blood cell interactions under flow in mechanically and biochemically well-defined environments. <i>Matrix Biology</i> , 2019, 78-79, 47-59.	1.5	15
13	Blood cell - vessel wall interactions probed by reflection interference contrast microscopy. , 2019, , .		0
14	Membrane-containing virus particles exhibit the mechanics of a composite material for genome protection. <i>Nanoscale</i> , 2018, 10, 7769-7779.	2.8	12
15	Reversible Immobilization of Proteins in Sensors and Solid-State Nanopores. <i>Small</i> , 2018, 14, e1703357.	5.2	30
16	Glycosaminoglycans in extracellular matrix organisation: are concepts from soft matter physics key to understanding the formation of perineuronal nets?. <i>Current Opinion in Structural Biology</i> , 2018, 50, 65-74.	2.6	54
17	Editorial overview: Carbohydrates: "À trois with glycosaminoglycans" a serious rendezvous, not a gag!. <i>Current Opinion in Structural Biology</i> , 2018, 50, iv-vi.	2.6	0
18	Structure and properties of polydisperse polyelectrolyte brushes studied by self-consistent field theory. <i>Soft Matter</i> , 2018, 14, 6230-6242.	1.2	16

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19	Elastohydrodynamic Lift at a Soft Wall. <i>Physical Review Letters</i> , 2018, 120, 198001.	2.9	36
20	Single-Molecule Unbinding Forces between the Polysaccharide Hyaluronan and Its Binding Proteins. <i>Biophysical Journal</i> , 2018, 114, 2910-2922.	0.2	23
21	Binding of the chemokine CXCL12 to its natural extracellular matrix ligand heparan sulfate enables myoblast adhesion and facilitates cell motility. <i>Biomaterials</i> , 2017, 123, 24-38.	5.7	15
22	Controlling Multivalent Binding through Surface Chemistry: Model Study on Streptavidin. <i>Journal of the American Chemical Society</i> , 2017, 139, 4157-4167.	6.6	86
23	Differential structural remodelling of heparan sulfate by chemokines: the role of chemokine oligomerization. <i>Open Biology</i> , 2017, 7, 160286.	1.5	37
24	Development of a selective cell capture and release assay: impact of clustered RGD ligands. <i>Journal of Materials Chemistry B</i> , 2017, 5, 4745-4753.	2.9	8
25	Enhanced Biological Activity of BMP-2 Bound to Surface-Grafted Heparan Sulfate. <i>Advanced Biology</i> , 2017, 1, e1600041.	3.0	24
26	A single molecule assay to probe monovalent and multivalent bonds between hyaluronan and its key leukocyte receptor CD44 under force. <i>Scientific Reports</i> , 2016, 6, 34176.	1.6	38
27	Micromechanical Analysis of the Hyaluronan-Rich Matrix Surrounding the Oocyte Reveals a Uniquely Soft and Elastic Composition. <i>Biophysical Journal</i> , 2016, 110, 2779-2789.	0.2	31
28	A physical model describing the interaction of nuclear transport receptors with FG nucleoporin domain assemblies. <i>ELife</i> , 2016, 5, .	2.8	69
29	Cytokines and growth factors cross-link heparan sulfate. <i>Open Biology</i> , 2015, 5, 150046.	1.5	55
30	Metal Ion-dependent Heavy Chain Transfer Activity of TSG-6 Mediates Assembly of the Cumulus-Oocyte Matrix. <i>Journal of Biological Chemistry</i> , 2015, 290, 28708-28723.	1.6	46
31	Sensor Based on Aptamer Folding to Detect Low-Molecular Weight Analytes. <i>Analytical Chemistry</i> , 2015, 87, 7566-7574.	3.2	47
32	Interaction of Hyaluronan with Cationic Nanoparticles. <i>Langmuir</i> , 2015, 31, 8411-8420.	1.6	6
33	pH- and Electro-Responsive Properties of Poly(acrylic acid) and Poly(acrylic Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 187 Td (acid)-Microbalance with Dissipation Monitoring. <i>Langmuir</i> , 2015, 31, 7684-7694.	1.6	40
34	Designing multivalent probes for tunable superselective targeting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 5579-5584.	3.3	104
35	A new configurational bias scheme for sampling supramolecular structures. <i>Journal of Chemical Physics</i> , 2014, 141, 244909.	1.2	16
