Tatiana Budtova

List of Publications by Year in Descending Order

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	Tuning the properties of porous chitosan: Aerogels and cryogels.. *International Journal of Biological Macromolecules*, **2022**, 202, 215-223	7.9	2
125	Tuning bio-aerogel properties for controlling drug delivery. Part 2: Cellulose-pectin composite aerogels **2022**, 212732		1
124	Exploring digital image correlation technique for the analysis of the tensile properties of all-cellulose composites. *Cellulose*, **2021**, 28, 4165-4178	5.5	3
123	Pectin hydrogels, aerogels, cryogels and xerogels: Influence of drying on structural and release properties. *European Polymer Journal*, **2021**, 149, 110386	5.2	9
122	Tuning bio-aerogel properties for controlling theophylline delivery. Part 1: Pectin aerogels. *Materials Science and Engineering C*, **2021**, 126, 112148	8.3	3
121	Tailoring the morphology and properties of starch aerogels and cryogels via starch source and process parameter. *Carbohydrate Polymers*, **2021**, 255, 117344	10.3	16
120	Polysaccharide-based aerogels for thermal insulation and superinsulation: An overview. *Carbohydrate Polymers*, **2021**, 266, 118130	10.3	16
119	Unidirectional All-Cellulose Composites from Flax via Controlled Impregnation with Ionic Liquid. *Polymers*, **2020**, 12,	4.5	7
118	Swelling and dissolution kinetics of natural and man-made cellulose fibers in solvent power tuned ionic liquid. *Cellulose*, **2020**, 27, 7399-7415	5.5	10
117	All-cellulose composite aerogels and cryogels. *Composites Part A: Applied Science and Manufacturing*, **2020**, 137, 106027	8.4	9
116	Cellulose Aerogel Microparticles via Emulsion-Coagulation Technique. *Biomacromolecules*, **2020**, 21, 1826-1831	6.9	14
115	Enzymically attaching oligosaccharide-linked 'cargoes' to cellulose and other commercial polysaccharides via stable covalent bonds. *International Journal of Biological Macromolecules*, **2020**, 164, 4359-4369	7.9	4
114	Biorefinery Approach for Aerogels. *Polymers*, **2020**, 12,	4.5	11
113	Exploring Large Ductility in Cellulose Nanopaper Combining High Toughness and Strength. *ACS Nano*, **2020**, 14, 11150-11159	16.7	19
112	Mechanical properties of cellulose aerogels and cryogels. *Soft Matter*, **2019**, 15, 7901-7908	3.6	38
111	An Opinion Paper on Aerogels for Biomedical and Environmental Applications. *Molecules*, **2019**, 24,	4.8	70
110	. *Cellulose*, **2019**, 26, 4881-4893	5.5	16

109	Characterization of polylactic acid green composites and its biodegradation in a bacterial environment. *International Journal of Polymer Analysis and Characterization*, **2019**, 24, 236-244	1.7	11
108	Gelation of cellulose-NaOH solutions in the presence of cellulose fibers. *Carbohydrate Polymers*, **2019**, 224, 115152	10.3	5
107	Cellulose II aerogels: a review. *Cellulose*, **2019**, 26, 81-121	5.5	108
106	All-cellulose composites from alfa and wood fibers. *Industrial Crops and Products*, **2019**, 127, 135-141	5.9	29
105	The investigation of rheological and strength properties of NFC hydrogels and aerogels from hardwood pulp by short catalytic bleaching (Hcat). *Cellulose*, **2018**, 25, 1637-1655	5.5	6
104	Rheology of cellulose-[DBNH][CO2Et] solutions and shaping into aerogel beads. *Green Chemistry*, **2018**, 20, 3993-4002	10	34
103	Thermal conductivity/structure correlations in thermal super-insulating pectin aerogels. *Carbohydrate Polymers*, **2018**, 196, 73-81	10.3	57
102	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	
101	Bio-based Aerogels: A New Generation of Thermal Superinsulating Materials **2018**, 371-392		2
100	Review on the Production of Polysaccharide Aerogel Particles. *Materials*, **2018**, 11,	3.5	108
99	Interactions between callose and cellulose revealed through the analysis of biopolymer mixtures. *Nature Communications*, **2018**, 9, 4538	17.4	29
98	Tuning structure and properties of pectin aerogels. *European Polymer Journal*, **2018**, 108, 250-261	5.2	37
97	Microscopic and Macroscopic Properties of Carbohydrate Solutions in the Ionic Liquid 1-Ethyl-3-methyl-imidazolium Acetate. *Journal of Physical Chemistry B*, **2018**, 122, 8763-8771	3.4	6
96	Lignocellulosic fiber breakage in a molten polymer. Part 2. Quantitative analysis of the breakage mechanisms during compounding. *Composites Part A: Applied Science and Manufacturing*, **2017**, 95, 31-39	8.4	19
95	Starch Aerogels: A Member of the Family of Thermal Superinsulating Materials. *Biomacromolecules*, **2017**, 18, 4232-4239	6.9	66
94	Thermal superinsulating silica aerogels reinforced with short man-made cellulose fibers. *Composites Part A: Applied Science and Manufacturing*, **2017**, 103, 113-121	8.4	36
93	NMR and Rheological Study of Anion Size Influence on the Properties of Two Imidazolium-based Ionic Liquids. *Scientific Reports*, **2017**, 7, 8968	4.9	18
92	Aerogels: a fascinating class of materials with a wide potential of application fields. *Journal of Sol-Gel Science and Technology*, **2017**, 84, 375-376	2.3	7

