FrÃ©dÃ©ric Pignon

List of Publications by Year
in descending order

64 papers	3,203 citations	201575 27 h-index	149623 56 g-index
64 all docs	64 docs citations	64 times ranked	3401 citing authors

#	Article	IF	Citations
1	Build-up and relaxation of membrane fouling deposits produced during crossflow ultrafiltration of casein micelle dispersions at 12ÂÂ°C and 42ÂÂ°C probed by in situ SAXS. Journal of Membrane Science, 2021, 618, 118700.	4.1	10
2	Temperature-triggered formation of a cellulose II nanocrystal network through regioselective derivatization. Nanoscale, 2021, 13, 6447-6460.	2.8	8
3	Breakdown and buildup mechanisms of cellulose nanocrystal suspensions under shear and upon relaxation probed by SAXS and SALS. Carbohydrate Polymers, 2021, 260, 117751.	5.1	31
4	On the reversibility of membrane fouling by deposits produced during crossflow ultrafiltration of casein micelle suspensions. Journal of Membrane Science, 2021, 630, 119289.	4.1	7
5	Orientation of Cellulose Nanocrystals Controlled in Perpendicular Directions by Combined Shear Flow and Ultrasound Waves Studied by Small-Angle X-ray Scattering. Journal of Physical Chemistry C, 2021, 125, 18409-18419.	1.5	7
6	Effect of Polymer Length on the Adsorption onto Aluminogermanate Imogolite Nanotubes. Langmuir, 2021, 37, 9858-9864.	1.6	4
7	Rheological and physicochemical stability of hydrolyzed jackfruit juice (Artocarpus heterophyllus L.) processed by spray drying. Journal of Food Science and Technology, 2020, 57, 663-672.	1.4	7
8	Layered organization of anisometric cellulose nanocrystals and beidellite clay particles accumulated near the membrane surface during cross-flow ultrafiltration: In situ SAXS and ex situ SEM/WAXD characterization. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 584, 124030.	2.3	8
9	Influence of membrane resistance on swelling and removal of colloidal filter cake after filtration pressure release. Journal of Membrane Science, 2020, 595, 117498.	4.1	11
10	Rheoacoustic Gels: Tuning Mechanical and Flow Properties of Colloidal Gels with Ultrasonic Vibrations. Physical Review X, 2020, 10, .	2.8	13
11	Impact of sonication on the rheological and colloidal properties of highly concentrated cellulose nanocrystal suspensions. Cellulose, 2019, 26, 7619-7634.	2.4	49
12	Structure, Rheological Behavior, and in Situ Local Flow Fields of Cellulose Nanocrystal Dispersions during Cross-Flow Ultrafiltration. ACS Sustainable Chemistry and Engineering, 2019, 7, 10679-10689.	3.2	9
13	Velocity, stress and concentration fields revealed by micro-PIV and SAXS within concentration polarization layers during cross-flow ultrafiltration of colloidal Laponite clay suspensions. Journal of Membrane Science, 2019, 578, 69-84.	4.1	15
14	Major Role of Voluminosity in the Compressibility and Solâ€“Gel Transition of Casein Micelle Dispersions Concentrated at 7 Â°C and 20 Â°C. Foods, 2019, 8, 652.	1.9	9
15	Ultrasonic assisted production of starch nanoparticles: Structural characterization and mechanism of disintegration. Ultrasonics Sonochemistry, 2018, 41, 327-336.	3.8	95
16	Role of Electrostatic Interactions on Supramolecular Organization in Calf-Thymus DNA Solutions under Flow. Polymers, 2018, 10, 1204.	2.0	6
17	Modeling and analysis of concentration profiles obtained by in-situ SAXS during cross-flow ultrafiltration of colloids. Journal of Membrane Science, 2017, 528, 34-45.	4.1	12
18	Supramolecular Organization in Calf-Thymus DNA Solutions under Flow in Dependence with DNA Concentration. Macromolecules, 2017, 50, 8245-8257.	2.2	7

