

Tatiana Budtova

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126
papers

4,679
citations

38
h-index

64
g-index

131
ext. papers

5,374
ext. citations

6.2
avg. IF

6.34
L-index

#	Paper	IF	Citations
126	Aerocellulose: new highly porous cellulose prepared from cellulose-NaOH aqueous solutions. <i>Biomacromolecules</i> , 2008 , 9, 269-77	6.9	273
125	Rheological properties of cellulose/ionic liquid solutions: from dilute to concentrated states. <i>Biomacromolecules</i> , 2009 , 10, 1188-94	6.9	212
124	Aerocellulose from cellulose/ionic liquid solutions: Preparation, properties and comparison with cellulose-NaOH and cellulose-EMMO routes. <i>Carbohydrate Polymers</i> , 2011 , 83, 1766-1774	10.3	211
123	Cellulose in NaOH/water based solvents: a review. <i>Cellulose</i> , 2016 , 23, 5-55	5.5	177
122	Aeropectin: fully biomass-based mechanically strong and thermal superinsulating aerogel. <i>Biomacromolecules</i> , 2014 , 15, 2188-95	6.9	149
121	Viscosity of cellulose-imidazolium-based ionic liquid solutions. <i>Journal of Physical Chemistry B</i> , 2010 , 114, 7222-8	3.4	139
120	Cellulose-silica aerogels. <i>Carbohydrate Polymers</i> , 2015 , 122, 293-300	10.3	110
119	Rheological properties and gelation of aqueous cellulose-NaOH solutions. <i>Biomacromolecules</i> , 2003 , 4, 259-64	6.9	110
118	Cellulose II aerogels: a review. <i>Cellulose</i> , 2019 , 26, 81-121	5.5	108
117	Review on the Production of Polysaccharide Aerogel Particles. <i>Materials</i> , 2018 , 11,	3.5	108
116	Structure of aqueous solutions of microcrystalline cellulose/sodium hydroxide below 0 degrees C and the limit of cellulose dissolution. <i>Biomacromolecules</i> , 2007 , 8, 2282-7	6.9	104
115	Strong, Thermally Superinsulating Biopolymer-Silica Aerogel Hybrids by Cogelation of Silicic Acid with Pectin. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 14282-6	16.4	102
114	Morphology and molten-state rheology of polylactide and polyhydroxyalkanoate blends. <i>European Polymer Journal</i> , 2012 , 48, 1110-1117	5.2	93
113	Macroscopic and microscopic study of 1-ethyl-3-methyl-imidazolium acetate-water mixtures. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 12810-8	3.4	90
112	The dissolution of microcrystalline cellulose in sodium hydroxide-urea aqueous solutions. <i>Cellulose</i> , 2008 , 15, 361-370	5.5	90
111	Cellulose aero-, cryo- and xerogels: towards understanding of morphology control. <i>Cellulose</i> , 2016 , 23, 2585-2595	5.5	89
110	A statistical analysis of fibre size and shape distribution after compounding in composites reinforced by natural fibres. <i>Composites Part A: Applied Science and Manufacturing</i> , 2011 , 42, 1542-1550	8.4	72

