



# Master R&D project

Materials, Chemistry, Process engineering

## Development of a new recyclable and biodegradable materials with high barrier properties

*5-6 months internship*

*Start in February*

The packaging sector is the one that generates the most plastic waste per year, and this figure is rising all the time. In 2019, the packaging sector accounted for 143 million tonnes of plastic waste, which poses a major environmental problem. While most of it is landfilled, a large proportion ends up in the environment, particularly lightweight packaging (flexible, foam, etc.). Yet packaging is important in a number of areas: product protection, consumer safety, etc. What's more, with the new European PPWR (Packaging and Packaging Waste Regulation), manufacturers are obliged to innovate in order to produce recyclable and/or biodegradable packaging that is just as effective.

This led to the creation of the UNIPACK project, a collaboration between LGP2 and a UK-based multinational. The aim is to replace flexible plastic packaging with an entirely biosourced, recyclable and biodegradable paper-based packaging with the same performance. The aim of the internship will therefore be to achieve a highly effective water vapour barrier, to work on the sealing of the packaging and to check its recyclability.

Autonomy, intercultural skills and a B2 level of English are expected. Knowledge of cellulose and paper conversion processes is a plus.

This internship is an opportunity to acquire the concepts of barrier properties and environmental impact (LCA, etc.) specific to packaging, to be in contact with a worldwide company and understand their expectations, and to develop skills in research and innovation.

The work will be carried out at LGP2, the process engineering laboratory for biorefinery, bio-based materials and functional printing, located on the university campus in Grenoble.

If you are interested, please contact us before 11 October.

### **Contacts:**

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