Job Offer – Research Engineer / post-doc in Optical Sensors for PFAS Detection

Location: Institut de Science des Matériaux de Mulhouse, CNRS UMR 7361, Mulhouse FRANCE
Contract: **Fixed-term – 18 months**
Salary: **36 k€ – 45 k€ annual**, depending on experience and applicable salary scales
Expected Start Date: **September 2025**

About the Project

We are looking for a highly motivated research engineer to contribute to the development of an innovative **optical sensor for detecting PFAS** (long lasting chemicals). This project is part of a technology transfer initiative, aiming to advance a recently **patented technology** to a higher Technology Readiness Level (TRL) in preparation for a **startup launch**.

The sensor is based on advanced optical detection techniques, particularly **Surface Plasmon Resonance (SPR) and Molecularly Imprinted Polymers (MIP)**, and requires an interdisciplinary approach combining surface physico-chemistry, analytical chemistry, and optical sensors. The selected candidate will play a key role in the technological development and will actively contribute to technology transfer and entrepreneurship efforts.

Responsibilities

Sensor Development & Optimization:

- Integrate and optimize functionalized surfaces for **specific PFAS detection** and other targets
- Perform **physico-chemical and analytical characterization** of surfaces and molecular interactions.
- Develop and validate the **analytical performance** of the sensor (detection limit, selectivity, reproducibility).

Technology Readiness & Validation:

- Conduct **real-world testing** and adapt the sensor to **industrial requirements**.
- Contribute to the development of a **functional prototype** and field evaluations.
- Lead partnership with hardware development partners.

Startup Preparation & Technology Transfer:

- Conduct technological benchmarking.
- Present the project to **partners, potential client and public institutions**.

Candidate Profile

Education: PhD, master or Engineering degree with a specialization in **optical sensors, surface physico-chemistry, or analytical chemistry**.

Technical Skills appreciated:

- Expertise in **optical sensors**, ideally **SPR** or similar techniques.
- Strong knowledge of **surface functionalization and characterization techniques** (spectroscopy, microscopy, etc.).
- Solid background in **analytical chemistry** applied to contaminant detection.

Additional Skills:

- **Entrepreneurial mindset** and strong motivation for **technology transfer**.
- **Ability to work in a multidisciplinary team** and collaborate with academic and industrial partners.
- **Excellent communication skills**
- **Fluent in scientific English** (written and spoken) with international team

Why Join Us?

A high-impact environmental project: Contribute to an innovative technology tackling PFAS pollution.
An entrepreneurial opportunity: Be at the core of a **deeptech startup** creation.
A cutting-edge research environment: Collaborate with experts in optical sensors, analytical chemistry, and materials science.

Application Process

To apply, please send your **CV and cover letter** to **olivier.soppera@uha.fr**, with **"Application PFAS Sensors"** as the subject.

Application Deadline: **30 May 2025**