

S2.1.3 Improving Filter Media Performance with Nano-Fibrillated Cellulose

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Recent advancements towards commercial production and scale up of nano-fibrillated cellulose (NFC) have increased the opportunities for using these unique biomaterials to improve the performance and sustainability of filtration media. The presentation will summarize recent activities of Performance BioFilaments toward the commercial development of cellulose filaments and their use as a functional additive in air laid and wet laid filtration media. The extremely high aspect ratio and surface area of cellulose filaments allows for network formation of the filaments amongst other larger fibers. This enables the tailoring of pore sizes in the media, as well as increases in the bond strength between the larger fibers in the network. Combined, these two effects could result in improved filtration performance as well as improvements in the fiber network strength.