109	An Opinion Paper on Aerogels for Biomedical and Environmental Applications. <i>Molecules</i> , 2019 , 24,	4.8	70
108	Kinetics of cellulose regeneration from cellulose--NaOH--water gels and comparison with cellulose--N-methylmorpholine-N-oxide--water solutions. <i>Biomacromolecules</i> , 2007 , 8, 424-32	6.9	69
107	Polypropylene/natural fibres composites: Analysis of fibre dimensions after compounding and observations of fibre rupture by rheo-optics. <i>Composites Part A: Applied Science and Manufacturing</i> , 2011 , 42, 1727-1737	8.4	67
106	Starch Aerogels: A Member of the Family of Thermal Superinsulating Materials. <i>Biomacromolecules</i> , 2017 , 18, 4232-4239	6.9	66
105	New nanostructured carbons based on porous cellulose: Elaboration, pyrolysis and use as platinum nanoparticles substrate for oxygen reduction electrocatalysis. <i>Journal of Power Sources</i> , 2008 , 185, 717-726	8.9	64
104	Wet and dry highly porous cellulose beads from cellulose--NaOH--water solutions: influence of the preparation conditions on beads shape and encapsulation of inorganic particles. <i>Journal of Materials Science</i> , 2011 , 46, 759-765	4.3	59
103	Thermal conductivity/structure correlations in thermal super-insulating pectin aerogels. <i>Carbohydrate Polymers</i> , 2018 , 196, 73-81	10.3	57
102	Physically and chemically cross-linked cellulose cryogels: Structure, properties and application for controlled release. <i>Carbohydrate Polymers</i> , 2016 , 151, 392-400	10.3	57
101	Influence of water on cellulose-EMIMAc solution properties: a viscometric study. <i>Cellulose</i> , 2012 , 19, 45-54	5.5	56
100	Influence of cellulose on ion diffusivity in 1-ethyl-3-methyl-imidazolium acetate cellulose solutions. <i>Biomacromolecules</i> , 2010 , 11, 2927-35	6.9	56
99	Dissolution of unmodified waxy starch in ionic liquid and solution rheological properties. <i>Carbohydrate Polymers</i> , 2013 , 93, 199-206	10.3	55
98	Structure of cellulose-soda solutions at low temperatures. <i>Biomacromolecules</i> , 2001 , 2, 687-93	6.9	55
97	PLA/algae composites: Morphology and mechanical properties. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015 , 73, 109-115	8.4	54
96	Phase diagram, solubility limit and hydrodynamic properties of cellulose in binary solvents with ionic liquid. <i>Carbohydrate Polymers</i> , 2014 , 105, 237-43	10.3	54
95	Influence of processing parameters on regeneration kinetics and morphology of porous cellulose from cellulose--NaOH--water solutions. <i>Cellulose</i> , 2009 , 16, 417-426	5.5	51
94	Macroscopic and microscopic study of 1-ethyl-3-methyl-imidazolium acetate-DMSO mixtures. <i>Journal of Physical Chemistry B</i> , 2015 , 119, 1633-40	3.4	50
93	Influence of ZnO on the properties of dilute and semi-dilute cellulose-NaOH-water solutions. <i>Cellulose</i> , 2011 , 18, 911-920	5.5	47
92	Cellulose--silica composite aerogels from one-pot synthesis. <i>Cellulose</i> , 2014 , 21, 2625-2636	5.5	45

91	Synthesis, characterization and solution behaviour of oxidized pullulan. <i>Carbohydrate Polymers</i> , 2014 , 111, 63-71	10.3	43
90	Solvent release from highly swollen gels under compression. <i>Polymer</i> , 2005 , 46, 121-127	3.9	41
89	Mechanical properties of cellulose aerogels and cryogels. <i>Soft Matter</i> , 2019 , 15, 7901-7908	3.6	38
88	Influence of lignin on cellulose-NaOH-water mixtures properties and on Aerocellulose morphology. <i>Cellulose</i> , 2010 , 17, 1137-1146	5.5	37
87	Tuning structure and properties of pectin aerogels. <i>European Polymer Journal</i> , 2018 , 108, 250-261	5.2	37
86	Thermal superinsulating silica aerogels reinforced with short man-made cellulose fibers. <i>Composites Part A: Applied Science and Manufacturing</i> , 2017 , 103, 113-121	8.4	36
85	Rheology of cellulose-[DBNH][CO ₂ Et] solutions and shaping into aerogel beads. <i>Green Chemistry</i> , 2018 , 20, 3993-4002	10	34
84	Diffusion of 1-ethyl-3-methyl-imidazolium acetate in glucose, cellobiose, and cellulose solutions. <i>Biomacromolecules</i> , 2014 , 15, 609-17	6.9	34
83	Dynamic and capillary shear rheology of natural fiber-reinforced composites. <i>Polymer Engineering and Science</i> , 2013 , 53, 2582-2593	2.3	32
82	Swelling Kinetics of a Polyelectrolyte Gel in Water and Salt Solutions. Coexistence of Swollen and Collapsed Phases. <i>Macromolecules</i> , 1998 , 31, 8845-8850	5.5	32
81	Ambient-dried thermal superinsulating monolithic silica-based aerogels with short cellulosic fibers. <i>Journal of Materials Science</i> , 2017 , 52, 2210-2221	4.3	29
80	Physicochemical properties of etherified maize starches. <i>Carbohydrate Polymers</i> , 2008 , 74, 170-184	10.3	29
79	All-cellulose composites from alfa and wood fibers. <i>Industrial Crops and Products</i> , 2019 , 127, 135-141	5.9	29
78	Interactions between callose and cellulose revealed through the analysis of biopolymer mixtures. <i>Nature Communications</i> , 2018 , 9, 4538	17.4	29
77	Synthesis and Properties of Platinum Nanocatalyst Supported on Cellulose-Based Carbon Aerogel for Applications in PEMFCs. <i>Journal of the Electrochemical Society</i> , 2011 , 158, B779	3.9	28
76	Mixtures of pregelatinised maize starch and Carrageenan: Compatibility, rheology and gelation. <i>Carbohydrate Polymers</i> , 2008 , 72, 579-589	10.3	28
75	Ionic liquid: A powerful solvent for homogeneous starch/cellulose mixing and making films with tuned morphology. <i>Polymer</i> , 2012 , 53, 5779-5787	3.9	27
74	Hydrogel under Shear: A Rheo-optical Study of the Particle Deformation and Solvent Release. <i>Macromolecules</i> , 2002 , 35, 1973-1975	5.5	26