91	Influence of the scale and type of processing tool on plasticization of cellulose acetate. *Polymer Engineering and Science*, **2017**, 57, 563-569	2.3	3
90	Lignocellulosic fiber breakage in a molten polymer. Part 3. Modeling of the dimensional change of the fibers during compounding by twin screw extrusion. *Composites Part A: Applied Science and Manufacturing*, **2017**, 101, 422-431	8.4	23
89	Ambient-dried thermal superinsulating monolithic silica-based aerogels with short cellulosic fibers. *Journal of Materials Science*, **2017**, 52, 2210-2221	4.3	29
88	Nanostructured interpenetrated organic-inorganic aerogels with thermal superinsulating properties. *Journal of Non-Crystalline Solids*, **2016**, 452, 259-265	3.9	22
87	Lignocellulosic fiber breakage in a molten polymer. Part 1. Qualitative analysis using rheo-optical observations. *Composites Part A: Applied Science and Manufacturing*, **2016**, 91, 229-237	8.4	23
86	Oxidation vs. degradation in polysaccharides: Pullulan □A case study. *European Polymer Journal*, **2016**, 85, 82-91	5.2	18
85	Cellulose in NaOH□water based solvents: a review. *Cellulose*, **2016**, 23, 5-55	5.5	177
84	Rheological properties of molten flax- and Tencel□ -polypropylene composites: Influence of fiber morphology and concentration. *Journal of Rheology*, **2016**, 60, 191-201	4.1	21
83	Physically and chemically cross-linked cellulose cryogels: Structure, properties and application for controlled release. *Carbohydrate Polymers*, **2016**, 151, 392-400	10.3	57
82	Cellulose aero-, cryo- and xerogels: towards understanding of morphology control. *Cellulose*, **2016**, 23, 2585-2595	5.5	89
81	Reliability evaluation of automated analysis, 2D scanner, and micro-tomography methods for measuring fiber dimensions in polymer-lignocellulosic fiber composites. *Composites Part A: Applied Science and Manufacturing*, **2016**, 90, 320-329	8.4	23
80	Valorisation of macroalgae industrial by-product as filler in thermoplastic polymer composites. *Composites Part A: Applied Science and Manufacturing*, **2016**, 90, 271-277	8.4	9
79	Cellulose-silica aerogels. *Carbohydrate Polymers*, **2015**, 122, 293-300	10.3	110
78	Structure and properties of novel cellulose-based fibers spun from aqueous NaOH solvent under various drawing conditions. *Cellulose*, **2015**, 22, 1333-1345	5.5	6
77	Highly porous and light-weight flax/PLA composites. *Industrial Crops and Products*, **2015**, 74, 132-138	5.9	17
76	Xerocellulose: lightweight, porous and hydrophobic cellulose prepared via ambient drying. *Journal of Materials Science*, **2015**, 50, 4526-4535	4.3	25
75	PLA/algae composites: Morphology and mechanical properties. *Composites Part A: Applied Science and Manufacturing*, **2015**, 73, 109-115	8.4	54
74	Strong, Thermally Superinsulating Biopolymer□Silica Aerogel Hybrids by Cogelation of Silicic Acid with Pectin. *Angewandte Chemie*, **2015**, 127, 14490-14494	3.6	20

