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Ph.D. thesis (2024-2027)
LGP2 (J. Bras ; N. Belgacem)
Gascogne Paper (J. Desmaisons;
A. Pinsolle)

Development of new biobased barrier solutions for flexible packaging

Développement de nouvelles solutions barrières biosourcées pour emballages flexibles

MatBio

Thèse confidentielle

Context / Objectives

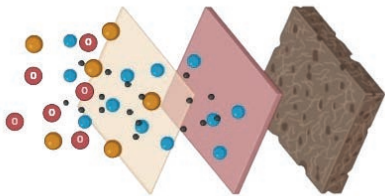
Regulations

SUP directive – AGEC law – PFAS regulation

- Imminent need to find **plastic and PFAS – free** solutions
- Solutions such as petro-based coatings or laminated papers are emerging, but at **detriment of the packaging's end-of-life**.

Challenges

- Formulation of 100% biobased solution
- Optimize and adapt coating processes
- Improve and adapt barrier characterization methods



Funded by:

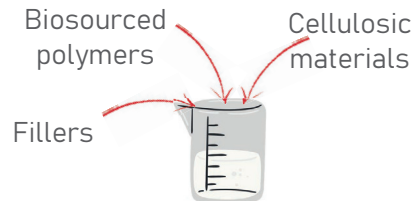


Gascogne

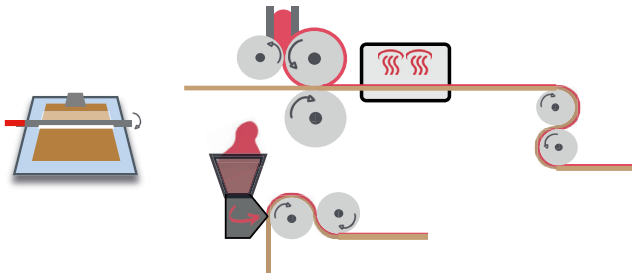
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Methods

Formulation



Coating processes : from lab to pilot and industrial scale devices

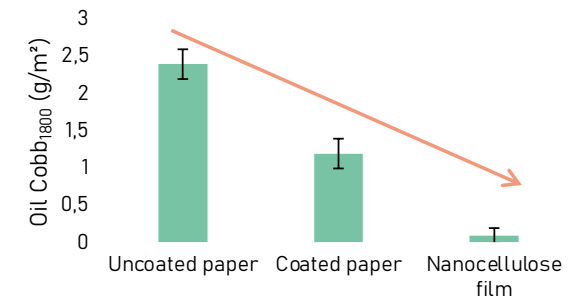


Barrier characterization



Results

Oil Cobb measurements



Liquid oil behavior onto paper substrate

- Depending on the oil used, the substrate doesn't react the same way
- Each oil has its own characteristics: viscosity, surface tension, density

