Emily D Cranston

List of Publications by Citations

116 papers	7,428 citations	40 h-index	85 g-index
125 ext. papers	8,869 ext. citations	7.4 avg, IF	6.87 L-index

#	Paper	IF	Citations
116	Review of Hydrogels and Aerogels Containing Nanocellulose. *Chemistry of Materials*, **2017**, 29, 4609-4631	9.6	798
115	Current characterization methods for cellulose nanomaterials. *Chemical Society Reviews*, **2018**, 47, 2609-2679	36.5	436
114	Cationic surface functionalization of cellulose nanocrystals. *Soft Matter*, **2008**, 4, 2238-2244	3.6	424
113	Nanocellulose as a natural source for groundbreaking applications in materials science: Today's state. *Materials Today*, **2018**, 21, 720-748	21.8	419
112	Chemically Cross-Linked Cellulose Nanocrystal Aerogels with Shape Recovery and Superabsorbent Properties. *Chemistry of Materials*, **2014**, 26, 6016-6025	9.6	344
111	Morphological and optical characterization of polyelectrolyte multilayers incorporating nanocrystalline cellulose. *Biomacromolecules*, **2006**, 7, 2522-30	6.9	313
110	Benchmarking Cellulose Nanocrystals: From the Laboratory to Industrial Production. *Langmuir*, **2017**, 33, 1583-1598	4	276
109	Flexible and Porous Nanocellulose Aerogels with High Loadings of Metal-Organic-Framework Particles for Separations Applications. *Advanced Materials*, **2016**, 28, 7652-7	24	255
108	Cellulose Nanocrystal Aerogels as Universal 3D Lightweight Substrates for Supercapacitor Materials. *Advanced Materials*, **2015**, 27, 6104-9	24	253
107	Surfactant-enhanced cellulose nanocrystal Pickering emulsions. *Journal of Colloid and Interface Science*, **2015**, 439, 139-48	9.3	239
106	Injectable polysaccharide hydrogels reinforced with cellulose nanocrystals: morphology, rheology, degradation, and cytotoxicity. *Biomacromolecules*, **2013**, 14, 4447-55	6.9	227
105	Composite Hydrogels with Tunable Anisotropic Morphologies and Mechanical Properties. *Chemistry of Materials*, **2016**, 28, 3406-3415	9.6	156
104	Polymer-grafted cellulose nanocrystals as pH-responsive reversible flocculants. *Biomacromolecules*, **2013**, 14, 3130-9	6.9	155
103	Enhanced Mechanical Properties in Cellulose Nanocrystal-Poly(oligoethylene glycol methacrylate) Injectable Nanocomposite Hydrogels through Control of Physical and Chemical Cross-Linking. *Biomacromolecules*, **2016**, 17, 649-60	6.9	137
102	One-Pot Water-Based Hydrophobic Surface Modification of Cellulose Nanocrystals Using Plant Polyphenols. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 5018-5026	8.3	128
101	Birefringence in spin-coated films containing cellulose nanocrystals. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2008**, 325, 44-51	5.1	120
100	Synergistic Stabilization of Emulsions and Emulsion Gels with Water-Soluble Polymers and Cellulose Nanocrystals. *ACS Sustainable Chemistry and Engineering*, **2015**, 3, 1023-1031	8.3	117

