

# Georges Belfort

## List of Publications by Year in descending order

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97  
papers

5,181  
citations

81743

39  
h-index

88477

70  
g-index

100  
all docs

100  
docs citations

100  
times ranked

4564  
citing authors

#	ARTICLE	IF	CITATIONS
1	The behavior of suspensions and macromolecular solutions in crossflow microfiltration. <i>Journal of Membrane Science</i> , 1994, 96, 1-58.	4.1	1,180
2	A genetic system yields self-cleaving inteins for bioseparations. <i>Nature Biotechnology</i> , 1999, 17, 889-892.	9.4	239
3	Surface modification of poly(ether sulfone) ultrafiltration membranes by low-temperature plasma-induced graft polymerization. <i>Journal of Applied Polymer Science</i> , 1999, 72, 1699-1711.	1.3	195
4	Polymer Brushes for Membrane Separations: A Review. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 28383-28399.	4.0	144
5	Continuous hybridoma growth and monoclonal antibody production in hollow fiber reactors-separators. <i>Biotechnology and Bioengineering</i> , 1986, 28, 646-658.	1.7	143
6	Use of the log-normal probability density function to analyze membrane pore size distributions: functional forms and discrepancies. <i>Journal of Membrane Science</i> , 1994, 91, 293-298.	4.1	136
7	Membranes and bioreactors: A technical challenge in biotechnology. <i>Biotechnology and Bioengineering</i> , 1989, 33, 1047-1066.	1.7	124
8	High-Throughput Membrane Surface Modification to Control NOM Fouling. <i>Environmental Science &amp; Technology</i> , 2009, 43, 3865-3871.	4.6	117
9	Cross-flow membrane microfiltration of a bacterial fermentation broth. <i>Biotechnology and Bioengineering</i> , 1989, 34, 447-466.	1.7	115
10	UV-Assisted Graft Polymerization of N-Vinyl-2-pyrrolidinone onto Poly(ether sulfone) Ultrafiltration Membranes Using Selective UV Wavelengths. <i>Chemistry of Materials</i> , 2002, 14, 256-265.	3.2	111
11	Surface modification of ultrafiltration membranes by low temperature plasma. I. Treatment of polyacrylonitrile. <i>Journal of Applied Polymer Science</i> , 1995, 56, 325-343.	1.3	108
12	Optimized Single-Step Affinity Purification with a Self-Cleaving Intein Applied to Human Acidic Fibroblast Growth Factor. <i>Biotechnology Progress</i> , 2000, 16, 1055-1063.	1.3	88
13	Nanometer-Scale Roughness Having Little Effect on the Amount or Structure of Adsorbed Protein. <i>Langmuir</i> , 2003, 19, 9868-9872.	1.6	88
14	The behavior of suspensions and macromolecular solutions in crossflow microfiltration: An update. <i>Journal of Membrane Science</i> , 2020, 601, 117865.	4.1	79
15	Effect of Undulations on Surface Energy: A Quantitative Assessment. <i>Langmuir</i> , 2001, 17, 4312-4315.	1.6	75
16	Adsorbed Gels versus Brushes: Viscoelastic Differences. <i>Langmuir</i> , 2007, 23, 3088-3094.	1.6	70
17	Oriented chiral water wires in artificial transmembrane channels. <i>Science Advances</i> , 2018, 4, eaao5603.	4.7	69
18	Construction and evaluation of a metal ion biosensor. <i>Biotechnology and Bioengineering</i> , 1993, 42, 945-952.	1.7	66