73	Strong, Thermally Superinsulating Biopolymer-Silica Aerogel Hybrids by Cogelation of Silicic Acid with Pectin. *Angewandte Chemie - International Edition*, **2015**, 54, 14282-6	16.4	102
72	Viscosity-temperature dependence and activation energy of cellulose solutions. *Nordic Pulp and Paper Research Journal*, **2015**, 30, 99-104	1.1	23
71	Influence of substitution on the rheological properties and gelation of hydroxyethyl cellulose solution in NaOH-water solvent. *Carbohydrate Polymers*, **2015**, 124, 85-9	10.3	16
70	Innentitelbild: Strong, Thermally Superinsulating Biopolymer□Silica Aerogel Hybrids by Cogelation of Silicic Acid with Pectin (Angew. Chem. 48/2015). *Angewandte Chemie*, **2015**, 127, 14400-14400	3.6	
69	Macroscopic and microscopic study of 1-ethyl-3-methyl-imidazolium acetate-DMSO mixtures. *Journal of Physical Chemistry B*, **2015**, 119, 1633-40	3.4	50
68	A thermal behavior of low-substituted hydroxyethyl cellulose and cellulose solutions in NaOH-water. *Nordic Pulp and Paper Research Journal*, **2015**, 30, 20-25	1.1	
67	Phase diagram, solubility limit and hydrodynamic properties of cellulose in binary solvents with ionic liquid. *Carbohydrate Polymers*, **2014**, 105, 237-43	10.3	54
66	Aeropectin: fully biomass-based mechanically strong and thermal superinsulating aerogel. *Biomacromolecules*, **2014**, 15, 2188-95	6.9	149
65	Synthesis, characterization and solution behaviour of oxidized pullulan. *Carbohydrate Polymers*, **2014**, 111, 63-71	10.3	43
64	Diffusion of 1-ethyl-3-methyl-imidazolium acetate in glucose, cellobiose, and cellulose solutions. *Biomacromolecules*, **2014**, 15, 609-17	6.9	34
63	Cellulose□silica composite aerogels from □one-pot□synthesis. *Cellulose*, **2014**, 21, 2625-2636	5.5	45
62	Rheological and hydrodynamic properties of cellulose acetate/ionic liquid solutions. *Carbohydrate Polymers*, **2013**, 92, 1966-71	10.3	25
61	Dissolution of unmodified waxy starch in ionic liquid and solution rheological properties. *Carbohydrate Polymers*, **2013**, 93, 199-206	10.3	55
60	Dynamic and capillary shear rheology of natural fiber-reinforced composites. *Polymer Engineering and Science*, **2013**, 53, 2582-2593	2.3	32
59	Morphology and molten-state rheology of polylactide and polyhydroxyalkanoate blends. *European Polymer Journal*, **2012**, 48, 1110-1117	5.2	93
58	Influence of water on cellulose-EMIMAc solution properties: a viscometric study. *Cellulose*, **2012**, 19, 45-54	5.5	56
57	Macroscopic and microscopic study of 1-ethyl-3-methyl-imidazolium acetate-water mixtures. *Journal of Physical Chemistry B*, **2012**, 116, 12810-8	3.4	90
56	Cellulose ester-polyolefine binary blend: Morphological, rheological and mechanical properties. *European Polymer Journal*, **2012**, 48, 981-989	5.2	8