99	Dried and Redispersible Cellulose Nanocrystal Pickering Emulsions. *ACS Macro Letters*, **2016**, 5, 185-189	6.6	117
98	Efficient Lightweight Supercapacitor with Compression Stability. *Advanced Functional Materials*, **2016**, 26, 6437-6445	15.6	101
97	Fluorescent labeling and characterization of cellulose nanocrystals with varying charge contents. *Biomacromolecules*, **2013**, 14, 3278-84	6.9	95
96	Production routes to tailor the performance of cellulose nanocrystals. *Nature Reviews Materials*, **2021**, 6, 124-144	73.3	90
95	Cooperative Ordering and Kinetics of Cellulose Nanocrystal Alignment in a Magnetic Field. *Langmuir*, **2016**, 32, 7564-71	4	89
94	Tuning cellulose nanocrystal gelation with polysaccharides and surfactants. *Langmuir*, **2014**, 30, 2684-92	4	87
93	Injectable Anisotropic Nanocomposite Hydrogels Direct in Situ Growth and Alignment of Myotubes. *Nano Letters*, **2017**, 17, 6487-6495	11.5	76
92	Cross-linked cellulose nanocrystal aerogels as viable bone tissue scaffolds. *Acta Biomaterialia*, **2019**, 87, 152-165	10.8	76
91	Porous nanocellulose gels and foams: Breakthrough status in the development of scaffolds for tissue engineering. *Materials Today*, **2020**, 37, 126-141	21.8	76
90	Tailoring Cellulose Nanocrystal and Surfactant Behavior in Miniemulsion Polymerization. *Macromolecules*, **2017**, 50, 2645-2655	5.5	69
89	Determination of Young's modulus for nanofibrillated cellulose multilayer thin films using buckling mechanics. *Biomacromolecules*, **2011**, 12, 961-9	6.9	69
88	Surface modification of cellulose nanocrystals with cetyltrimethylammonium bromide. *Nordic Pulp and Paper Research Journal*, **2014**, 29, 46-57	1.1	67
87	Pressure sensitive adhesive property modification using cellulose nanocrystals. *International Journal of Adhesion and Adhesives*, **2018**, 81, 36-42	3.4	64
86	Insight into thermal stability of cellulose nanocrystals from new hydrolysis methods with acid blends. *Cellulose*, **2019**, 26, 507-528	5.5	60
85	Cocrystallization model for synthetic biodegradable poly(butylene adipate-co-butylene terephthalate). *Biomacromolecules*, **2003**, 4, 995-9	6.9	59
84	Cellulose nanocrystal interactions probed by thin film swelling to predict dispersibility. *Nanoscale*, **2016**, 8, 12247-57	7.7	53
83	Direct surface force measurements of polyelectrolyte multilayer films containing nanocrystalline cellulose. *Langmuir*, **2010**, 26, 17190-7	4	53
82	Recent advances and an industrial perspective of cellulose nanocrystal functionalization through polymer grafting. *Current Opinion in Solid State and Materials Science*, **2019**, 23, 74-91	12	50

81	Stable Aqueous Foams from Cellulose Nanocrystals and Methyl Cellulose. *Biomacromolecules*, **2016**, 17, 4095-4099	6.9	49
80	Optimization of cellulose nanocrystal length and surface charge density through phosphoric acid hydrolysis. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2018**, 376,	3	47
79	Adsorption of Xyloglucan onto Cellulose Surfaces of Different Morphologies: An Entropy-Driven Process. *Biomacromolecules*, **2016**, 17, 2801-11	6.9	43
78	Poly(methyl methacrylate)-grafted cellulose nanocrystals: One-step synthesis, nanocomposite preparation, and characterization. *Canadian Journal of Chemical Engineering*, **2016**, 94, 811-822	2.3	42
77	Nanocellulose in Emulsions and Heterogeneous Water-Based Polymer Systems: A Review. *Advanced Materials*, **2021**, 33, e2002404	24	42
76	The role of hydrogen bonding in non-ionic polymer adsorption to cellulose nanocrystals and silica colloids. *Current Opinion in Colloid and Interface Science*, **2017**, 29, 76-82	7.6	40
75	Cellulose Nanocrystals and Methyl Cellulose as Costabilizers for Nanocomposite Latexes with Double Morphology. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 10509-10517	8.3	39
74	Optimization of Spray Drying Conditions for Yield, Particle Size and Biological Activity of Thermally Stable Viral Vectors. *Pharmaceutical Research*, **2016**, 33, 2763-76	4.5	37
73	Tissue Response and Biodistribution of Injectable Cellulose Nanocrystal Composite Hydrogels. *ACS Biomaterials Science and Engineering*, **2019**, 5, 2235-2246	5.5	34
72	Hybrid fluorescent nanoparticles from quantum dots coupled to cellulose nanocrystals. *Cellulose*, **2017**, 24, 1287-1293	5.5	32
71	Effect of Counterion Choice on the Stability of Cellulose Nanocrystal Pickering Emulsions. *Industrial & Engineering Chemistry Research*, **2018**, 57, 7169-7180	3.9	32
70	Synthesis of Poly(n-butyl acrylate/methyl methacrylate)/CNC Latex Nanocomposites via In Situ Emulsion Polymerization. *Macromolecular Reaction Engineering*, **2017**, 11, 1700013	1.5	30
69	Evaluation of excipients for enhanced thermal stabilization of a human type 5 adenoviral vector through spray drying. *International Journal of Pharmaceutics*, **2016**, 506, 289-301	6.5	30
68	Grafting-from cellulose nanocrystals via photoinduced Cu-mediated reversible-deactivation radical polymerization. *Carbohydrate Polymers*, **2017**, 157, 1033-1040	10.3	30
67	Mechanically Reinforced Injectable Hydrogels. *ACS Applied Polymer Materials*, **2020**, 2, 1016-1030	4.3	29
66	Liquid-State NMR Analysis of Nanocelluloses. *Biomacromolecules*, **2018**, 19, 2708-2720	6.9	28
65	In Situ Semibatch Emulsion Polymerization of 2-Ethyl Hexyl Acrylate/n-Butyl Acrylate/Methyl Methacrylate/Cellulose Nanocrystal Nanocomposites for Adhesive Applications. *Macromolecular Reaction Engineering*, **2018**, 12, 1700068	1.5	24
64	Benchmarking Cellulose Nanocrystals Part II: New Industrially Produced Materials. *Langmuir*, **2021**, 37, 8393-8409	4	24

