Explore the 16 INN-PRESSME Pilot Lines

INN PRESSME
Open Innovation Test Bed

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.

More Information

www.inn-pressme.eu/pilot_line

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 hemps 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.

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