Lars A. Berglund

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321 papers	25,081 citations	77 h-index	150 g-index
338 ext. papers	28,218 ext. citations	7.2 avg, IF	7.43 L-index

#	Paper	IF	Citations
321	Review: current international research into cellulose nanofibres and nanocomposites. *Journal of Materials Science*, **2010**, 45, 1-33	4.3	1760
320	Cellulose nanopaper structures of high toughness. *Biomacromolecules*, **2008**, 9, 1579-85	6.9	949
319	An environmentally friendly method for enzyme-assisted preparation of microfibrillated cellulose (MFC) nanofibers. *European Polymer Journal*, **2007**, 43, 3434-3441	5.2	902
318	Making flexible magnetic aerogels and stiff magnetic nanopaper using cellulose nanofibrils as templates. *Nature Nanotechnology*, **2010**, 5, 584-8	28.7	684
317	On the use of nanocellulose as reinforcement in polymer matrix composites. *Composites Science and Technology*, **2014**, 105, 15-27	8.6	554
316	Long and entangled native cellulose I nanofibers allow flexible aerogels and hierarchically porous templates for functionalities. *Soft Matter*, **2008**, 4, 2492	3.6	533
315	Synthesis of epoxy□lay nanocomposites: influence of the nature of the clay on structure. *Polymer*, **2001**, 42, 1303-1310	3.9	506
314	Multifunctional bionanocomposite films of poly(lactic acid), cellulose nanocrystals and silver nanoparticles. *Carbohydrate Polymers*, **2012**, 87, 1596-1605	10.3	458
313	An ultrastrong nanofibrillar biomaterial: the strength of single cellulose nanofibrils revealed via sonication-induced fragmentation. *Biomacromolecules*, **2013**, 14, 248-53	6.9	426
312	Functionalized cellulose nanocrystals as biobased nucleation agents in poly(l-lactide) (PLLA) □ Crystallization and mechanical property effects. *Composites Science and Technology*, **2010**, 70, 815-821	8.6	416
311	High-porosity aerogels of high specific surface area prepared from nanofibrillated cellulose (NFC). *Composites Science and Technology*, **2011**, 71, 1593-1599	8.6	398
310	Large-area, lightweight and thick biomimetic composites with superior material properties via fast, economic, and green pathways. *Nano Letters*, **2010**, 10, 2742-8	11.5	385
309	Synthesis of epoxy□lay nanocomposites. Influence of the nature of the curing agent on structure. *Polymer*, **2001**, 42, 4493-4499	3.9	374
308	Strong and tough cellulose nanopaper with high specific surface area and porosity. *Biomacromolecules*, **2011**, 12, 3638-44	6.9	373
307	Mechanical performance tailoring of tough ultra-high porosity foams prepared from cellulose I nanofiber suspensions. *Soft Matter*, **2010**, 6, 1824	3.6	339
306	Clay nanopaper with tough cellulose nanofiber matrix for fire retardancy and gas barrier functions. *Biomacromolecules*, **2011**, 12, 633-41	6.9	334
305	Strong Nanocomposite Reinforcement Effects in Polyurethane Elastomer with Low Volume Fraction of Cellulose Nanocrystals. *Macromolecules*, **2011**, 44, 4422-4427	5.5	327

304	Fast preparation procedure for large, flat cellulose and cellulose/inorganic nanopaper structures. *Biomacromolecules*, **2010**, 11, 2195-8	6.9	310
303	Biomimetic Foams of High Mechanical Performance Based on Nanostructured Cell Walls Reinforced by Native Cellulose Nanofibrils. *Advanced Materials*, **2008**, 20, 1263-1269	24	277
302	Highly conducting, strong nanocomposites based on nanocellulose-assisted aqueous dispersions of single-wall carbon nanotubes. *ACS Nano*, **2014**, 8, 2467-76	16.7	262
301	Cellulose nanofiber orientation in nanopaper and nanocomposites by cold drawing. *ACS Applied Materials & Interfaces*, **2012**, 4, 1043-9	9.5	259
300	Nanocomposites based on montmorillonite and unsaturated polyester. *Polymer Engineering and Science*, **1998**, 38, 1351-1358	2.3	259
299	Biomimetic polysaccharide nanocomposites of high cellulose content and high toughness. *Biomacromolecules*, **2007**, 8, 2556-63	6.9	248
298	Hydrophobic cellulose nanocrystals modified with quaternary ammonium salts. *Journal of Materials Chemistry*, **2012**, 22, 19798		244
297	Structure and properties of cellulose nanocomposite films containing melamine formaldehyde. *Journal of Applied Polymer Science*, **2007**, 106, 2817-2824	2.9	244
296	Optically Transparent Wood from a Nanoporous Cellulosic Template: Combining Functional and Structural Performance. *Biomacromolecules*, **2016**, 17, 1358-64	6.9	238
295	Surface quaternized cellulose nanofibrils with high water absorbency and adsorption capacity for anionic dyes. *Soft Matter*, **2013**, 9, 2047	3.6	234
294	A high strength nanocomposite based on microcrystalline cellulose and polyurethane. *Biomacromolecules*, **2007**, 8, 3687-92	6.9	231
293	Structure–property–function relationships of natural and engineered wood. *Nature Reviews Materials*, **2020**, 5, 642-666	73.3	220
292	Bioinspired Wood Nanotechnology for Functional Materials. *Advanced Materials*, **2018**, 30, e1704285	24	199
291	The Effects of Crystallinity on the Mechanical Properties of PEEK Polymer and Graphite Fiber Reinforced PEEK. *Journal of Composite Materials*, **1987**, 21, 1056-1081	2.7	192
290	Supramolecular control of stiffness and strength in lightweight high-performance nacre-mimetic paper with fire-shielding properties. *Angewandte Chemie - International Edition*, **2010**, 49, 6448-53	16.4	191
289	Transparent chitosan films reinforced with a high content of nanofibrillated cellulose. *Carbohydrate Polymers*, **2010**, 81, 394-401	10.3	185
288	Preparation of double Pickering emulsions stabilized by chemically tailored nanocelluloses. *Langmuir*, **2014**, 30, 9327-35	4	175
287	Morphology and mechanical properties of unidirectional sisal–epoxy composites. *Journal of Applied Polymer Science*, **2002**, 84, 2358-2365	2.9	175