63	Bionanocomposite Films from Resilin-CBD Bound to Cellulose Nanocrystals. *Industrial Biotechnology*, **2015**, 11, 44-58	1.3	23
62	Morphology of cross-linked cellulose nanocrystal aerogels: cryo-templating versus pressurized gas expansion processing. *Journal of Materials Science*, **2018**, 53, 9842-9860	4.3	23
61	Effect of Ionic Strength and Surface Charge Density on the Kinetics of Cellulose Nanocrystal Thin Film Swelling. *Langmuir*, **2017**, 33, 7403-7411	4	23
60	Incorporating Cellulose Nanocrystals into the Core of Polymer Latex Particles via Polymer Grafting. *ACS Macro Letters*, **2018**, 7, 990-996	6.6	22
59	Cellulose Nanocrystal Aerogels as Electrolyte Scaffolds for Glass and Plastic Dye-Sensitized Solar Cells. *ACS Applied Energy Materials*, **2019**, 2, 5635-5642	6.1	22
58	Spray dried human and chimpanzee adenoviral-vectored vaccines are thermally stable and immunogenic in vivo. *Vaccine*, **2017**, 35, 2916-2924	4.1	20
57	Bottom-up assembly of nanocellulose structures. *Carbohydrate Polymers*, **2020**, 247, 116664	10.3	20
56	2.5D Hierarchical Structuring of Nanocomposite Hydrogel Films Containing Cellulose Nanocrystals. *ACS Applied Materials & Interfaces*, **2019**, 11, 6325-6335	9.5	19
55	Determination of sulfur and sulfate half-ester content in cellulose nanocrystals: an interlaboratory comparison. *Metrologia*, **2018**, 55, 872-882	2.1	19
54	Naturally Hydrophobic Foams from Lignocellulosic Fibers Prepared by Oven-Drying. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 8267-8278	8.3	18
53	Polymer Nanocomposites for Emulsion-Based Coatings and Adhesives. *Macromolecular Reaction Engineering*, **2019**, 13, 1800050	1.5	18
52	Synthesis of poly(isobutyl acrylate/n-butyl acrylate/methyl methacrylate)/CNC nanocomposites for adhesive applications via in situ semi-batch emulsion polymerization. *Polymer Composites*, **2019**, 40, 1365-1377	3	18
51	Patterned Cellulose Nanocrystal Aerogel Films with Tunable Dimensions and Morphologies as Ultra-Porous Scaffolds for Cell Culture. *ACS Applied Nano Materials*, **2019**, 2, 4169-4179	5.6	17
50	Relating Nanoparticle Shape and Adhesiveness to Performance as Flotation Collectors. *Industrial & Engineering Chemistry Research*, **2016**, 55, 9633-9638	3.9	17
49	Comparison of polyethylene glycol adsorption to nanocellulose versus fumed silica in water. *Cellulose*, **2017**, 24, 4743-4757	5.5	17
48	Patience is a virtue: self-assembly and physico-chemical properties of cellulose nanocrystal allomorphs. *Nanoscale*, **2020**, 12, 17480-17493	7.7	17
47	Tailoring Rheological Properties of Thermoresponsive Hydrogels through Block Copolymer Adsorption to Cellulose Nanocrystals. *Biomacromolecules*, **2019**, 20, 2545-2556	6.9	16
46	Fundamentals of cellulose lightweight materials: bio-based assemblies with tailored properties. *Green Chemistry*, **2021**, 23, 3542-3568	10	16

