**CPJ project: Ceramic materials, ceramic processes and surface treatments in a sustainable development approach.**

A Tenure-Track Junior Professor Chair (CPJ) – for 5 years (+ 1 year renewable) in the field of sustainable development and life cycle analysis applied to ceramic materials and processing and/or surface treatment process is open at the University of Limoges (France, Limoges). The research will be executed at the **Institute of Research for Ceramics (IRCER)** which provides a dynamic and collaborative environment to develop a high impact research activity. This position - intended for PhD holders with several years of postdoctoral experience - provides a unique opportunity to develop advanced research in ceramics, with applications open to various scientific and societal challenges. The position comes with a budget of approximately €200,000 (e.g., PhD scholarship, postdoctoral position, operational costs, etc.).

**The position will lead to a full professorship (Professeur des Universités) at the end of this period.**

### **Research/Scientific Project:** In a global context of growing awareness and prominence of environmental sustainability, the ceramic topic (in terms of processes and materials) has had to face a number of challenges to remain competitive. In response to these challenges, sustainability has proven to be crucial, pushing research and development activities towards increasingly innovative solutions.

The Institute of Research for Ceramics (IRCER) is particularly well positioned to implement a multidisciplinary strategy to address these challenges over the next 5 to 10 years. As an illustration, a unique cross-disciplinary approach integrating artificial intelligence (AI) to support materials and process science is already being deployed at IRCER. This approach could be judiciously complemented by applying a sustainable development approach to ceramic materials and processing and/or surface treatments processes through the recruitment of a Junior Professor. The goal is to further develop research activities integrating as well carbon emission reduction policies and technologies as natural resource conservation and management across all of the laboratory's current activities.

The successful candidate – with skills in ceramic and/or surface treatment-related topics - will conduct his/her research using a sustainable development-oriented approach, applied to the activities of IRCER. He/she will contribute to strengthen (by a topic currently developed or a new one) the cross-disciplinary group dedicated to sustainable development. The latter currently covers low-environmental impact materials (*e.g.*, example cements, bio-sourced additives, geopolymers; refractory materials and functional ceramics) and processes (*e.g.*, drying process optimization in ceramic manufacturing). The main goal is to consider breakthrough solutions from an environmental perspective, while assessing their economic feasibility in the ceramic and/or surface treatment-related topics. This activity can greatly complement the one established with the AI chair and will contribute to a comprehensive and synergistic approach to conduct high scientific impact researches at IRCER.

**Teaching:** The teaching will be taught at the University of Limoges, within ENSIL-ENSCI – engineering school (component of the position) – as well as at the Faculty of Science and Technology. It will focus on materials science, and more specifically on issues related to the life cycle, recycling and recovery of end-of-life materials, the synthesis of low-carbon mass-market materials, as well as the development of low-environmental impact processes. Courses in these areas have been offered in ENSIL-ENSCI engineering programs since 2024. The laboratory's increased expertise in these topics is an asset for training in the field of advanced ceramic processes and materials. It will enable students and staff to be trained in environmental issues and promote research/training/business interactions.

**Timeline:**

Official call for applications from **1st july 2025 to 31 august, 2025** - Start date: **1st december 2025**

Salary: **around 3400,00 € gross monthly**

To apply (CV + Cover Letter)

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