Nanocellulose Films for Water Treatment
Minna Hakalahti
Nanocellulose Films for Water Treatment

**CHALLENGE**

- Diverse domestic and industrial contamination by nano- and micropollutants e.g. heavy metals, viruses, bacteria
- Loss of valuable particles in water streams
- Cheap, biodegradable and efficient treatment substrates needed for purification of water and capturing of valuable particles
- Global market for water treatment membranes to reach $32B by 2020
Nanocellulose Films for Water Treatment

- Technology for biobased nanocellulose films with numerous active sites for capturing valuable particles and pollutants
- In-house nanocellulose production facilities
- VTT SutCo pilot line for film production with integrated surface-treatment for additional functionalities, e.g. antifouling, environmental responsiveness
Nanocellulose Films for Water Treatment

**BENEFIT**

- Position in the emerging next generation biobased membrane sector through the unique combination of nanocellulose, film technology, surface chemistry and pilot-scale production facilities
- Strong IPR base and academic evidence for commercialization
- Multifunctional and tailorable template for efficient and selective capturing of valuable particles and pollutants

Antifouling
Nanoscaled structure
Environmental responsiveness
Nanocellulose Films for Water Treatment

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