

# Explore the 16 INN-PRESSME Pilot Lines



## ADDITIVE MANUFACTURING

Unique heading prototype allowing surface modification while printing in one step.



## COEXTRUSION/ MULTI-NANOLAYERING

Production of recyclable and/or biodegradable bio-based nanolayered films /sheets providing high barrier and optical properties.



## DISPERSION COATING

Surface Treatment Concept for coating and film preparation pilot line with several coating units. Application of various bio-based dispersions and polymers on fiber-based substrates.



## SHEET TO SHEET PRINTING

Development of smart surfaces with embedding electronic functionalities, e.g. printed & flexible antennas/filters, sensors, organic FT-circuits, bare die and LEDs.



## DISPERSION COATING

Manufacturing of Roll2Roll electrodes of at least 60m length for testing in industrial sized ultracapacitor cells. Electrodes will be produced using novel cellulose in water-based slurries.



## FOAM EXTRUSION

Particle foaming pilot line enabling fully controlled development/ production environment for particle foams with nano-scaled additives incorporation to (bio)polymers to increase functionality.



## LACQUERS OF BIO-INORGANIC PARTICLES

Improving the production quality and - quantity of bio-based lacquers and machinability of bio-based materials in Roll2Roll processes for more efficient use.



## COMPOUNDING AND PROCESSING FILAMENTS

Developing new formulations with efficient dispersion of additives while reducing overheating of thermal sensitive material, like PLA.



## COMPOUNDING

Melt blending processes as the key to efficient production of bio-based compounds of nano composites.



## PLA BARRIER DISPERSION

Optimised data acquisition and evaluation enabling faster production of PLAX copolymers with desired structure, architecture and molecular weight.



## CARBON BASED MATERIALS / GRAPHENE

Novel technology for generating new nanomaterials based on graphene and other carbons from different biosources, combined with metal oxide nanoparticles.



## PREPARATION OF INKS AND SLURRIES

Further development of the production of bio-based printable inks from laboratory status to industrial use.



## NATURAL MICROFIBRES

Optimisation natural microfibers flax or hems as an important component of biocomposites.



## PHA POWDER FROM MARINE BACTERIA

Industrialisation of the production of Polyhydroxyalkanoates (PHA), so-called biopolyesters, from marine bacteria.



## CELLULOSE NANO CRYSTALS

Optimising and increasing the production of Nano Cellulose Crystals (CNC) to reach an output of 10Kg/day.

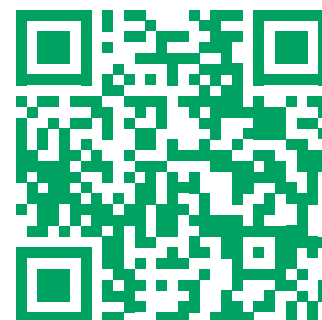


## CELLULOSE NANOFIBRILS, MICROFIBRILLATED CELLULOSE

Improving and optimising the production of nano cellulose as a sustainable biomaterial to reduce the use of fossil plastic.



## More Information



[www.inn-pressme.eu/pilot\\_line](http://www.inn-pressme.eu/pilot_line)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°952972

**Follow our latest  
developments**



@inn\_pressme



inn-pressme



@inn\_pressme



INN-PRESSME