



APPLICATIONS:



PACKAGINGS



ENERGY &
TRANSPORT

DEVELOPMENT:



NANO
MATERIALS

CURRENT-STATUS

The pilot line can produce CNC at scales ranging from gram to kg (1L, 5L, 50L, 700L). Combining bio-based feedstock with nano-enabling technologies can be an excellent solution to overcome mechanical properties issues and reduce the current dependency on fossil-based resources.



CHALLENGE

There are only a few providers of CNC worldwide and the lack of providers impedes development of products and processes requiring CNC.

FURTHER DEVELOPMENT

The production capacity of CNC will increase to 10 kg/day and specific quality of CNC, yield, selectivity and residual stream characterisation will be determined for the pilot line.



BENEFITS FOR COMPANIES AND SME'S

The pilot line will deliver amounts of CNC large enough for process and product development. Organisations with potential starting materials can also collaborate with this pilot line to investigate the suitability of their raw material for CNC production. Furthermore the pilot line aims to have a scalable process with a commercially relevant product to support decision making for production scale implementation.

APPLICATION EXAMPLES

BIO-BASED ADHESIVE SMART LABELS

The crystalline nanocellulose will due to its unique properties be used as binder and reinforcement agent for printed batteries and displays. Due to its homogeneous properties nanocellulose is suitable for printing or to be used as coating base.

BIO- AND FIBRE-BASED STAND-UP POUCH

Due to the flexible pilot line and unique properties of nanocellulose that can be adjusted according to requirements, CNC will be used as dispersion stabilizer for partial replacement of PVA.

BIOBASED ULTRACAPACITORS

Novel functionalized biobased nanocellulose will due to the possibilities with its large surface area and unique physiochemical properties serve as a suitable carbonaceous material for producing ultracapacitor test cells.