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## JOB OFFER: Contractual Researcher 2 / Postdoctoral Fellow (M/F)

**PROJECT CONTEXT:** MET-SUSCOAT is a cross-border scientific cooperation project funded by the Operational Programme for Cross-Border Cooperation Spain-France-Andorra (POCTEFA). Led by the University of Pau et des Pays de l'Adour (UPPA), it brings together three academic partners and one industrial partner (two in France, two in Spain). The objective is to develop advanced and durable coatings to protect critical metal components in the transport sector against corrosion and wear challenges.

**LOCATION:** 'Materials + Technologies' (GMT) Research Group of the Chemical and Environmental Engineering Department of the Basque Country University (UPV/EHU) at the Polytechnic School of Donostia-San Sebastian, Spain.

**CONTRACT TYPE:** Fixed-term contract (6 months)

**START DATE:** September 1, 2026

**REMUNERATION:** Gross monthly salary €2,950 (depending on profile and experience).

### MAIN RESPONSIBILITIES

Under the supervision of the Project Coordinator, Professor Sylvie Dagréou (UPPA), and Professor Arantxa Eceiza (UPV/EHU), the successful candidate will lead the synthesis and the chemical characterization of bio-based Polyurethanes with tailored anti-corrosion,

hydrophobic, and fire-retardant properties. characterize the polymer films, and evaluate their anti-corrosion performance.

## **1. Polymer synthesis and characterization**

Synthesize bio-based polyurethanes ( $\geq 50\%$  renewable carbon content) incorporating clickable reactive groups (e.g. furan) and phosphorus-containing monomers to enhance fire resistance, building upon the laboratory's established expertise in this type of synthesis.

Implement environmentally friendly bulk polymerization techniques to avoid the use of organic solvents, leveraging existing laboratory know-how.

Achieve high molecular weight polymers ( $> 60$  kDa) with narrow molecular weight distributions ( $< 2.0$ ).

Perform comprehensive characterization of the synthesized materials (FTIR,  $^1\text{H}/^3\text{C}$  NMR, DSC, TGA, GPC) to validate their chemical structure, molecular weight, and thermal stability.

Prepare these polyurethanes as precursors for the subsequent fabrication of films and membranes via electrospinning.

## **2. Dissemination and Coordination**

- Critical data analysis and drafting of scientific reports for consortium partners.
- Active collaboration with French and Spanish industrial and academic partners.
- Science Outreach: Co-creation, in partnership with the Project Manager, of accessible communication materials (blog posts, short videos, public presentations) to explain the project's stakes to the general public and POCTEFA institutional stakeholders.

## **REQUIRED PROFILE**

**Education:**

- PhD in Chemistry, Materials Physics, Surface Science, or Process Engineering.
- Specialization in organic/inorganic coatings, corrosion, or polymerization is required.

#### **Technical Skills:**

- Practical experience in Biobased Polyurethane synthesis
- Experience in NMR, FTIR and GPC
- Knowledge on polymer synthesis in general

#### **Personal Qualities:**

- Autonomy, curiosity, and initiative.
- Strong analytical and synthesis skills.
- Scientific and organizational rigor.
- Excellent team spirit and interpersonal skills for working in an international context (France/Spain).
- Fluency in scientific English (knowledge of Spanish is an asset).

#### **HOW TO APPLY:**

**Application Package:** CV, cover letter, and 2 references (contact details or letters).

**Contact:** leila.mezzasalma@univ-pau.fr

**Email Subject:** Chemistry Application PostD-METSCUSCOAT-2026 + Surname Name

**Application Deadline:** July 7, 2026

#### **WHY JOIN US?**

A Committed and Inclusive University UPPA's strategy, aligned with the France 2030 plan, aims to meet tomorrow's challenges, particularly the ecological transition. The pillars of our target university include: high-visibility, international-level specialized and interdisciplinary research addressing societal issues; intense partnerships with socio-economic and cultural stakeholders of the territory; international attractiveness and influence; a training offer designed for lifelong learning to support emerging socio-economic needs; and the capacity to foster innovation. This trajectory is supported by the European alliance UNITA, which reinforces this dynamic through specific strategic axes.

### Benefits

- 45 days of annual leave + 10 days of additional paid time off (ARTT) per academic year.
- Teleworking options available.
- Sustainable mobility allowance, plus access to leisure, sports, and culture offers.
- Campus located at few minutes of the Atlantic Ocean (UPV/EHU)
- Individual support dedicated to employees with disabilities.
- Dynamic supervisors, attentive to your work-life balance, offering flexible working hours based on mutual trust.