36	Incorporation of Pentraxin 3 into Hyaluronan Matrices Is Tightly Regulated and Promotes Matrix Cross-linking. <i>Journal of Biological Chemistry</i> , 2014, 289, 30481-30498.	1.6	67

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37	A quartz crystal microbalance method to study the terminal functionalization of glycosaminoglycans. <i>Chemical Communications</i> , 2014, 50, 15148-15151.	2.2	52
38	Quartz Crystal Microbalance with Dissipation Monitoring and Spectroscopic Ellipsometry Measurements of the Phospholipid Bilayer Anchoring Stability and Kinetics of Hydrophobically Modified DNA Oligonucleotides. <i>Langmuir</i> , 2014, 30, 6525-6533.	1.6	39
39	Well-defined biomimetic surfaces to characterize glycosaminoglycan-mediated interactions on the molecular, supramolecular and cellular levels. <i>Biomaterials</i> , 2014, 35, 8903-8915.	5.7	57
40	Superselective Targeting Using Multivalent Polymers. <i>Journal of the American Chemical Society</i> , 2014, 136, 1722-1725.	6.6	92
41	Transient Exposure of Pulmonary Surfactant to Hyaluronan Promotes Structural and Compositional Transformations into a Highly Active State. <i>Journal of Biological Chemistry</i> , 2013, 288, 29872-29881.	1.6	20
42	Self-assembly and elasticity of hierarchical proteoglycan-hyaluronan brushes. <i>Soft Matter</i> , 2013, 9, 10473.	1.2	25
43	Solid-supported lipid bilayers to drive stem cell fate and tissue architecture using periosteum derived progenitor cells. <i>Biomaterials</i> , 2013, 34, 1878-1887.	5.7	51
44	Cohesiveness tunes assembly and morphology of FG nucleoporin domain meshworks – Implications for nuclear pore permeability. <i>Biophysical Journal</i> , 2013, 105, 1860-1870.	0.2	42
45	Inter- β -inhibitor Impairs TSG-6-induced Hyaluronan Cross-linking. <i>Journal of Biological Chemistry</i> , 2013, 288, 29642-29653.	1.6	60
46	Viscoelasticity of Thin Biomolecular Films: A Case Study on Nucleoporin Phenylalanine-Glycine Repeats Grafted to a Histidine-Tag Capturing QCM-D Sensor. <i>Biomacromolecules</i> , 2012, 13, 2322-2332.	2.6	86
47	Films of End-Grafted Hyaluronan Are a Prototype of a Brush of a Strongly Charged, Semiflexible Polyelectrolyte with Intrinsic Excluded Volume. <i>Biomacromolecules</i> , 2012, 13, 1466-1477.	2.6	44
48	Hydration Dynamics of Hyaluronan and Dextran. <i>Biophysical Journal</i> , 2012, 103, L10-L12.	0.2	47
49	Combining Colloidal Probe Atomic Force and Reflection Interference Contrast Microscopy to Study the Compressive Mechanics of Hyaluronan Brushes. <i>Langmuir</i> , 2012, 28, 3206-3216.	1.6	23
50	Hearing What You Cannot See and Visualizing What You Hear: Interpreting Quartz Crystal Microbalance Data from Solvated Interfaces. <i>Analytical Chemistry</i> , 2011, 83, 8838-8848.	3.2	696
51	The sweet coat of living cells – from supramolecular structure and dynamics to biological function. <i>International Journal of Materials Research</i> , 2011, 102, 903-905.	0.1	4
52	The Inflammation-associated Protein TSG-6 Cross-links Hyaluronan via Hyaluronan-induced TSG-6 Oligomers. <i>Journal of Biological Chemistry</i> , 2011, 286, 25675-25686.	1.6	119
53	Ultrathin nucleoporin phenylalanine-glycine repeat films and their interaction with nuclear transport receptors. <i>EMBO Reports</i> , 2010, 11, 366-372.	2.0	101
54	Analysis of CD44-Hyaluronan Interactions in an Artificial Membrane System. <i>Journal of Biological Chemistry</i> , 2010, 285, 30170-30180.	1.6	187

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55	Dynamic Modulation of the Glycosphingolipid Content in Supported Lipid Bilayers by Glycolipid Transfer Protein. <i>Biophysical Journal</i> , 2010, 99, 2947-2956.	0.2	29
56	Label-Free Detection of Clustering of Membrane-Bound Proteins. <i>Analytical Chemistry</i> , 2010, 82, 9275-9281.	3.2	73
