Emily D Cranston

List of Publications by Year
in descending order

117 papers	10,343 citations	46918 47 h-index	33814 99 g-index
125 all docs	125 docs citations	125 times ranked	9410 citing authors

#	Article	IF	Citations
1	Review of Hydrogels and Aerogels Containing Nanocellulose. Chemistry of Materials, 2017, 29, 4609-4631.	3.2	1,056
2	Current characterization methods for cellulose nanomaterials. Chemical Society Reviews, 2018, 47, 2609-2679.	18.7	690
3	Nanocellulose as a natural source for groundbreaking applications in materials science: Todayâ€™s state. Materials Today, 2018, 21, 720-748.	8.3	625
4	Cationic surface functionalization of cellulose nanocrystals. Soft Matter, 2008, 4, 2238-2244.	1.2	494
5	Chemically Cross-Linked Cellulose Nanocrystal Aerogels with Shape Recovery and Superabsorbent Properties. Chemistry of Materials, 2014, 26, 6016-6025.	3.2	418
6	Benchmarking Cellulose Nanocrystals: From the Laboratory to Industrial Production. Langmuir, 2017, 33, 1583-1598.	1.6	382
7	Flexible and Porous Nanocellulose Aerogels with High Loadings of Metalâ€“Organicâ€Framework Particles for Separations Applications. Advanced Materials, 2016, 28, 7652-7657.	11.1	369
8	Morphological and Optical Characterization of Polyelectrolyte Multilayers Incorporating Nanocrystalline Cellulose. Biomacromolecules, 2006, 7, 2522-2530.	2.6	339
9	Surfactant-enhanced cellulose nanocrystal Pickering emulsions. Journal of Colloid and Interface Science, 2015, 439, 139-148.	5.0	306
10	Cellulose Nanocrystal Aerogels as Universal 3D Lightweight Substrates for Supercapacitor Materials. Advanced Materials, 2015, 27, 6104-6109.	11.1	297
11	Injectable Polysaccharide Hydrogels Reinforced with Cellulose Nanocrystals: Morphology, Rheology, Degradation, and Cytotoxicity. Biomacromolecules, 2013, 14, 4447-4455.	2.6	263
12	Production routes to tailor the performance of cellulose nanocrystals. Nature Reviews Materials, 2021, 6, 124-144.	23.3	231
13	Composite Hydrogels with Tunable Anisotropic Morphologies and Mechanical Properties. Chemistry of Materials, 2016, 28, 3406-3415.	3.2	206
14	Polymer-Grafted Cellulose Nanocrystals as pH-Responsive Reversible Flocculants. Biomacromolecules, 2013, 14, 3130-3139.	2.6	182
15	Enhanced Mechanical Properties in Cellulose Nanocrystalâ€“Poly(oligoethylene glycol methacrylate) Injectable Nanocomposite Hydrogels through Control of Physical and Chemical Cross-Linking. Biomacromolecules, 2016, 17, 649-660.	2.6	175
16	One-Pot Water-Based Hydrophobic Surface Modification of Cellulose Nanocrystals Using Plant Polyphenols. ACS Sustainable Chemistry and Engineering, 2017, 5, 5018-5026.	3.2	171
17	Synergistic Stabilization of Emulsions and Emulsion Gels with Water-Soluble Polymers and Cellulose Nanocrystals. ACS Sustainable Chemistry and Engineering, 2015, 3, 1023-1031.	3.2	151
18	Birefringence in spin-coated films containing cellulose nanocrystals. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 325, 44-51.	2.3	147

