

Sustainable production of nanocellulose and their application in fibre based packaging.

Dr. Julien BRAS

Grenoble INP – Pagora

bras@pagora.grenoble-inp.fr

Through his different experiences, he develops several competences in: Cellulose fibres, nanofibres and nanocrystals, cellulose derivatives, Biocomposites & Nanocomposites, Surface grafting, Barrier properties, Specialty paper & active packaging. Nanocellulose production, characterization of micro-fibrillated cellulose and cellulose nanocrystals. Chemical grafting: surface grafting of molecule in solvent, ionic liquid, aqueous system with several families of molecule or polymer and several strategies (grafting from, grafting onto, click) Materials: Polymer (nano)composites and fibrous structures : preparation & characterization, DSC, DMA, FTIR, XRD, XPS, NMR, TOFSIMS, etc.. Application domains: paper and packaging industries, polymer composites, biomedical & cosmetic (controlled release)