45	Beyond buckling: humidity-independent measurement of the mechanical properties of green nanobiocomposite films. *Nanoscale*, **2017**, 9, 7781-7790	7.7	15
44	Excipient selection for thermally stable enveloped and non-enveloped viral vaccine platforms in dry powders. *International Journal of Pharmaceutics*, **2019**, 561, 66-73	6.5	15
43	Green Templating of Ultraporous Cross-Linked Cellulose Nanocrystal Microparticles. *Chemistry of Materials*, **2018**, 30, 8040-8051	9.6	15
42	Stabilization of HSV-2 viral vaccine candidate by spray drying. *International Journal of Pharmaceutics* , **2019**, 569, 118615	6.5	14
41	Tunable hydrogel thin films from reactive synthetic polymers as potential two-dimensional cell scaffolds. *Langmuir*, **2015**, 31, 5623-32	4	14
40	Chiral Nematic Self-Assembly of Cellulose Nanocrystals in Suspensions and Solid Films. *Materials and Energy*, **2014**, 37-56		14
39	Particle size distributions for cellulose nanocrystals measured by atomic force microscopy: an interlaboratory comparison. *Cellulose*, **2021**, 28, 1387-1403	5.5	14
38	Comparing Soft Semicrystalline Polymer Nanocomposites Reinforced with Cellulose Nanocrystals and Fumed Silica. *Industrial & Engineering Chemistry Research*, **2018**, 57, 220-230	3.9	14
37	Dual physically and chemically crosslinked regenerated cellulose - Gelatin composite hydrogels towards art restoration. *Carbohydrate Polymers*, **2020**, 234, 115885	10.3	11
36	DNA stickers promote polymer adsorption onto cellulose. *Biomacromolecules*, **2012**, 13, 3173-80	6.9	11
35	Effect of Tannic Acid and Cellulose Nanocrystals on Antioxidant and Antimicrobial Properties of Gelatin Films. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 8539-8549	8.3	11
34	Cellulose Nanocrystal (CNC)-Latex Nanocomposites: Effect of CNC Hydrophilicity and Charge on Rheological, Mechanical, and Adhesive Properties. *Macromolecular Rapid Communications*, **2021**, 42, e2000448	4.8	11
33	Acoustic levitation as a screening method for excipient selection in the development of dry powder vaccines. *International Journal of Pharmaceutics*, **2019**, 563, 71-78	6.5	10
32	Structural Variations in Hybrid All-Nanoparticle Gibbsite Nanoplatelet/Cellulose Nanocrystal Multilayered Films. *Langmuir*, **2017**, 33, 7896-7907	4	10
31	Effect of Shear Stresses on Adenovirus Activity and Aggregation during Atomization To Produce Thermally Stable Vaccines by Spray Drying. *ACS Biomaterials Science and Engineering*, **2020**, 6, 4304-4313	5.5	9
30	A sequential design approach for in situ incorporation of cellulose nanocrystals in emulsion-based pressure sensitive adhesives. *Cellulose*, **2020**, 27, 10837-10853	5.5	9
29	Mechanical testing of thin film nanocellulose composites using buckling mechanics. *Tappi Journal*, **2013**, 12, 9-17	0.5	9
28	Special issue on nanocellulose- Editorial. *Nordic Pulp and Paper Research Journal*, **2014**, 29, 4-5	1.1	8