286	Microstructure and nonisothermal cold crystallization of PLA composites based on silver nanoparticles and nanocrystalline cellulose. *Polymer Degradation and Stability*, **2012**, 97, 2027-2036	4.7	171
285	Reduced water vapour sorption in cellulose nanocomposites with starch matrix. *Composites Science and Technology*, **2009**, 69, 500-506	8.6	170
284	Surface grafting of microfibrillated cellulose with poly(ε-caprolactone) – Synthesis and characterization. *European Polymer Journal*, **2008**, 44, 2991-2997	5.2	159
283	Cellulose Biocomposites–From Bulk Moldings to Nanostructured Systems. *MRS Bulletin*, **2010**, 35, 201-207	3.2	157
282	Wood Nanotechnology for Strong, Mesoporous, and Hydrophobic Biocomposites for Selective Separation of Oil/Water Mixtures. *ACS Nano*, **2018**, 12, 2222-2230	16.7	156
281	Thermal response in crystalline Ibeta cellulose: a molecular dynamics study. *Journal of Physical Chemistry B*, **2007**, 111, 9138-45	3.4	149
280	Prediction of matrix-initiated transverse failure in polymer composites. *Composites Science and Technology*, **1996**, 56, 1089-1097	8.6	144
279	Polymorphism in polyamide 66/clay nanocomposites. *Polymer*, **2002**, 43, 4967-4972	3.9	142
278	Nanostructured biocomposites of high toughness: wood cellulose nanofiber network in ductile hydroxyethylcellulose matrix. *Soft Matter*, **2011**, 7, 7342	3.6	140
277	Cellulose nanofiber network for moisture stable, strong and ductile biocomposites and increased epoxy curing rate. *Composites Part A: Applied Science and Manufacturing*, **2014**, 63, 35-44	8.4	134
276	Wood cellulose biocomposites with fibrous structures at micro- and nanoscale. *Composites Science and Technology*, **2011**, 71, 382-387	8.6	131
275	Tunable Thermosetting Epoxies Based on Fractionated and Well-Characterized Lignins. *Journal of the American Chemical Society*, **2018**, 140, 4054-4061	16.4	130
274	A criterion for crack initiation in glassy polymers subjected to a composite-like stress state. *Composites Science and Technology*, **1996**, 56, 1291-1301	8.6	125
273	Electroactive nanofibrillated cellulose aerogel composites with tunable structural and electrochemical properties. *Journal of Materials Chemistry*, **2012**, 22, 19014		123
272	High performance epoxy-layered silicate nanocomposites. *Polymer Engineering and Science*, **2002**, 42, 1815-1826	2.3	120
271	FT-IR spectroscopic study of hydrogen bonding in PA6/clay nanocomposites. *Polymer*, **2002**, 43, 2445-2449	3.9	120
270	Effect of voids on failure mechanisms in RTM laminates. *Composites Science and Technology*, **1995**, 53, 241-249	8.6	114
269	Lignin-Retaining Transparent Wood. *ChemSusChem*, **2017**, 10, 3445-3451	8.3	113

