Laboratoire de génie des procédés pour la bioraffinerie,
les matériaux bio-sourcés et l'impression fonctionnelle
UMR 5518 CNRS / Grenoble INP – UGA

PhD thesis proposal

Optimization of processes for production and recycling of new molded fibre product and natural fibre products

Job Information

Organization/Company: Grenoble INP – UGA **Department:** LGP2 - Laboratory of process engineering for biorefinery, bio-based materials and functional printing (UMR 5518)
Research field: Material, Chemistry, Process engineering
Researcher profile: First stage researcher (R1) **Position:** PhD position **Country:** France
Application deadline: May 22, 2026 **Type of contract:** Temporary **Job status:** Full-time
Is the job funded through the EU Research Framework Programme? Horizon Europe
Is the job related to staff position within a Research Infrastructure? No

Description

ENDURE call for doctoral candidate applicants: to succeed on the ambitious objectives of the European growth model, the European moulded fibre products (MFP) industry must have access to a new generation of innovative, entrepreneurial, highly skilled research-oriented cross-disciplinary engineers with direct research experience in: **(i) natural fibre material (NFM) engineering; (ii) product design and production engineering of MFPs; (iii) digital manufacturing technologies and industry 4.0 for MFP industry.** With the support of the Marie Skłodowska Curie (MSCA) Doctoral Network Programme (5 universities, 2 RTOs and 8 industry partners for four countries), the ENDURE project will train 12 doctoral candidates.

More information: https://endure.dtu.dk/ ■ https://cordis.europa.eu/project/id/101227649

ENDURE seeks to recruit Doctoral Candidates on a full-time basis over three years starting in Sept 2026. The Doctoral Candidates will be hosted by Grenoble INP - UGA a beneficiary organization in the ENDURE network, and will be supported by associated partner organizations IPC and JKC. ENDURE delivers a unique employability and skills development process for Doctoral Candidates ensuring that they can lead the scientific and technological developments in the European MFP industry.

Project objectives: the project will have 3 main objectives: (i) Optimization of extrusion-based processes for generating NFMs for four demonstrator cases and impact of their recyclability. (ii) Study of recycled NFM materials or fibre waste potential for MFP industry (e.g., bagasse, wheat straw, agricultural waste, virgin fibres, barrier coating). (iii) Development of new recycling process and end of life for MFP from different sources at laboratory-scale (sorting, repulping, screening, refining upcycling) for extracting NFMs.
Secondment(s): The applicant will undertake several secondments. For example, it could be in: (i) IPC, **Supervisor:** Dr. Thomas Joffre, Timing: M15, Length:3xM, Purpose: Identifying NFM requirements based on constraints of the injection moulding system; (ii) DTU; Supervisor: Guido Tosello; Timing: M26; Length: 1.5 M; Purpose: NFM material models integration with injection moulding simulations; (iii) JKC, Supervisor: Peter Bay, Timing: M27, Length: 2.5M, Purpose: Trial production of optimized MFPs with new recycled NFMs and identifying challenges to industrial scaling.

Doctoral Candidate

Doctoral research on: *Optimization of processes for production and recycling of new molded fibre product and natural fibre products*
Workplace location: LGP2 - Laboratory of process engineering for biorefinery, bio-based materials and functional printing (UMR 5518), 461 rue de la Papeterie, 38402 Saint-Martin-d'Hères - FRANCE
PhD enrolment: Université Grenoble Alpes – I-MEP2 Doctoral School
Primary supervisor: Julien BRAS ▪ **Co-supervisor/mentors:** Quentin CHARLIER - Jérémie VIGUIÉ
Duration: 36 months ▪ Starting in August / September 2026
Required applicant profile: 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. Very good English level is necessary for this European project. Basic knowledge in French would be appreciate.
Desired skills: Knowledge in biopolymer and/or fiber science will be considered. Previous experience on cellulose or packaging would be a plus. Team work capacity, autonomy, communication soft skills and motivation for circular and bioeconomy would be important selection parameters.
Salary and Funding Information: This is a full-time Doctoral Candidate position with a total duration of 36 months

Application Process

The following is an overview description of the application process for the ENDURE doctoral candidate positions. Before making an application please review the details below.

General and project specific eligibility requirements

All applicants must fulfil the following general eligibility criteria, or otherwise will be rejected:

- must have completed a Master's degree or equivalent at the time of start (after January 2026) Research field: Material science, Process engineer, Chemistry;
- must not have a doctoral degree at the date of their recruitment;
- should comply with the mobility rules, where they must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting organization for more than 12 months, at any point during the 36 months immediately before their recruitment date (short stays such as holidays or compulsory military service are not taken into account;
- Project specific eligibility criteria must also be met. Please see individual job descriptions for these criteria.

Essential language requirements

The working language of ENDURE is English. Applicants are required to either be:

- A native English speaker;

  Or
- A non-native English speaker who has passed the academic IELTS (minimum score: 7.5) or TOEFL internet-based (minimum score: 113) tests.

  Or
- A non-native English speaker who has completed a Master degree through English.

How to apply

Send CV and motivation letter to Pr. Julien BRAS before May 22, 2026.
Julien.Bras@grenoble-inp.fr

Interviews of shortlisted applicants

All shortlisted applicants will be invited to interview. The interviews will take place online and will be scheduled end of May 2026.