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19	Making polymeric membranes antifouling via "grafting from" polymerization of zwitterions. Journal of Applied Polymer Science, 2015, 132, .	1.3	62
20	Correcting for Surface Roughness: Advancing and Receding Contact Angles. Langmuir, 2002, 18, 6465-6467.	1.6	61
21	Structure and Function in Antimicrobial Piscidins: Histidine Position, Directionality of Membrane Insertion, and pH-Dependent Permeabilization. Journal of the American Chemical Society, 2019, 141, 9837-9853.	6.6	60
22	High throughput discovery of new fouling-resistant surfaces. Journal of Materials Chemistry, 2011, 21, 693-704.	6.7	58
23	Quantitative Flow Measurements in Bioreactors by Nuclear Magnetic Resonance Imaging. Nature Biotechnology, 1990, 8, 327-330.	9.4	54
24	A new coiled hollow-fiber module design for enhanced microfiltration performance in biotechnology. Biotechnology and Bioengineering, 1999, 65, 247-257.	1.7	54
25	Viscoelastic properties of adsorbed and cross-linked polypeptide and protein layers at a solid-liquid interface. Journal of Colloid and Interface Science, 2008, 324, 55-60.	5.0	54
26	High throughput atmospheric pressure plasma-induced graft polymerization for identifying protein-resistant surfaces. Biomaterials, 2012, 33, 1261-1270.	5.7	54
27	Intermolecular Forces between Extracellular Polysaccharides Measured Using the Atomic Force Microscope. Langmuir, 1997, 13, 6234-6240.	1.6	53
28	Enhanced Nutrient Transport in Hollow Fiber Perfusion Bioreactors: A Theoretical Analysis. Biotechnology Progress, 1987, 3, 80-89.	1.3	52
29	Membrane Desalination: Where Are We, and What Can We Learn from Fundamentals?. Annual Review of Chemical and Biomolecular Engineering, 2016, 7, 29-64.	3.3	50
30	Selective adsorption of organic homologues onto activated carbon from dilute aqueous solutions: Solvophobic interaction approach: Part IV. Effect of simple structural modifications with aliphatics. AIChE Journal, 1984, 30, 197-207.	1.8	48
31	Alzheimer's Protective A2T Mutation Changes the Conformational Landscape of the A $\beta$ 1-42 Monomer Differently Than Does the A2V Mutation. Biophysical Journal, 2015, 108, 738-747.	0.2	48
32	Manipulation of heterogeneous hybridoma cultures for overproduction of monoclonal antibodies. Biotechnology Progress, 1991, 7, 445-454.	1.3	47
33	Kinetic resolution of racemic glycidyl butyrate using a multiphase membrane enzyme reactor: Experiments and model verification. Biotechnology and Bioengineering, 1993, 41, 979-990.	1.7	47
34	Dean vortices in curved tube flow: 5. 3-D MRI and numerical analysis of the velocity field. AIChE Journal, 1993, 39, 1592-1602.	1.8	46
35	Membrane Filtration with Liquids: A Global Approach with Prior Successes, New Developments and Unresolved Challenges. Angewandte Chemie - International Edition, 2019, 58, 1892-1902.	7.2	46
36	Alzheimer's Protective Cross-Interaction between Wild-Type and A2T Variants Alters A $\beta$ <sub>42</sub> Dimer Structure. ACS Chemical Neuroscience, 2017, 8, 606-618.	1.7	45

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37	Relaxation studies of adsorbed water on porous glass. <i>Journal of Colloid and Interface Science</i> , 1978, 66, 146-152.	5.0	43
38	Modeling Flux Decline during Nanofiltration of NOM with Poly(arylsulfone) Membranes Modified Using UV-Assisted Graft Polymerization. <i>Environmental Engineering Science</i> , 2002, 19, 477-495.	0.8	43
39	Microfiltration of yeast suspensions with self-cleaning spiral vortices: Possibilities for a new membrane module design. <i>Biotechnology and Bioengineering</i> , 1995, 48, 375-385.	1.7	40
40	Interaction of Amyloid Inhibitor Proteins with Amyloid Beta Peptides: Insight from Molecular Dynamics Simulations. <i>PLoS ONE</i> , 2014, 9, e113041.	1.1	40
41	Critical aspects of RO desalination: A combination strategy. <i>Desalination</i> , 2017, 401, 68-87.	4.0	40
42	Nuclear magnetic resonance relaxation studies of adsorbed water on porous glass of varying pore size. <i>Journal of Colloid and Interface Science</i> , 1974, 47, 106-116.	5.0	35
43	Kinetics of Membrane Flux Decline: The Role of Natural Colloids and Mitigation via Membrane Surface Modification. <i>Journal of Nanoparticle Research</i> , 2005, 7, 525-544.	0.8	35
44	Selection and Structure of Hyperactive Inteins: Peripheral Changes Relayed to the Catalytic Center. <i>Journal of Molecular Biology</i> , 2009, 393, 1106-1117.	2.0	33
45	Exploring Intein Inhibition by Platinum Compounds as an Antimicrobial Strategy. <i>Journal of Biological Chemistry</i> , 2016, 291, 22661-22670.	1.6	32
46	Semiempirical Modeling of Cross-Flow Microfiltration with Periodic Reverse Filtration. <i>Industrial &amp; Engineering Chemistry Research</i> , 1996, 35, 2920-2928.	1.8	30
47	A2T and A2V A $\beta$ peptides exhibit different aggregation kinetics, primary nucleation, morphology, structure, and LTP inhibition. <i>Proteins: Structure, Function and Bioinformatics</i> , 2016, 84, 488-500.	1.5	30
48	Combinatorial synthesis with high throughput discovery of $\beta$ -protein-resistant membrane surfaces. <i>Biomaterials</i> , 2013, 34, 6133-6138.	5.7	29
49	N-Terminal Hypothesis for Alzheimer's Disease. <i>ACS Chemical Neuroscience</i> , 2017, 8, 432-434.	1.7	29
50	High-Throughput Screening of Substrate Chemistry for Embryonic Stem Cell Attachment, Expansion, and Maintaining Pluripotency. <i>Macromolecular Bioscience</i> , 2013, 13, 177-190.	2.1	28
51	New Class of Synthetic Membranes: Organophilic Pervaporation Brushes for Organics Recovery. <i>Chemistry of Materials</i> , 2015, 27, 4142-4148.	3.2	28
52	Dean vortex stability using magnetic resonance flow imaging and numerical analysis. <i>AIChE Journal</i> , 2001, 47, 1126-1140.	1.8	26
53	A New Combinatorial Method for Synthesizing, Screening, and Discovering Antifouling Surface Chemistries. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 2385-2392.	4.0	26
54	Detection of amyloid $\beta$ oligomers toward early diagnosis of Alzheimer's disease. <i>Analytical Biochemistry</i> , 2019, 566, 40-45.	1.1	25