268	Nanostructured Wood Hybrids for Fire-Retardancy Prepared by Clay Impregnation into the Cell Wall. *ACS Applied Materials & Interfaces*, **2017**, 9, 36154-36163	9.5	108
267	Superior mechanical performance of highly porous, anisotropic nanocellulose-montmorillonite aerogels prepared by freeze casting. *Journal of the Mechanical Behavior of Biomedical Materials*, **2014**, 37, 88-99	4.1	108
266	Nanocomposites of bacterial cellulose nanofibers and chitin nanocrystals: fabrication, characterization and bactericidal activity. *Green Chemistry*, **2013**, 15, 3404	10	104
265	Cellulose nanocrystals/polyurethane nanocomposites. Study from the viewpoint of microphase separated structure. *Carbohydrate Polymers*, **2013**, 92, 751-7	10.3	103
264	Effect of steam treatment on the properties of wood cell walls. *Biomacromolecules*, **2011**, 12, 194-202	6.9	102
263	Effect of light power density variations on bulk curing properties of dental composites. *Journal of Dentistry*, **2003**, 31, 189-96	4.8	97
262	Synthesis of amine-cured, epoxy-layered silicate nanocomposites: The influence of the silicate surface modification on the properties. *Journal of Applied Polymer Science*, **2002**, 86, 2643-2652	2.9	93
261	Effects of a composite-like stress state on the fracture of epoxies. *Composites Science and Technology*, **1995**, 53, 27-37	8.6	93
260	Clay nanopaper composites of nacre-like structure based on montmorrilonite and cellulose nanofibers-Improvements due to chitosan addition. *Carbohydrate Polymers*, **2012**, 87, 53-60	10.3	92
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257	Cellulose nanofibers decorated with magnetic nanoparticles synthesis, structure and use in magnetized high toughness membranes for a prototype loudspeaker. *Journal of Materials Chemistry C*, **2013**, 1, 7963	7.1	90
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255	Towards tailored hierarchical structures in cellulose nanocomposite biofoams prepared by freezing/freeze-drying. *Journal of Materials Chemistry*, **2010**, 20, 6646		88
254	Fatigue mechanisms in unidirectional glass-fibre-reinforced polypropylene. *Composites Science and Technology*, **1999**, 59, 759-768	8.6	84
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251	High-strength nanocellulose-talc hybrid barrier films. *ACS Applied Materials & Interfaces*, **2013**, 5, 13412-8	9.5	83

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249	Stretchable and strong cellulose nanopaper structures based on polymer-coated nanofiber networks: an alternative to nonwoven porous membranes from electrospinning. *Biomacromolecules* , **2012**, 13, 3661-7	6.9	81
248	Isocyanate-rich cellulose nanocrystals and their selective insertion in elastomeric polyurethane. *Composites Science and Technology*, **2011**, 71, 1953-1960	8.6	79
247	An Unusual Crystallization Behavior in Polyamide 6/Montmorillonite Nanocomposites. *Macromolecular Rapid Communications*, **2001**, 22, 1438-1440	4.8	79
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242	Towards centimeter thick transparent wood through interface manipulation. *Journal of Materials Chemistry A*, **2018**, 6, 1094-1101	13	74
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238	Cellulose nanocomposite biopolymer foam--hierarchical structure effects on energy absorption. *ACS Applied Materials & Interfaces*, **2011**, 3, 1411-7	9.5	71
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232	Transparent Wood for Thermal Energy Storage and Reversible Optical Transmittance. *ACS Applied Materials & Interfaces*, **2019**, 11, 20465-20472	9.5	69
231	Fire-retardant and ductile clay nanopaper biocomposites based on montmorrilonite in matrix of cellulose nanofibers and carboxymethyl cellulose. *European Polymer Journal*, **2013**, 49, 940-949	5.2	69
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226	Nematic structuring of transparent and multifunctional nanocellulose papers. *Nanoscale Horizons*, **2018**, 3, 28-34	10.8	65
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213	Bioinspired and highly oriented clay nanocomposites with a xyloglucan biopolymer matrix: extending the range of mechanical and barrier properties. *Biomacromolecules*, **2013**, 14, 84-91	6.9	56
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207	BIOREFINERY: Nanofibrillated cellulose for enhancement of strength in high-density paper structures. *Nordic Pulp and Paper Research Journal*, **2013**, 28, 182-189	1.1	52
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197	In situ polymerization and characterization of elastomeric polyurethane-cellulose nanocrystal nanocomposites. Cell response evaluation. *Cellulose*, **2013**, 20, 1819-1828	5.5	46

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193	Failure mechanisms in polypropylene with glass beads. *Polymer Composites*, **1997**, 18, 1-8	3	44
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189	Tamarind seed xyloglucan a thermostable high-performance biopolymer from non-food feedstock. *Journal of Materials Chemistry*, **2010**, 20, 4321		42
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187	Thickness Dependence of Optical Transmittance of Transparent Wood: Chemical Modification Effects. *ACS Applied Materials & Interfaces*, **2019**, 11, 35451-35457	9.5	40
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