

6-month internship in the **CELLULOSE VALLEY CHAIR**

Extrusion-foaming of cellulosic materials: towards lightweight and functional cellulosic foams for packaging

LGP2, Grenoble, France

Contract start: February 2027

Employer: Fondation Grenoble INP – Cellulose Valley (<https://urlz.fr/viiU>)

Supervision: Prof. Julien BRAS & Alexis SUCHET (PhD Student)

Description

The **Cellulose Valley Chair** is a research and innovation ecosystem developing new cellulose-based materials as sustainable alternatives for packaging. It brings together nine industrial partners: its founding patrons—Ahlstrom, Groupe Guillin (Alphaform), Aptar, Chanel Parfums Beauté, Citeo, and DS Smith—and its new partners: ANDRITZ, the Centre Technique du Papier (CTP), and Fibre Excellence. Each year, **nine students** - coming from an engineering school or a Master's program - work on specific challenges submitted by these partners.

The Chair is hosted by the Laboratory of Process Engineering for Biorefinery, Bio-based Materials and Functional Printing (LGP2, UMR 5518, CNRS / Grenoble INP-Pagora, Univ. Grenoble Alpes). **LGP2** covers the full value chain from wood science to packaging converting and printing, combining process engineering, chemistry, and materials science. Its close ties with the paper and packaging industry give access to equipment from laboratory to pilot scale.

Project (<https://urlz.fr/viiu>)

Regulations and standards worldwide increasingly promote the **circular economy** and the bioeconomy. In this context, **cellulose** is a strong candidate for high-performance bio-based materials, offering strength, light weight, and barrier properties. Industry interest in such materials is growing rapidly.

This internship focuses on an innovative route to cellulosic foams: **extrusion-foaming**. Your objectives will be to:

1. Investigate the extrusion-foaming process.
2. Produce lightweight cellulosic foams and characterize their structure and properties.
3. Identify and implement routes to impart functionalities to the foam – especially mechanical strength.
4. Biomimetic strategy for multilayer structure development.
5. Assess the recyclability of the material.
6. If time permits, carry out a life-cycle assessment (LCA) compared with an equivalent plastic material.

You will also develop a **demonstrator** to showcase the results. Regular meetings with the R&D department of the partner concerned, as well as occasional **site visits**, are planned.

Practical information

- **Duration:** 5–6 months, starting in **February 2027** and ending by **July 2027**
- **Location:** LGP2, Grenoble, France
- **Supervision:** Julien BRAS & Alexis SUCHET

Profile

- Enrolled in the final year of an engineering school or a Master's program (or equivalent) in materials science, process engineering, chemistry, or a related field.
- Good written and spoken English (French is a plus).
- Autonomy, motivation, and the ability to work in a team.

Assets: prior experience with cellulose or packaging, knowledge on biopolymers, and familiarity with life-cycle assessment.

How to apply

Please log in to <https://forms.gle/hT4onUSqTHBGeJN78>, answer the questions, and upload your CV and your cover letter.

If necessary, contact Alexis Suchet (PhD Student) at alexis.suchet@grenoble-inp.fr and copy Prof. Julien Bras at julien.bras@grenoble-inp.fr on your email, using the following subject line:

“Extrusion-foaming internship 2027”.

Application deadline

October 30, 2026 (the applications will be reviewed on a rolling basis).