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55	Spontaneous Proton Transfer to a Conserved Inetin Residue Determines On-Pathway Protein Splicing. Journal of Molecular Biology, 2011, 406, 430-442.	2.0	24
56	Global Model for Optimizing Crossflow Microfiltration and Ultrafiltration Processes: A New Predictive and Design Tool. Biotechnology Progress, 2008, 21, 1013-1025.	1.3	23
57	Dean vortices with wall flux in a curved channel membrane system: 2. The velocity field. AICHE Journal, 1996, 42, 347-358.	1.8	22
58	Atmospheric pressure plasma - ARGET ATRP modification of poly(ether sulfone) membranes: A combination attack. Journal of Membrane Science, 2018, 546, 151-157.	4.1	22
59	Particulate Membrane Fouling and Recent Developments in Fluid Mechanics of Dilute Suspensions. ACS Symposium Series, 1985, , 383-401.	0.5	21
60	Integrated membrane and microbial fuel cell technologies for enabling energy-efficient effluent Re-use in power plants. Water Research, 2017, 117, 37-48.	5.3	21
61	Multifield computational fluid dynamics model of particulate flow in curved circular tubes. Theoretical and Computational Fluid Dynamics, 2004, 18, 205-220.	0.9	20
62	A multi-dimensional approach for fractionating proteins using charged membranes. Biotechnology and Bioengineering, 2013, 110, 1704-1713.	1.7	20
63	FLUID DYNAMICS IN A TUBULAR MEMBRANE: THEORY AND EXPERIMENT. Chemical Engineering Communications, 1993, 122, 103-125.	1.5	19
64	Weaker N-Terminal Interactions for the Protective over the Causative A $\beta$ Peptide Dimer Mutants. ACS Chemical Neuroscience, 2018, 9, 1247-1253.	1.7	18
65	Combined Bioinformatic and Rational Design Approach To Develop Antimicrobial Peptides against Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2016, 60, 2757-2764.	1.4	16
66	Dean Vortices with Wall Flux in a Curved Channel Membrane System: 3. Concentration Polarization in a Spiral Reverse Osmosis Slit.. Journal of Chemical Engineering of Japan, 1998, 31, 683-693.	0.3	15
67	Protein transmission during Dean vortex microfiltration of yeast suspensions. , 1999, 65, 649-658.		15
68	Viscous interactions of many neutrally buoyant spheres in Poiseuille flow. Journal of Fluid Mechanics, 1986, 167, 415.	1.4	14
69	Viscosity effects on Dean vortex membrane microfiltration. AICHE Journal, 1999, 45, 1913-1926.	1.8	14
70	Predictive Tool for Design and Analysis of ARGET ATRP Grafting Reactions. Macromolecules, 2017, 50, 7930-7939.	2.2	13
71	Mechanism of Four de Novo Designed Antimicrobial Peptides. Journal of Biological Chemistry, 2016, 291, 25706-25715.	1.6	12
72	Linking microstructure of membranes and performance. Journal of Membrane Science, 2020, 594, 117419.	4.1	12