73	Xerocellulose: lightweight, porous and hydrophobic cellulose prepared via ambient drying. <i>Journal of Materials Science</i> , 2015 , 50, 4526-4535	4.3	25
72	Rheological and hydrodynamic properties of cellulose acetate/ionic liquid solutions. <i>Carbohydrate Polymers</i> , 2013 , 92, 1966-71	10.3	25
71	Rheological properties of an interpolymer complex formed between poly(acrylic acid) and methyl cellulose. <i>Journal of Applied Polymer Science</i> , 1999 , 72, 1523-1528	2.9	24
70	Lignocellulosic fiber breakage in a molten polymer. Part 1. Qualitative analysis using rheo-optical observations. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 91, 229-237	8.4	23
69	Lignocellulosic fiber breakage in a molten polymer. Part 3. Modeling of the dimensional change of the fibers during compounding by twin screw extrusion. <i>Composites Part A: Applied Science and Manufacturing</i> , 2017 , 101, 422-431	8.4	23
68	Viscosity-temperature dependence and activation energy of cellulose solutions. <i>Nordic Pulp and Paper Research Journal</i> , 2015 , 30, 99-104	1.1	23
67	Chitosan modified by poly(ethylene oxide): Film and mixture properties. <i>Journal of Applied Polymer Science</i> , 2002 , 84, 1114-1122	2.9	23
66	Reliability evaluation of automated analysis, 2D scanner, and micro-tomography methods for measuring fiber dimensions in polymer-lignocellulosic fiber composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 90, 320-329	8.4	23
65	Nanostructured interpenetrated organic-inorganic aerogels with thermal superinsulating properties. <i>Journal of Non-Crystalline Solids</i> , 2016 , 452, 259-265	3.9	22
64	Rheological properties of molten flax- and Tencel [®] -polypropylene composites: Influence of fiber morphology and concentration. <i>Journal of Rheology</i> , 2016 , 60, 191-201	4.1	21
63	Strong, Thermally Superinsulating Biopolymer/Silica Aerogel Hybrids by Cogelation of Silicic Acid with Pectin. <i>Angewandte Chemie</i> , 2015 , 127, 14490-14494	3.6	20
62	Individual swollen starch granules under mechanical stress: evidence for deformation and volume loss. <i>Soft Matter</i> , 2010 , 6, 363-369	3.6	20
61	Lignocellulosic fiber breakage in a molten polymer. Part 2. Quantitative analysis of the breakage mechanisms during compounding. <i>Composites Part A: Applied Science and Manufacturing</i> , 2017 , 95, 31-39	8.4	19
60	Droplet deformation and break-up under shear: Hydrocolloid solution vs. suspension of starch granules. <i>Food Hydrocolloids</i> , 2011 , 25, 495-502	10.6	19
59	Concentration redistribution of low-molecular-weight salts of metals in the presence of a strongly swelling polyelectrolyte hydrogel. <i>Polymer</i> , 1993 , 34, 5154-5156	3.9	19
58	Exploring Large Ductility in Cellulose Nanopaper Combining High Toughness and Strength. <i>ACS Nano</i> , 2020 , 14, 11150-11159	16.7	19
57	Oxidation vs. degradation in polysaccharides: Pullulan [®] A case study. <i>European Polymer Journal</i> , 2016 , 85, 82-91	5.2	18
56	NMR and Rheological Study of Anion Size Influence on the Properties of Two Imidazolium-based Ionic Liquids. <i>Scientific Reports</i> , 2017 , 7, 8968	4.9	18