57	On the Adsorption Behavior of Biotin-Binding Proteins on Gold and Silica. <i>Langmuir</i> , 2010, 26, 1029-1034.	1.6	51
58	Water Content and Buildup of Poly(diallyldimethylammonium chloride)/Poly(sodium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 632 Td (4-sty) Polyelectrolyte Multilayers Studied by an in Situ Combination of a Quartz Crystal Microbalance with Dissipation Monitoring and Spectroscopic Ellipsometry. <i>Macromolecules</i> , 2010, 43, 9063-9070.	2.2	114
59	Dissipation in Films of Adsorbed Nanospheres Studied by Quartz Crystal Microbalance (QCM). <i>Analytical Chemistry</i> , 2009, 81, 8167-8176.	3.2	148
60	QCM-D and Reflectometry Instrument: Applications to Supported Lipid Structures and Their Biomolecular Interactions. <i>Analytical Chemistry</i> , 2009, 81, 349-361.	3.2	102
61	Model-Independent Analysis of QCM Data on Colloidal Particle Adsorption. <i>Langmuir</i> , 2009, 25, 5177-5184.	1.6	133
62	Orientation-Selective Incorporation of Transmembrane F ₀ F ₁ ATP Synthase Complex from <i>Micrococcus luteus</i> in Polymer-Supported Membranes. <i>Macromolecular Bioscience</i> , 2008, 8, 1034-1043.	2.1	16
63	Solvation Effects in the Quartz Crystal Microbalance with Dissipation Monitoring Response to Biomolecular Adsorption. A Phenomenological Approach. <i>Analytical Chemistry</i> , 2008, 80, 8880-8890.	3.2	132
64	Assembly of Multilayer Arrays of Viral Nanoparticles via Biospecific Recognition: A Quartz Crystal Microbalance with Dissipation Monitoring Study. <i>Biomacromolecules</i> , 2008, 9, 456-462.	2.6	56
65	Membrane-Grafted Hyaluronan Films: A Well-Defined Model System of Glycoconjugate Cell Coats. <i>Journal of the American Chemical Society</i> , 2007, 129, 5306-5307.	6.6	70
66	Formation of Solid-Supported Lipid Bilayers: An Integrated View. <i>Langmuir</i> , 2006, 22, 3497-3505.	1.6	980
67	FG-Rich Repeats of Nuclear Pore Proteins Form a Three-Dimensional Meshwork with Hydrogel-Like Properties. <i>Science</i> , 2006, 314, 815-817.	6.0	555
68	Vesicles surfing on a lipid bilayer: Self-induced haptotactic motion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 12382-12387.	3.3	81
69	Enzyme immobilization on poly(ethylene-co-acrylic acid) films studied by quartz crystal microbalance with dissipation monitoring. <i>Journal of Colloid and Interface Science</i> , 2005, 287, 35-42.	5.0	47
70	Following the Formation of Supported Lipid Bilayers on Mica: A Study Combining AFM, QCM-D, and Ellipsometry. <i>Biophysical Journal</i> , 2005, 88, 3422-3433.	0.2	424
71	On the Kinetics of Adsorption and Two-Dimensional Self-Assembly of Annexin A5 on Supported Lipid Bilayers. <i>Biophysical Journal</i> , 2005, 89, 3372-3385.	0.2	133
72	On the Effect of the Solid Support on the Interleaflet Distribution of Lipids in Supported Lipid Bilayers. <i>Langmuir</i> , 2005, 21, 299-304.	1.6	100

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73	Effects of flow on solute exchange between fluids and supported biosurfaces. <i>Biotechnology and Applied Biochemistry</i> , 2004, 39, 277-284.	1.4	22
74	QCM-D on Mica for Parallel QCM-DAFM Studies. <i>Langmuir</i> , 2004, 20, 4609-4613.	1.6	62
75	Supported lipid membranes. <i>Materials Today</i> , 2003, 6, 32-37.	8.3	56
76	Characterization of Lipid Bilayers and Protein Assemblies Supported on Rough Surfaces by Atomic Force Microscopy. <i>Langmuir</i> , 2003, 19, 1632-1640.	1.6	103
77	Pathways of Lipid Vesicle Deposition on Solid Surfaces: A Combined QCM-D and AFM Study. <i>Biophysical Journal</i> , 2003, 85, 3035-3047.	0.2	604
78	Binding of a model regulator of complement activation (RCA) to a biomaterial surface: surface-bound factor H inhibits complement activation. <i>Biomaterials</i> , 2001, 22, 2435-2443.	5.7	57