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19	Rheological Properties of DNA Molecules in Solution: Molecular Weight and Entanglement Influences. Polymers, 2016, 8, 279.	2.0	10
20	Surface adsorption of triblock copolymer (PEOâ€“PPOâ€“PEO) on cellulose nanocrystals and their melt extrusion with polyethylene. RSC Advances, 2016, 6, 66224-66232.	1.7	50
21	Tunable Aggregation and Gelation of Thermoresponsive Suspensions of Polymer-Grafted Cellulose Nanocrystals. Biomacromolecules, 2016, 17, 2112-2119.	2.6	55
22	Current Progress in Rheology of Cellulose Nanofibril Suspensions. Biomacromolecules, 2016, 17, 2311-2320.	2.6	207
23	Influence of ionic interactions between nanofibrillated cellulose andÂlatex on the ensuing composite properties. Composites Part B: Engineering, 2016, 85, 188-195.	5.9	17
24	Influence of Molar Mass and Concentration on the Thermogelation of Methylcelluloses. International Journal of Polymer Analysis and Characterization, 2015, 20, 110-118.	0.9	15
25	Intensification of heat and mass transfer by ultrasound: Application to heat exchangers and membrane separation processes. Ultrasonics Sonochemistry, 2015, 25, 40-50.	3.8	49
26	Ultrasonic assisted cross-flow ultrafiltration of starch and cellulose nanocrystals suspensions: Characterization at multi-scales. Carbohydrate Polymers, 2015, 124, 66-76.	5.1	19
27	Methylcellulose, a Cellulose Derivative with Original Physical Properties and Extended Applications. Polymers, 2015, 7, 777-803.	2.0	345
28	Concentration effect of TEMPO-oxidized nanofibrillated cellulose aqueous suspensions on the flow instabilities and small-angle X-ray scattering structural characterization. Cellulose, 2015, 22, 2197-2210.	2.4	40
29	Morphological properties of nanofibrillated cellulose produced using wet grinding as an ultimate fibrillation process. Journal of Materials Science, 2015, 50, 531-541.	1.7	121
30	Interfacial Properties of Methylcelluloses: The Influence of Molar Mass. Polymers, 2014, 6, 2961-2973.	2.0	23
31	Effects of ultrasound on colloidal organization at nanometer length scale during cross-flow ultrafiltration probed by in-situ SAXS. Journal of Membrane Science, 2014, 453, 624-635.	4.1	23
32	A new way to apply ultrasound in cross-flow ultrafiltration: Application to colloidal suspensions. Ultrasonics Sonochemistry, 2014, 21, 1018-1025.	3.8	20
33	Silica nanoparticles as tracers of the gelation dynamics of a natural biopolymer physical gel. Soft Matter, 2014, 10, 4547.	1.2	44
34	Effects of ultrasound on cross-flow ultrafiltration of skim milk: Characterization from macro-scale to nano-scale. Journal of Membrane Science, 2014, 470, 205-218.	4.1	37
35	Rheological properties of micro-/nanofibrillated cellulose suspensions: Wall-slip and shear banding phenomena. Carbohydrate Polymers, 2014, 112, 432-439.	5.1	133
36	Influence of hydrodynamics on the growth kinetics of glass-adhering Pseudomonas putida cells through a parallel plate flow chamber. Biomicrofluidics, 2013, 7, 54105.	1.2	6