55	Preparation and Properties of Cellulose Solutions **2012**, 91-152		5
54	Cellulose Products from Solutions: Film, Fibres and Aerogels **2012**, 153-185		2
53	Ionic liquid: A powerful solvent for homogeneous starch–cellulose mixing and making films with tuned morphology. *Polymer*, **2012**, 53, 5779-5787	3.9	27
52	A statistical analysis of fibre size and shape distribution after compounding in composites reinforced by natural fibres. *Composites Part A: Applied Science and Manufacturing*, **2011**, 42, 1542-1550	8.4	72
51	Polypropylene/natural fibres composites: Analysis of fibre dimensions after compounding and observations of fibre rupture by rheo-optics. *Composites Part A: Applied Science and Manufacturing*, **2011**, 42, 1727-1737	8.4	67
50	Droplet deformation and break-up under shear: Hydrocolloid solution vs. suspension of starch granules. *Food Hydrocolloids*, **2011**, 25, 495-502	10.6	19
49	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. *Journal of Materials Science*, **2011**, 46, 759-765	4.3	59
48	Influence of ZnO on the properties of dilute and semi-dilute cellulose-NaOH-water solutions. *Cellulose*, **2011**, 18, 911-920	5.5	47
47	Aerocellulose from cellulose–ionic liquid solutions: Preparation, properties and comparison with cellulose–NaOH and cellulose–NMMO routes. *Carbohydrate Polymers*, **2011**, 83, 1766-1774	10.3	211
46	Synthesis and Properties of Platinum Nanocatalyst Supported on Cellulose-Based Carbon Aerogel for Applications in PEMFCs. *Journal of the Electrochemical Society*, **2011**, 158, B779	3.9	28
45	Viscosity of cellulose-imidazolium-based ionic liquid solutions. *Journal of Physical Chemistry B*, **2010**, 114, 7222-8	3.4	139
44	Influence of cellulose on ion diffusivity in 1-ethyl-3-methyl-imidazolium acetate cellulose solutions. *Biomacromolecules*, **2010**, 11, 2927-35	6.9	56
43	Elaboration and Characterizations of Platinum Nanoparticles Supported on Cellulose-Based Carbon Aerogel. *ECS Transactions*, **2010**, 33, 447-459	1	5
42	Effect of Enzymatic Treatment on Solubility of Cellulose in 7.6%NaOH-Water and Ionic Liquid. *ACS Symposium Series*, **2010**, 213-226	0.4	1
41	Individual swollen starch granules under mechanical stress: evidence for deformation and volume loss. *Soft Matter*, **2010**, 6, 363-369	3.6	20
40	Delivery of fullerene-containing complexes via microgel swelling and shear-induced release. *International Journal of Pharmaceutics*, **2010**, 384, 9-14	6.5	8
39	Influence of lignin on cellulose-NaOH-water mixtures properties and on Aerocellulose morphology. *Cellulose*, **2010**, 17, 1137-1146	5.5	37
38	Analysis of the continuous phase of the modified waxy maize starch suspension. *Carbohydrate Polymers*, **2009**, 77, 320-325	10.3	11

37	Influence of processing parameters on regeneration kinetics and morphology of porous cellulose from cellulose□NaOH□water solutions. *Cellulose*, **2009**, 16, 417-426	5.5	51
36	Rheological properties of cellulose/ionic liquid solutions: from dilute to concentrated states. *Biomacromolecules*, **2009**, 10, 1188-94	6.9	212
35	Experimental study of the break-up of starch suspension droplets in step-up shear flow. *Journal of Rheology*, **2009**, 53, 943-955	4.1	11
34	Aerocellulose: new highly porous cellulose prepared from cellulose-NaOH aqueous solutions. *Biomacromolecules*, **2008**, 9, 269-77	6.9	273
33	New nanostructured carbons based on porous cellulose: Elaboration, pyrolysis and use as platinum nanoparticles substrate for oxygen reduction electrocatalysis. *Journal of Power Sources*, **2008**, 185, 717-726	3.9	64
32	The dissolution of microcrystalline cellulose in sodium hydroxide-urea aqueous solutions. *Cellulose*, **2008**, 15, 361-370	5.5	90
31	Mixtures of pregelatinised maize starch and □carrageenan: Compatibility, rheology and gelation. *Carbohydrate Polymers*, **2008**, 72, 579-589	10.3	28
30	Physicochemical properties of etherified maize starches. *Carbohydrate Polymers*, **2008**, 74, 170-184	10.3	29
29	Structure of aqueous solutions of microcrystalline cellulose/sodium hydroxide below 0 degrees C and the limit of cellulose dissolution. *Biomacromolecules*, **2007**, 8, 2282-7	6.9	104
28	Kinetics of cellulose regeneration from cellulose--NaOH--water gels and comparison with cellulose--N-methylmorpholine-N-oxide--water solutions. *Biomacromolecules*, **2007**, 8, 424-32	6.9	69
27	3D numerical simulation of the behaviour of a spherical particle suspended in a Newtonian fluid and submitted to a simple shear. *Computational Materials Science*, **2006**, 37, 517-525	3.2	11
26	Solvent release from highly swollen gels under compression. *Polymer*, **2005**, 46, 121-127	3.9	41
25	Interpolymer complexes between hydrophobically modified poly(methacrylic acid) and poly(N-vinylpyrrolidone). *Polymer*, **2005**, 46, 7047-7054	3.9	16
24	Shear-induced gel widening and solvent release in the vorticity direction. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2005**, 262, 132-138	5.1	5
23	Kinetics of shear-induced gel deswelling/solvent release. *Journal of Controlled Release*, **2005**, 108, 73-83	11.7	9
22	Evidence of shear-induced polymer release from a swollen gel particle. *Polymer International*, **2003**, 52, 553-558	3.3	10
21	Rheological properties and gelation of aqueous cellulose-NaOH solutions. *Biomacromolecules*, **2003**, 4, 259-64	6.9	110
20	Chitosan modified by poly(ethylene oxide): Film and mixture properties. *Journal of Applied Polymer Science*, **2002**, 84, 1114-1122	2.9	23