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19	Dried and Redispersible Cellulose Nanocrystal Pickering Emulsions. ACS Macro Letters, 2016, 5, 185-189.	2.3	138
20	Porous nanocellulose gels and foams: Breakthrough status in the development of scaffolds for tissue engineering. Materials Today, 2020, 37, 126-141.	8.3	134
21	Efficient Lightweight Supercapacitor with Compression Stability. Advanced Functional Materials, 2016, 26, 6437-6445.	7.8	123
22	Cooperative Ordering and Kinetics of Cellulose Nanocrystal Alignment in a Magnetic Field. Langmuir, 2016, 32, 7564-7571.	1.6	119
23	Nanocellulose in Emulsions and Heterogeneous Waterâ€Based Polymer Systems: A Review. Advanced Materials, 2021, 33, e2002404.	11.1	119
24	Tuning Cellulose Nanocrystal Gelation with Polysaccharides and Surfactants. Langmuir, 2014, 30, 2684-2692.	1.6	118
25	Cross-linked cellulose nanocrystal aerogels as viable bone tissue scaffolds. Acta Biomaterialia, 2019, 87, 152-165.	4.1	114
26	Fluorescent Labeling and Characterization of Cellulose Nanocrystals with Varying Charge Contents. Biomacromolecules, 2013, 14, 3278-3284.	2.6	111
27	Injectable Anisotropic Nanocomposite Hydrogels Direct in Situ Growth and Alignment of Myotubes. Nano Letters, 2017, 17, 6487-6495.	4.5	111
28	Insight into thermal stability of cellulose nanocrystals from new hydrolysis methods with acid blends. Cellulose, 2019, 26, 507-528.	2.4	103
29	Surface modification of cellulose nanocrystals with cetyltrimethylammonium bromide. Nordic Pulp and Paper Research Journal, 2014, 29, 46-57.	0.3	90
30	Tailoring Cellulose Nanocrystal and Surfactant Behavior in Miniemulsion Polymerization. Macromolecules, 2017, 50, 2645-2655.	2.2	84
31	Pressure sensitive adhesive property modification using cellulose nanocrystals. International Journal of Adhesion and Adhesives, 2018, 81, 36-42.	1.4	82
32	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.	5.6	75
33	Determination of Youngâ€™s Modulus for Nanofibrillated Cellulose Multilayer Thin Films Using Buckling Mechanics. Biomacromolecules, 2011, 12, 961-969.	2.6	74
34	Cocrystallization Model for Synthetic Biodegradable Poly(butylene adipate-co-butylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142 Td (te	2.6	73
35	Cellulose nanocrystal interactions probed by thin film swelling to predict dispersibility. Nanoscale, 2016, 8, 12247-12257.	2.8	71
36	Adsorption of Xyloglucan onto Cellulose Surfaces of Different Morphologies: An Entropy-Driven Process. Biomacromolecules, 2016, 17, 2801-2811.	2.6	68

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37	Optimization of cellulose nanocrystal length and surface charge density through phosphoric acid hydrolysis. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170041.	1.6	67
38	Benchmarking Cellulose Nanocrystals Part II: New Industrially Produced Materials. Langmuir, 2021, 37, 8393-8409.	1.6	64
39	Stable Aqueous Foams from Cellulose Nanocrystals and Methyl Cellulose. Biomacromolecules, 2016, 17, 4095-4099.	2.6	63
40	Direct Surface Force Measurements of Polyelectrolyte Multilayer Films Containing Nanocrystalline Cellulose. Langmuir, 2010, 26, 17190-17197.	1.6	59
41	Poly(methyl methacrylate)â€grafted cellulose nanocrystals: Oneâ€step synthesis, nanocomposite preparation, and characterization. Canadian Journal of Chemical Engineering, 2016, 94, 811-822.	0.9	59
42	Cellulose Nanocrystals and Methyl Cellulose as Costabilizers for Nanocomposite Latexes with Double Morphology. ACS Sustainable Chemistry and Engineering, 2017, 5, 10509-10517.	3.2	57
43	Liquid-State NMR Analysis of Nanocelluloses. Biomacromolecules, 2018, 19, 2708-2720.	2.6	57
44	Effect of Tannic Acid and Cellulose Nanocrystals on Antioxidant and Antimicrobial Properties of Gelatin Films. ACS Sustainable Chemistry and Engineering, 2021, 9, 8539-8549.	3.2	57
45	Fundamentals of cellulose lightweight materials: bio-based assemblies with tailored properties. Green Chemistry, 2021, 23, 3542-3568.	4.6	57
46	Mechanically Reinforced Injectable Hydrogels. ACS Applied Polymer Materials, 2020, 2, 1016-1030.	2.0	54
47	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.	3.4	51
48	Naturally Hydrophobic Foams from Lignocellulosic Fibers Prepared by Oven-Drying. ACS Sustainable Chemistry and Engineering, 2020, 8, 8267-8278.	3.2	48
49	Optimization of Spray Drying Conditions for Yield, Particle Size and Biological Activity of Thermally Stable Viral Vectors. Pharmaceutical Research, 2016, 33, 2763-2776.	1.7	47
50	Effect of Counterion Choice on the Stability of Cellulose Nanocrystal Pickering Emulsions. Industrial & Engineering Chemistry Research, 2018, 57, 7169-7180.	1.8	47
51	Tissue Response and Biodistribution of Injectable Cellulose Nanocrystal Composite Hydrogels. ACS Biomaterials Science and Engineering, 2019, 5, 2235-2246.	2.6	46
52	Bottom-up assembly of nanocellulose structures. Carbohydrate Polymers, 2020, 247, 116664.	5.1	46
53	Grafting-from cellulose nanocrystals via photoinduced Cu-mediated reversible-deactivation radical polymerization. Carbohydrate Polymers, 2017, 157, 1033-1040.	5.1	44
54	Hybrid fluorescent nanoparticles from quantum dots coupled to cellulose nanocrystals. Cellulose, 2017, 24, 1287-1293.	2.4	43