27	Polyelectrolyte Multilayer Films Containing Cellulose: A Review. *ACS Symposium Series*, **2010**, 95-114	0.4	7
26	Challenges in Synthesis and Analysis of Asymmetrically Grafted Cellulose Nanocrystals via Atom Transfer Radical Polymerization. *Biomacromolecules*, **2021**, 22, 2702-2717	6.9	6
25	Film thickness limits of a buckling-based method to determine mechanical properties of polymer coatings. *Journal of Colloid and Interface Science*, **2021**, 582, 227-235	9.3	6
24	Model Cellulose I Surfaces: A Review. *ACS Symposium Series*, **2010**, 75-93	0.4	5
23	Spray dried VSV-vectored vaccine is thermally stable and immunologically active in vivo. *Scientific Reports*, **2020**, 10, 13349	4.9	5
22	Xyloglucan Structure Impacts the Mechanical Properties of Xyloglucan-Cellulose Nanocrystal Layered Films-A Buckling-Based Study. *Biomacromolecules*, **2020**, 21, 3898-3908	6.9	5
21	Bioinspired Thermoresponsive Xyloglucan-Cellulose Nanocrystal Hydrogels. *Biomacromolecules*, **2021**, 22, 743-753	6.9	5
20	How latex film formation and adhesion at the nanoscale correlate to performance of pressure sensitive adhesives with cellulose nanocrystals. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200330	3	5
19	The microscale flocculation test (MFT)A high-throughput technique for optimizing separation performance. *Chemical Engineering Research and Design*, **2016**, 105, 85-93	5.5	4
18	Pushing the Limits with Cellulose Nanocrystal Loadings in Latex-Based Pressure-Sensitive Adhesive Nanocomposites. *Macromolecular Reaction Engineering*, **2020**, 14, 2000027	1.5	4
17	Cellulose Nanocrystals Influence Polyamide 6 Crystal Structure, Spherulite Uniformity, and Mechanical Performance of Nanocomposite Films. *ACS Applied Polymer Materials*, **2021**, 3, 4673-4684	4.3	4
16	Consecutive Spray Drying to Produce Coated Dry Powder Vaccines Suitable for Oral Administration. *ACS Biomaterials Science and Engineering*, **2018**, 4, 1669-1678	5.5	3
15	Directed Assembly of Oriented Cellulose Nanocrystal Films. *Materials and Energy*, **2014**, 79-103		3
14	Thick Polyvinyl Alcohol Films Reinforced with Cellulose Nanocrystals for Coating Applications. *ACS Applied Nano Materials*, **2021**, 4, 8015-8025	5.6	3
13	Tuning the Physicochemical Properties of Cellulose Nanocrystals through an In Situ Oligosaccharide Surface Modification Method. *Biomacromolecules*, **2021**, 22, 3284-3296	6.9	3
12	Multi-scale structuring of cell-instructive cellulose nanocrystal composite hydrogel sheets via sequential electrospinning and thermal wrinkling. *Acta Biomaterialia*, **2021**, 128, 250-261	10.8	3
11	Hydrothermal treatments of aqueous cellulose nanocrystal suspensions: effects on structure and surface charge content. *Cellulose*, **2021**, 28, 10239	5.5	3
10	Ultrathin-Walled 3D Inorganic Nanostructured Networks Templated from Cross-Linked Cellulose Nanocrystal Aerogels. *Advanced Materials Interfaces*, **2021**, 8, 2001181	4.6	2

9	Liquid Crystalline Properties of Symmetric and Asymmetric End-Grafted Cellulose Nanocrystals. *Biomacromolecules*, **2021**, 22, 3552-3564	6.9	2
8	Direct Comparison of Three Buckling-Based Methods to Measure the Elastic Modulus of Nanobiocomposite Thin Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 29187-29198	9.5	1
7	The physicochemical effect of sugar alcohol plasticisers on oxidised nanocellulose gels and extruded filaments. *Cellulose*, **2021**, 28, 7829-7843	5.5	1
6	Effect of Reaction Media on Grafting Hydrophobic Polymers from Cellulose Nanocrystals Surface-Initiated Atom-Transfer Radical Polymerization. *Biomacromolecules*, **2021**, 22, 3601-3612	6.9	1
5	Validation of a diffusion-based single droplet drying model for encapsulation of a viral-vectored vaccine using an acoustic levitator. *International Journal of Pharmaceutics*, **2021**, 605, 120806	6.5	1
4	Incorporating Hydrophobic Cellulose Nanocrystals inside Latex Particles via Mini-Emulsion Polymerization. *Macromolecular Reaction Engineering*, **2021**, 15, 2100023	1.5	1
3	Improving Latex-Based Pressure-Sensitive Adhesive Properties Using Carboxylated Cellulose Nanocrystals. *Macromolecular Reaction Engineering*,2100051	1.5	0
2	Cryoprotective agents influence viral dosage and thermal stability of inhalable dry powder vaccines.. *International Journal of Pharmaceutics*, **2022**, 617, 121602	6.5	0
1	Incorporation of Polymer-Grafted Cellulose Nanocrystals into Latex-Based Pressure-Sensitive Adhesives. *ACS Materials Au*, **2022**, 2, 176-189		0