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73	Polarized, Cobblestone, Human Retinal Pigment Epithelial Cell Maturation on a Synthetic PEG Matrix. ACS Biomaterials Science and Engineering, 2017, 3, 890-902.	2.6	11
74	Relaxation Studies of Adsorbed Water on Porous Glass. ACS Symposium Series, 1980, , 323-345.	0.5	10
75	Interactions between polycationic and polyanionic layers: Changes in rigidity, charge and adsorption kinetics. Sensors and Actuators B: Chemical, 2009, 136, 60-65.	4.0	10
76	Accelerated insulin aggregation under alternating current electric fields: Relevance to amyloid kinetics. Biomicrofluidics, 2015, 9, 044123.	1.2	10
77	Cell-free production of isobutanol: A completely immobilized system. Bioresource Technology, 2019, 294, 122104.	4.8	10
78	Membrane Filtration with Liquids: A Global Approach with Prior Successes, New Developments and Unresolved Challenges. Angewandte Chemie, 2019, 131, 1908-1918.	1.6	10
79	Interactions of nuclear transport factors and surface-conjugated FG nucleoporins: Insights and limitations. PLoS ONE, 2019, 14, e0217897.	1.1	9
80	Similarity of ideal adsorbed solution and potential theories for adsorption from a bulk phase onto a solid surface. AIChE Journal, 1981, 27, 1021-1022.	1.8	8
81	Organic solvent filtration by brush membranes: Permeability, selectivity and fouling correlate with degree of SET-LRP grafting. Journal of Membrane Science, 2021, 618, 118699.	4.1	8
82	Enhanced Stem Cell Pluripotency in Surface-Modified Electrospun Fibrous Matrices. Macromolecular Bioscience, 2014, 14, 215-224.	2.1	6
83	Early Treatment Critical: Bexarotene Reduces Amyloid-Beta Burden In Silico. PLoS ONE, 2016, 11, e0153150.	1.1	6
84	Towards cell-free isobutanol production: Development of a novel immobilized enzyme system. Biotechnology Progress, 2016, 32, 66-73.	1.3	6
85	Rejection of Alkyl Phenols by Reverse Osmosis Membranes. Water Science and Technology, 1987, 19, 967-979.	1.2	5
86	Phosphate Ions Affect the Water Structure at Functionalized Membrane Surfaces. Langmuir, 2016, 32, 9074-9082.	1.6	5
87	Protein Binding Kinetics in Multimodal Systems: Implications for Protein Separations. Analytical Chemistry, 2018, 90, 2609-2617.	3.2	5
88	Structural Properties of Proteins as a Basis for Separation. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1989, 93, 939-944.	0.9	4
89	Modular optimization in metabolic engineering. Critical Reviews in Biochemistry and Molecular Biology, 2021, 56, 1-16.	2.3	4
90	Production and Characterization of Recombinant Collagen-Binding Resilin Nanocomposite for Regenerative Medicine Applications. Regenerative Engineering and Translational Medicine, 2019, 5, 362-372.	1.6	3

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91	Ultrathin Microporous Metal-Organic Network Membranes for Molecular Separation. Journal of Materials Chemistry A, 0, , .	5.2	3
92	Intrinsic Membrane Compaction and Aqueous Solute Studies of Hyperfiltration (Reverse-Osmosis) Membranes Using Interferometry. ACS Symposium Series, 1981, , 147-158.	0.5	2
93	Structural Response of Bovine Growth Hormone to Dead-Ended Ultrafiltration. Separation Science and Technology, 2003, 38, 251-270.	1.3	2
94	A Simplified Predictive Tool for Design and Analysis of SET-LRP Reactions with Mechanistic Insight. ACS Applied Polymer Materials, 2020, 2, 4924-4935.	2.0	2
95	Backbone assignments of mini-RecA intein with short native exteins and an active N-terminal catalytic cysteine. Biomolecular NMR Assignments, 2015, 9, 235-238.	0.4	1
96	Structure of an engineered intein reveals thiazoline ring and provides mechanistic insight. Biotechnology and Bioengineering, 2019, 116, 709-721.	1.7	1
97	Cover Image, Volume 84, Issue 4. Proteins: Structure, Function and Bioinformatics, 2016, 84, C4-C4.	1.5	0