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37	Single-cell adhesion probedin-situusing optical tweezers: A case study withSaccharomyces cerevisiae. Journal of Applied Physics, 2012, 111, 114701.	1.1	25
38	REMOVED: Cross-Flow Membrane Separation Process of Starch Nanocrystals: Application to the Production of Bio-Based Product and Improvements. Procedia Engineering, 2012, 44, 1370-1372.	1.2	0
39	In Situ Characterization by SAXS of Concentration Polarization Layers during Cross-Flow Ultrafiltration of Laponite Dispersions. Langmuir, 2012, 28, 1083-1094.	1.6	30
40	Structure and orientation dynamics of sepiolite fibersâ€“poly(ethylene oxide) aqueous suspensions under extensional and shear flow, probed by in situ SAXS. Rheologica Acta, 2009, 48, 563-578.	1.1	9
41	Rheology of the Pluronic P103/water system in a semidilute regime: Evidence of nonequilibrium critical behavior. Journal of Colloid and Interface Science, 2009, 336, 842-849.	5.0	25
42	Micron-scale origin of the shear-induced structure in Laponiteâ€“poly(ethylene oxide) dispersions. Rheologica Acta, 2008, 47, 63-73.	1.1	20
43	Spatial and Temporal in Situ Evolution of the Concentration Profile during Casein Micelle Ultrafiltration Probed by Small-Angle X-ray Scattering. Langmuir, 2008, 24, 4523-4529.	1.6	39
44	The initial single yeast cell adhesion on glass via optical trapping and Derjaguinâ€“Landauâ€“Verweyâ€“Overbeek predictions. Journal of Chemical Physics, 2008, 128, 135101.	1.2	16
45	In-situ Structural Characterization by SAXS and Flow Properties of Colloidal Suspensions During Cross-flow Ultrafiltration. AIP Conference Proceedings, 2008, , .	0.3	0
46	Removal forces and adhesion properties ofSaccharomyces cerevisiaeon glass substrates probed by optical tweezer. Journal of Chemical Physics, 2007, 127, 135104.	1.2	21
47	Effects of the environmental factors on the casein micelle structure studied by cryo transmission electron microscopy and small-angle x-ray scattering/ultrasmall-angle x-ray scattering. Journal of Chemical Physics, 2007, 126, 045101.	1.2	198
48	New capillary rheometer allowing for small-angle x-ray scattering experiments inside the die. Application to the extrusion of block copolymers, their macroscopic defects, and their structure. Journal of Rheology, 2006, 50, 803-829.	1.3	9
49	Osmotic Compression and Expansion of Highly Ordered Clay Dispersions. Langmuir, 2006, 22, 4065-4075.	1.6	59
50	Kinetic arrest and glass-glass transition in short-ranged attractive colloids. Physical Review E, 2006, 74, 051504.	0.8	55
51	Microstructure and Rheology near an Attractive Colloidal Glass Transition. Physical Review Letters, 2006, 96, 258301.	2.9	26
52	Rheometric properties of micron-sized CaCO3 suspensions stabilised by a physical polyol/silica gel for polyurethane foams. Rheologica Acta, 2005, 44, 644-653.	1.1	6
53	Structure and rheological behavior of casein micelle suspensions during ultrafiltration process. Journal of Chemical Physics, 2004, 121, 8138.	1.2	91
54	Fractal behavior and scaling law of hydrophobic silica in polyol. Journal of Colloid and Interface Science, 2003, 267, 314-319.	5.0	25

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55	Small-Angle X-ray Scattering Studies of Fe-Montmorillonite Deposits during Ultrafiltration in a Magnetic Field. Langmuir, 2003, 19, 8638-8645.	1.6	19
56	The orientation dynamics of rigid rod suspensions under extensional flow. Journal of Rheology, 2003, 47, 371-388.	1.3	11
57	Dissociation of thixotropic clay gels. Physical Review E, 2002, 66, 021401.	0.8	86
58	Structural characterisation of deposits formed during frontal filtration. Journal of Membrane Science, 2000, 174, 189-204.	4.1	58
59	Nondynamic Origin of the High-Frequency Acoustic Attenuation in Glasses. Physical Review Letters, 1999, 83, 5583-5586.	2.9	86
60	Thixotropic behavior of clay dispersions: Combinations of scattering and rheometric techniques. Journal of Rheology, 1998, 42, 1349-1373.	1.3	133
61	Yield stress thixotropic clay suspension:â€ƒInvestigations of structure by light, neutron, and x-ray scattering. Physical Review E, 1997, 56, 3281-3289.	0.8	203
62	Butterfly Light Scattering Pattern and Rheology of a Sheared Thixotropic Clay Gel. Physical Review Letters, 1997, 79, 4689-4692.	2.9	123
63	Thixotropic colloidal suspensions and flow curves with minimum: Identification of flow regimes and rheometric consequences. Journal of Rheology, 1996, 40, 573-587.	1.3	202
64	Structure and Pertinent Length Scale of a Discotic Clay Gel. Physical Review Letters, 1996, 76, 4857-4860.	2.9	106