55	Swelling-Induced Birefringence of a Polyelectrolyte Gel Strongly Interacting with Metal Ions. <i>Macromolecules</i> , 1997 , 30, 6556-6558	5.5	18
54	Highly porous and light-weight flax/PLA composites. <i>Industrial Crops and Products</i> , 2015 , 74, 132-138	5.9	17
53	Swelling-induced structure changes of polyelectrolyte gels. <i>Polymer</i> , 1999 , 40, 2975-2979	3.9	17
52	. <i>Cellulose</i> , 2019 , 26, 4881-4893	5.5	16
51	Influence of substitution on the rheological properties and gelation of hydroxyethyl cellulose solution in NaOH-water solvent. <i>Carbohydrate Polymers</i> , 2015 , 124, 85-9	10.3	16
50	Interpolymer complexes between hydrophobically modified poly(methacrylic acid) and poly(N-vinylpyrrolidone). <i>Polymer</i> , 2005 , 46, 7047-7054	3.9	16
49	Tailoring the morphology and properties of starch aerogels and cryogels via starch source and process parameter. <i>Carbohydrate Polymers</i> , 2021 , 255, 117344	10.3	16
48	Polysaccharide-based aerogels for thermal insulation and superinsulation: An overview. <i>Carbohydrate Polymers</i> , 2021 , 266, 118130	10.3	16
47	Electrokinetics of the contraction of a polyelectrolyte hydrogel under the influence of constant electric current. <i>Polymer Gels and Networks</i> , 1995 , 3, 387-393		15
46	Cellulose Aerogel Microparticles via Emulsion-Coagulation Technique. <i>Biomacromolecules</i> , 2020 , 21, 1824-1831	10.3	14
45	Swelling Dynamics of Cross-Linked Poly(acrylic acid) and Neutralized Poly(acrylate-co-acrylic acid) in Aqueous Solutions of (Hydroxypropyl)cellulose. <i>Macromolecules</i> , 1996 , 29, 3931-3936	5.5	13
44	Shear-induced solvent release from gel particles: application to drug-delivery systems. <i>International Journal of Pharmaceutics</i> , 2002 , 242, 137-46	6.5	12
43	Characterization of polylactic acid green composites and its biodegradation in a bacterial environment. <i>International Journal of Polymer Analysis and Characterization</i> , 2019 , 24, 236-244	1.7	11
42	Analysis of the continuous phase of the modified waxy maize starch suspension. <i>Carbohydrate Polymers</i> , 2009 , 77, 320-325	10.3	11
41	Experimental study of the break-up of starch suspension droplets in step-up shear flow. <i>Journal of Rheology</i> , 2009 , 53, 943-955	4.1	11
40	3D numerical simulation of the behaviour of a spherical particle suspended in a Newtonian fluid and submitted to a simple shear. <i>Computational Materials Science</i> , 2006 , 37, 517-525	3.2	11
39	Rheological properties of highly swollen hydrogel suspensions. <i>Journal of Applied Polymer Science</i> , 1994 , 52, 721-726	2.9	11
38	Biorefinery Approach for Aerogels. <i>Polymers</i> , 2020 , 12,	4.5	11

37	Swelling and dissolution kinetics of natural and man-made cellulose fibers in solvent power tuned ionic liquid. <i>Cellulose</i> , 2020 , 27, 7399-7415	5.5	10
36	Evidence of shear-induced polymer release from a swollen gel particle. <i>Polymer International</i> , 2003 , 52, 553-558	3.3	10
35	All-cellulose composite aerogels and cryogels. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020 , 137, 106027	8.4	9
34	Kinetics of shear-induced gel deswelling/solvent release. <i>Journal of Controlled Release</i> , 2005 , 108, 73-83	11.7	9
33	Pectin hydrogels, aerogels, cryogels and xerogels: Influence of drying on structural and release properties. <i>European Polymer Journal</i> , 2021 , 149, 110386	5.2	9
32	Valorisation of macroalgae industrial by-product as filler in thermoplastic polymer composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 90, 271-277	8.4	9
31	Cellulose ester-polyolefine binary blend: Morphological, rheological and mechanical properties. <i>European Polymer Journal</i> , 2012 , 48, 981-989	5.2	8
30	Delivery of fullerene-containing complexes via microgel swelling and shear-induced release. <i>International Journal of Pharmaceutics</i> , 2010 , 384, 9-14	6.5	8
29	Absorption/release of polyvalent metal ions by a polyelectrolyte gel. <i>Journal of Controlled Release</i> , 1998 , 54, 305-12	11.7	8
28	Unidirectional All-Cellulose Composites from Flax via Controlled Impregnation with Ionic Liquid. <i>Polymers</i> , 2020 , 12,	4.5	7
27	Aerogels: a fascinating class of materials with a wide potential of application fields. <i>Journal of Sol-Gel Science and Technology</i> , 2017 , 84, 375-376	2.3	7
26	Swelling behaviour of a polyelectrolyte network under load. <i>Polymer</i> , 1997 , 38, 5947-5952	3.9	7
25	Structure and properties of novel cellulose-based fibers spun from aqueous NaOH solvent under various drawing conditions. <i>Cellulose</i> , 2015 , 22, 1333-1345	5.5	6
24	The investigation of rheological and strength properties of NFC hydrogels and aerogels from hardwood pulp by short catalytic bleaching (Hcat). <i>Cellulose</i> , 2018 , 25, 1637-1655	5.5	6
23	Polyelectrolyte hydrogel swelling in a concentrated polymer solution. <i>Macromolecules</i> , 1995 , 28, 1714-1716	3.6	6
22	Microscopic and Macroscopic Properties of Carbohydrate Solutions in the Ionic Liquid 1-Ethyl-3-methyl-imidazolium Acetate. <i>Journal of Physical Chemistry B</i> , 2018 , 122, 8763-8771	3.4	6
21	Gelation of cellulose-NaOH solutions in the presence of cellulose fibers. <i>Carbohydrate Polymers</i> , 2019 , 224, 115152	10.3	5
20	Preparation and Properties of Cellulose Solutions 2012 , 91-152		5