19	Shear-induced solvent release from gel particles: application to drug-delivery systems. *International Journal of Pharmaceutics*, **2002**, 242, 137-46	6.5	12
18	Hydrogel under Shear:A Rheo-optical Study of the Particle Deformation and Solvent Release. *Macromolecules*, **2002**, 35, 1973-1975	5.5	26
17	Anomalous behaviour of ultrahigh molecular weight poly(methyl methacrylate) in the converging and shear flows. *European Polymer Journal*, **2001**, 37, 2231-2237	5.2	4
16	Structure of cellulose-soda solutions at low temperatures. *Biomacromolecules*, **2001**, 2, 687-93	6.9	55
15	Swelling-induced structure changes of polyelectrolyte gels. *Polymer*, **1999**, 40, 2975-2979	3.9	17
14	Rheological properties of an interpolymer complex formed between poly(acrylic acid) and methyl cellulose. *Journal of Applied Polymer Science*, **1999**, 72, 1523-1528	2.9	24
13	Absorption/release of polyvalent metal ions by a polyelectrolyte gel. *Journal of Controlled Release*, **1998**, 54, 305-12	11.7	8
12	Swelling Kinetics of a Polyelectrolyte Gel in Water and Salt Solutions. Coexistence of Swollen and Collapsed Phases. *Macromolecules*, **1998**, 31, 8845-8850	5.5	32
11	Swelling-Induced Birefringence of a Polyelectrolyte Gel Strongly Interacting with Metal Ions. *Macromolecules*, **1997**, 30, 6556-6558	5.5	18
10	Swelling behaviour of a polyelectrolyte network under load. *Polymer*, **1997**, 38, 5947-5952	3.9	7
9	Swelling Dynamics of Cross-Linked Poly(acrylic acid) and Neutralized Poly(acrylate-co-acrylic acid) in Aqueous Solutions of (Hydroxypropyl)cellulose. *Macromolecules*, **1996**, 29, 3931-3936	5.5	13
8	New optical properties of polyelectrolyte hydrogels. *Macromolecular Rapid Communications*, **1996**, 17, 87-90	4.8	3
7	Polyelectrolyte hydrogel swelling in a concentrated polymer solution. *Macromolecules*, **1995**, 28, 1714-1716	5.5	6
6	Small-Angle Scattering of Polarised Light. V: Liquid Crystalline Droplets in an Isotropic Polymer. *Molecular Crystals and Liquid Crystals*, **1995**, 261, 167-175		2
5	Physical principles of using polyelectrolyte hydrogels for purifying and enrichment technologies. *Journal of Applied Polymer Science*, **1995**, 57, 1653-1658	2.9	5
4	Electrokinetics of the contraction of a polyelectrolyte hydrogel under the influence of constant electric current. *Polymer Gels and Networks*, **1995**, 3, 387-393		15
3	Rheological properties of highly swollen hydrogel suspensions. *Journal of Applied Polymer Science*, **1994**, 52, 721-726	2.9	11
2	Concentration redistribution of low-molecular-weight salts of metals in the presence of a strongly swelling polyelectrolyte hydrogel. *Polymer*, **1993**, 34, 5154-5156	3.9	19

1 Complex-formation in aqueous solutions of mixtures of polyacrylic acid and polyvinylalcohol and its copolymers. *Polymer Science USSR*, **1989**, 31, 1859-1866 2