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55	Synthesis of Poly(<i>n</i>â€butyl acrylate/methyl methacrylate)/CNC Latex Nanocomposites via In Situ Emulsion Polymerization. Macromolecular Reaction Engineering, 2017, 11, 1700013.	0.9	40
56	Patience is a virtue: self-assembly and physico-chemical properties of cellulose nanocrystal allomorphs. Nanoscale, 2020, 12, 17480-17493.	2.8	37
57	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.	2.6	36
58	Effect of Ionic Strength and Surface Charge Density on the Kinetics of Cellulose Nanocrystal Thin Film Swelling. Langmuir, 2017, 33, 7403-7411.	1.6	36
59	Incorporating Cellulose Nanocrystals into the Core of Polymer Latex Particles via Polymer Grafting. ACS Macro Letters, 2018, 7, 990-996.	2.3	31
60	In Situ Semibatch Emulsion Polymerization of 2â€Ethyl Hexyl Acrylate/<i>n</i>â€Butyl Acrylate/Methyl Methacrylate/Cellulose Nanocrystal Nanocomposites for Adhesive Applications. Macromolecular Reaction Engineering, 2018, 12, 1700068.	0.9	30
61	Bionanocomposite Films from Resilin-CBD Bound to Cellulose Nanocrystals. Industrial Biotechnology, 2015, 11, 44-58.	0.5	29
62	Cellulose Nanocrystal Aerogels as Electrolyte Scaffolds for Glass and Plastic Dye-Sensitized Solar Cells. ACS Applied Energy Materials, 2019, 2, 5635-5642.	2.5	29
63	Morphology of cross-linked cellulose nanocrystal aerogels: cryo-templating versus pressurized gas expansion processing. Journal of Materials Science, 2018, 53, 9842-9860.	1.7	28
64	Polymer Nanocomposites for Emulsionâ€Based Coatings and Adhesives. Macromolecular Reaction Engineering, 2019, 13, 1800050.	0.9	28
65	Synthesis of poly(isobutyl acrylate/nâ€butyl acrylate/methyl methacrylate)/CNC nanocomposites for adhesive applications via <i>in situ</i> semiâ€batch emulsion polymerization. Polymer Composites, 2019, 40, 1365-1377.	2.3	28
66	Tailoring Rheological Properties of Thermoresponsive Hydrogels through Block Copolymer Adsorption to Cellulose Nanocrystals. Biomacromolecules, 2019, 20, 2545-2556.	2.6	27
67	Particle size distributions for cellulose nanocrystals measured by atomic force microscopy: an interlaboratory comparison. Cellulose, 2021, 28, 1387-1403.	2.4	27
68	Spray dried human and chimpanzee adenoviral-vectored vaccines are thermally stable and immunogenic in vivo. Vaccine, 2017, 35, 2916-2924.	1.7	26
69	Determination of sulfur and sulfate half-ester content in cellulose nanocrystals: an interlaboratory comparison. Metrologia, 2018, 55, 872-882.	0.6	25
70	Green Templating of Ultraporous Cross-Linked Cellulose Nanocrystal Microparticles. Chemistry of Materials, 2018, 30, 8040-8051.	3.2	25
71	2.5D Hierarchical Structuring of Nanocomposite Hydrogel Films Containing Cellulose Nanocrystals. ACS Applied Materials & Interfaces, 2019, 11, 6325-6335.	4.0	25
72	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.	2.4	25

