

## Publications

### Publications

1. Gates, H. and D.W. Bousfield, "Forces generated by web peeling for coating and printing applications", *J. of Coating Sci. and Tech.*, 12(5): 899-913 (2015).
2. Nazari B., S. Niazi, M. Zohrabi, and D.W. Bousfield, "Finite element analysis of vane geometry for shear thinning materials", *J. of Fluid Flow, Heat and Mass Transfer*, 3:1-7 (2016). DOI: 10.11159/jffhmt.2016.001.
3. Songok J., D.W. Bousfield, P.A.C. Gane and M. Toivakka, "Heat and mass transfer models to understand the drying mechanism of a porous substrate", *EPJ E Soft Matter and Biological Physics Eur. Phys. J. E* (2016) 39 :25 DOI 10.1140/epje/i2016-16025-6
4. Kumar V., A. Elfving, H. Koivula, D. Bousfield and M. Toivakka, "Roll-to-roll processed cellulose nanofiber coatings", *I&EC research*, March 2016, DOI: 10.1021/acs.iecr.6b00417.
5. Kumar V. E. Lazarus, P. Salminen, D. Bousfield and M. Toivakka, "Influence of nanolatex addition on cellulose nanofiber film properties", *Nordic Pulp and Paper Res. J.* 31(2): (2016).
6. Kiziltas E.E. and A. Kiziltas, B. Nazari, D.J. Gardner and D.W. Bousfield, 'Glycerine treated nanofiberillated cellulose composites", *J. of Nanomaterials*, Article ID 7851308, dx.doi.org/10.1155/2016/785130 (2016).
7. Tajvidi, M., Gardner, D. J., & Bousfield, D. W. (2016). Cellulose Nanomaterials as Binders: Laminate and Particulate Systems. *Journal of Renewable Material* 4(5):365-376.  
<http://dx.doi.org/10.7569/JRM.2016.634103>
8. Nazari, B. and D.W. Bousfield, "Cellulose nanofibers influence on properties and processing of paperboard coatings", *Nordic Pulp and Paper Res. J.* , 31(3) 511-520 (2016).
9. Kumar V., B. Nazari, D.W. Bousfield and M. Toivakka, "Rheology of microfibrillated cellulose in pressure driven flows", *Applied Rheology*, 26, 53534, DOI: 10.3933/APPLRHEOL-26-43534 (2016).
10. Yousefi Shiyvari, Niloofar, Mehdi Tajvidi, Douglas W. Bousfield, and Douglas J. Gardner. "Production and characterization of laminates of paper and cellulose nanofibrils." *ACS Applied Materials & Interfaces* (2016). DOI: [10.1021/acsami.6b07655](https://doi.org/10.1021/acsami.6b07655)
11. Nazari B., V. Kumar, D.W. Bousfield, and Martti Toivakka, "Rheology of cellulose nanofiber suspensions: boundary driven flow", *J. Rheol.* 60(6), 1151-1159 (2016) [<http://dx.doi.org/10.1122/1.4960336>]
12. Kumar V., V.R. Koppolu, D. Bousfield, and M. Toivakka, "Substrate role in coating of microfibrillated cellulose", *Cellulose* 2017. DOI:10.1007/s10570-017-121-5.
13. Gates, H. and D.W. Bousfield, 'A method to model web trajectory and release in forward roll coating". *Journal of coating science and technology*. 14(5): 957–964 (2017).

14. Mousavi, S.M., Afra, E., Tajvidi, M., Bousfield, D.W. and Dehghani-Firouzabadi, M., 2017. Cellulose nanofiber/carboxymethyl cellulose blends as an efficient coating to improve the structure and barrier properties of paperboard. *Cellulose*, 24(7), pp.3001-3014.
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17. Wang, J., Gardner, D.J., Stark, N.M., Bousfield, D.W., Tajvidi, M. and Cai, Z., 2017. Moisture and oxygen barrier properties of cellulose nanomaterial-based films. *ACS Sustainable Chemistry & Engineering*, 6(1), pp.49-70.
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19. Purington E., A. Blakeley, D. Bousfield, W. Gramlich, "Visualization of latex and starch in paper coatings by tagging with fluorescent dyes", *Nordic Pulp and Paper Research J.*, 32(3), 395-406. DOI [10.3183/NPPRJ-2017-32-03-p395-406](https://doi.org/10.3183/NPPRJ-2017-32-03-p395-406)
20. Ghasemi S., M. Tajvidi, M. Bilodeau, D.W. Bousfield, and J.F. Hunt, Reinforcement of natural fiber yarns by cellulose nanomaterials: A multi-scale study, *Industrial Crops and Products* vol 111, pp 471-481 (2018)
21. Kumar V., D.W. Bousfield, and M. Toivakka, "Slot Die Coating of Cellulose nanofibers on paperboard", *TAPPI J.*, 17(1), 11-20 (2018).
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25. DeLoid, G.M., Sohal, I.S., Lorente, L.R., Molina, R.M., Pyrgiotakis, G., Stevanovic, A., Zhang, R., McClements, D.J., Geitner, N.K., Bousfield, D.W. and Ng, K.W., 2018. Reducing Intestinal Digestion and Absorption of Fat Using a Nature-Derived Biopolymer: Interference of Triglyceride Hydrolysis by Nanocellulose. *ACS nano*.
26. Najafi, S.M.H., Tajvidi, M. and Bousfield, D.W., 2018. Production and mechanical characterization of free-standing pigmented paper coating layers with latex and starch as binder. *Progress in Organic Coatings*, 123, pp.138-145.