19	Elaboration and Characterizations of Platinum Nanoparticles Supported on Cellulose-Based Carbon Aerogel. <i>ECS Transactions</i> , 2010 , 33, 447-459	1	5
18	Shear-induced gel widening and solvent release in the vorticity direction. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2005 , 262, 132-138	5.1	5
17	Physical principles of using polyelectrolyte hydrogels for purifying and enrichment technologies. <i>Journal of Applied Polymer Science</i> , 1995 , 57, 1653-1658	2.9	5
16	Anomalous behaviour of ultrahigh molecular weight poly(methyl methacrylate) in the converging and shear flows. <i>European Polymer Journal</i> , 2001 , 37, 2231-2237	5.2	4
15	Enzymically attaching oligosaccharide-linked 'cargoes' to cellulose and other commercial polysaccharides via stable covalent bonds. <i>International Journal of Biological Macromolecules</i> , 2020 , 164, 4359-4369	7.9	4
14	Influence of the scale and type of processing tool on plasticization of cellulose acetate. <i>Polymer Engineering and Science</i> , 2017 , 57, 563-569	2.3	3
13	New optical properties of polyelectrolyte hydrogels. <i>Macromolecular Rapid Communications</i> , 1996 , 17, 87-90	4.8	3
12	Exploring digital image correlation technique for the analysis of the tensile properties of all-cellulose composites. <i>Cellulose</i> , 2021 , 28, 4165-4178	5.5	3
11	Tuning bio-aerogel properties for controlling theophylline delivery. Part 1: Pectin aerogels. <i>Materials Science and Engineering C</i> , 2021 , 126, 112148	8.3	3
10	Cellulose Products from Solutions: Film, Fibres and Aerogels 2012 , 153-185		2
9	Small-Angle Scattering of Polarised Light. V: Liquid Crystalline Droplets in an Isotropic Polymer. <i>Molecular Crystals and Liquid Crystals</i> , 1995 , 261, 167-175		2
8	Complex-formation in aqueous solutions of mixtures of polyacrylic acid and polyvinylalcohol and its copolymers. <i>Polymer Science USSR</i> , 1989 , 31, 1859-1866		2
7	Tuning the properties of porous chitosan: Aerogels and cryogels.. <i>International Journal of Biological Macromolecules</i> , 2022 , 202, 215-223	7.9	2
6	Bio-based Aerogels: A New Generation of Thermal Superinsulating Materials 2018 , 371-392		2
5	Effect of Enzymatic Treatment on Solubility of Cellulose in 7.6%NaOH-Water and Ionic Liquid. <i>ACS Symposium Series</i> , 2010 , 213-226	0.4	1
4	Tuning bio-aerogel properties for controlling drug delivery. Part 2: Cellulose-pectin composite aerogels 2022 , 212732		1
3	Innentitelbild: Strong, Thermally Superinsulating BiopolymerSilica Aerogel Hybrids by Cogelation of Silicic Acid with Pectin (Angew. Chem. 48/2015). <i>Angewandte Chemie</i> , 2015 , 127, 14400-14400	3.6	
2	A thermal behavior of low-substituted hydroxyethyl cellulose and cellulose solutions in NaOH-water. <i>Nordic Pulp and Paper Research Journal</i> , 2015 , 30, 20-25	1.1	

- 1 Hydroxyalkylation of xylan using propylene carbonate: comparison of products from homo- and heterogeneous synthesis by HRMAS NMR and rheology. *Cellulose*, **2018**, 25, 217-231 5.5