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73	Relating Nanoparticle Shape and Adhesiveness to Performance as Flotation Collectors. Industrial & Engineering Chemistry Research, 2016, 55, 9633-9638.	1.8	23
74	Comparison of polyethylene glycol adsorption to nanocellulose versus fumed silica in water. Cellulose, 2017, 24, 4743-4757.	2.4	23
75	Excipient selection for thermally stable enveloped and non-enveloped viral vaccine platforms in dry powders. International Journal of Pharmaceutics, 2019, 561, 66-73.	2.6	22
76	Cellulose Nanocrystal (CNC)â€"Latex Nanocomposites: Effect of CNC Hydrophilicity and Charge on Rheological, Mechanical, and Adhesive Properties. Macromolecular Rapid Communications, 2021, 42, e2000448.	2.0	22
77	Comparing Soft Semicrystalline Polymer Nanocomposites Reinforced with Cellulose Nanocrystals and Fumed Silica. Industrial & Engineering Chemistry Research, 2018, 57, 220-230.	1.8	21
78	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.	2.6	21
79	Beyond buckling: humidity-independent measurement of the mechanical properties of green nanobiocomposite films. Nanoscale, 2017, 9, 7781-7790.	2.8	20
80	Cellulose Nanocrystals Influence Polyamide 6 Crystal Structure, Spherulite Uniformity, and Mechanical Performance of Nanocomposite Films. ACS Applied Polymer Materials, 2021, 3, 4673-4684.	2.0	17
81	Acoustic levitation as a screening method for excipient selection in the development of dry powder vaccines. International Journal of Pharmaceutics, 2019, 563, 71-78.	2.6	16
82	Multi-scale structuring of cell-instructive cellulose nanocrystal composite hydrogel sheets via sequential electrospinning and thermal wrinkling. Acta Biomaterialia, 2021, 128, 250-261.	4.1	16
83	Chiral Nematic Self-Assembly of Cellulose Nanocrystals in Suspensions and Solid Films. Materials and Energy, 2014, , 37-56.	2.5	15
84	Stabilization of HSV-2 viral vaccine candidate by spray drying. International Journal of Pharmaceutics, 2019, 569, 118615.	2.6	15
85	Xyloglucan Structure Impacts the Mechanical Properties of Xyloglucanâ€"Cellulose Nanocrystal Layered Filmsâ€"A Buckling-Based Study. Biomacromolecules, 2020, 21, 3898-3908.	2.6	15
86	Dual physically and chemically crosslinked regenerated cellulose â€" Gelatin composite hydrogels towards art restoration. Carbohydrate Polymers, 2020, 234, 115885.	5.1	15
87	Bioinspired Thermoresponsive Xyloglucanâ€"Cellulose Nanocrystal Hydrogels. Biomacromolecules, 2021, 22, 743-753.	2.6	15
88	Tunable Hydrogel Thin Films from Reactive Synthetic Polymers as Potential Two-Dimensional Cell Scaffolds. Langmuir, 2015, 31, 5623-5632.	1.6	14
89	A sequential design approach for in situ incorporation of cellulose nanocrystals in emulsion-based pressure sensitive adhesives. Cellulose, 2020, 27, 10837-10853.	2.4	14
90	Challenges in Synthesis and Analysis of Asymmetrically Grafted Cellulose Nanocrystals via Atom Transfer Radical Polymerization. Biomacromolecules, 2021, 22, 2702-2717.	2.6	14

