

**PHD PROJECT IN CHAIR CELLULOSE VALLEY**  
**INNOVATIVE STRATEGIES FOR OBTAINING**  
**BARRIER FLEXIBLE CELLULOSIC PACKAGING SOLUTION USING BIOBASED**  
**POLYMERS AND MOLECULES**  
(INDUSTRIAL & COLLABORATIVE PHD PROJECT – START: OCT-NOV 2026)

**PhD topic**

The Chair “Cellulose Valley” deals with new cellulosic materials for innovative packaging solutions to propose single use plastic alternatives. The main idea is to develop bio-based, biodegradable and recyclable packaging solutions to answer expectations of our society. This chair is a consortium of several industrial partners, with several PhDs, Post-docs and Masters involved in the program.

The PhD proposal below concerns the development of innovative solutions to obtain barrier for flexible cellulosic substrate. The main scientific challenges are: formulation of barrier solutions or suspensions or emulsions, crosslinking or supramolecular interactions characterization, coating process and in-operando thermal treatment, barrier properties to liquid and gas, recyclability evaluation of fibre based materials.

A focus on the packaging applications and ensued properties will be done to propose innovative but applied solutions and to realize demonstrators.

This project will be based in LGP2 in close collaboration with the industrial partners with several meetings, collaborations and visits.

**Description and expertise of the laboratory**

Laboratory of Process Engineering for Biorefinery, Bio-based Materials and Functional Printing (LGP2) is a mixed research unit (UMR 5518) with National Centre for Scientific Research (CNRS). Its activity starts from biorefinery, wood science to material processing and surface functionalization of biobased materials. The Laboratory’s particularity is its pluri-disciplinarity in process, chemistry and materials. Moreover, its strong link with packaging industry induces lots of applied research projects and specific tools (from lab to pilot scale). About 90 people are working in this laboratory including 30 PhD Students & 10 post-doc.

The Chair “Cellulose Valley” is a special eco-system inside the laboratory dealing with new cellulosic materials for packaging funded by the Fondation Grenoble INP.

**Candidate requirement**

Candidate should have an Engineer or Master level in the field of Materials science, Chemistry or Process engineering with a specific expertise in field of materials or polymer. Knowledge in biopolymer and paper science will be considered. Work on cellulose or packaging would be a plus. Good French and English level is needed. Team work capacity, autonomy, communication soft skills and motivation for circular and bioeconomy would be important selection parameters.

**Contact persons involved in the project**

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Send CV asap (first sent, first in motivation) and before 20th of May 2026