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91	Thick Polyvinyl Alcohol Films Reinforced with Cellulose Nanocrystals for Coating Applications. ACS Applied Nano Materials, 2021, 4, 8015-8025.	2.4	14
92	Mechanical testing of thin film nanocellulose composites using buckling mechanics. Tappi Journal, 2013, 12, 9-17.	0.2	14
93	Structural Variations in Hybrid All-Nanoparticle Gibbsite Nanoplatelet/Cellulose Nanocrystal Multilayered Films. Langmuir, 2017, 33, 7896-7907.	1.6	13
94	DNA Stickers Promote Polymer Adsorption onto Cellulose. Biomacromolecules, 2012, 13, 3173-3180.	2.6	12
95	Effect of Reaction Media on Grafting Hydrophobic Polymers from Cellulose Nanocrystals <i>via</i> Surface-Initiated Atom-Transfer Radical Polymerization. Biomacromolecules, 2021, 22, 3601-3612.	2.6	12
96	Special issue on nanocellulose- Editorial. Nordic Pulp and Paper Research Journal, 2014, 29, 4-5.	0.3	11
97	Spray dried VSV-vectored vaccine is thermally stable and immunologically active in vivo. Scientific Reports, 2020, 10, 13349.	1.6	11
98	Pushing the Limits with Cellulose Nanocrystal Loadings in Latexâ€Based Pressureâ€Sensitive Adhesive Nanocomposites. Macromolecular Reaction Engineering, 2020, 14, 2000027.	0.9	10
99	Liquid Crystalline Properties of Symmetric and Asymmetric End-Grafted Cellulose Nanocrystals. Biomacromolecules, 2021, 22, 3552-3564.	2.6	10
100	Tuning the Physicochemical Properties of Cellulose Nanocrystals through an In Situ Oligosaccharide Surface Modification Method. Biomacromolecules, 2021, 22, 3284-3296.	2.6	10
101	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.	1.6	9
102	Hydrothermal treatments of aqueous cellulose nanocrystal suspensions: effects on structure and surface charge content. Cellulose, 2021, 28, 10239-10257.	2.4	9
103	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.	5.0	8
104	Polyelectrolyte Multilayer Films Containing Cellulose: A Review. ACS Symposium Series, 2010, , 95-114.	0.5	7
105	The microscale flocculation test (MFT)â€"A high-throughput technique for optimizing separation performance. Chemical Engineering Research and Design, 2016, 105, 85-93.	2.7	7
106	Consecutive Spray Drying to Produce Coated Dry Powder Vaccines Suitable for Oral Administration. ACS Biomaterials Science and Engineering, 2018, 4, 1669-1678.	2.6	6
107	The physicochemical effect of sugar alcohol plasticisers on oxidised nanocellulose gels and extruded filaments. Cellulose, 2021, 28, 7829-7843.	2.4	6
108	Incorporating Hydrophobic Cellulose Nanocrystals inside Latex Particles via Miniâ€Emulsion Polymerization. Macromolecular Reaction Engineering, 2021, 15, 2100023.	0.9	6

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109	Improving Latexâ€Based Pressureâ€Sensitive Adhesive Properties Using Carboxylated Cellulose Nanocrystals. Macromolecular Reaction Engineering, 2022, 16, .	0.9	6
110	Incorporation of Polymer-Grafted Cellulose Nanocrystals into Latex-Based Pressure-Sensitive Adhesives. ACS Materials Au, 2022, 2, 176-189.	2.6	6
111	Model Cellulose I Surfaces: A Review. ACS Symposium Series, 2010, , 75-93.	0.5	5
112	Direct Comparison of Three Buckling-Based Methods to Measure the Elastic Modulus of Nanobiocomposite Thin Films. ACS Applied Materials & Interfaces, 2021, 13, 29187-29198.	4.0	4
113	Creaming Layers of Nanocellulose Stabilized Water-Based Polystyrene: High-Solids Emulsions for 3D Printing. Frontiers in Chemical Engineering, 2021, 3, .	1.3	4
114	Cryoprotective agents influence viral dosage and thermal stability of inhalable dry powder vaccines. International Journal of Pharmaceutics, 2022, 617, 121602.	2.6	4
115	Directed Assembly of Oriented Cellulose Nanocrystal Films. Materials and Energy, 2014, , 79-103.	2.5	3
116	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.	2.6	3
117	Ultrathinâ€Walled 3D Inorganic Nanostructured Networks Templated from Crossâ€Linked Cellulose Nanocrystal Aerogels. Advanced Materials Interfaces, 2021, 8, 2001181.	1.9	2