DP²I (Digital printing – Primer and Interface) – POST-DOCTORATE Position

R&D CDD position (post-doctorate)

Start: between April and Sep. 1st 2024 (duration 18 months)

Application deadline: March 31st 2024

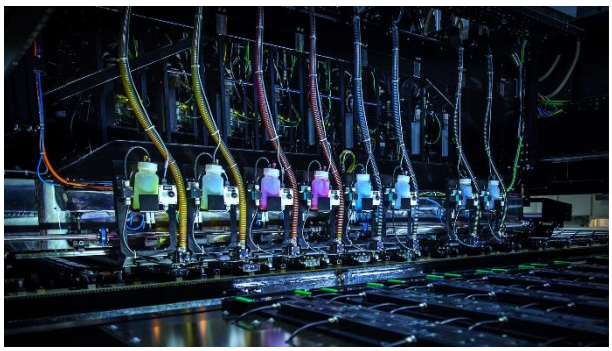
This post-doctorate position is part of a collaborative project between LGP2 (France) and Tarkett GDL (Grand Duchy of Luxembourg)

LGP2: Laboratory of Process Engineering for Biorefinery, Bio-based Materials and Functional, CNRS-Grenoble INP-UGA (https://lgp2.grenoble-inp.fr/en)
Tarkett GDL .S.A. Research Centre Z.A. Salzbaach 9559 Wiltz (GD of Luxembourg)

Key-words : Surfaces & interfaces, Fluid-substrate interaction; inkjet;

Project Description

Tarkett was a pioneer in the industrialization of the sustainable water-based inkjet printing process to print on flooring materials. This process is now mature and allows the conversion of millions of m² of modular floor tiles. It is critical that this competitive advantage is maintained, and Tarkett is therefore willing to continuously improve material properties and process efficiency.



The objective of this research project aims at the determination and comprehension of the relations between film, primer and inks composition, morphology and interfacial mechanisms happening between all the different layers.

- A first part will be dedicated to an in-depth characterisation of the industrial primer formulation and polymer substrates to deeper understand the role and interactions of specific components and process parameters on print quality and product performance.

The mechanisms of primer wetting, film forming, drying will be studied in relation with the primer structure and morphology.

The correlation between the above parameters and the ink receptivity, dot formation and wetting, as well as the ink drying will be determined.

- In a second part, and based on the results of the first part of the project, the goal is to optimize the formulation and propose an alternative to the actual formulation.

This project will require a multidisciplinary approach including polymer surface and interfaces, coating formulation (including emulsion science) and process as well as inkjet process.

This 18 months Post -doctoral fellowship project, starting April 2024, will be lead by the team of Mrs Aurore Denneulin/Anne Blayo and hosted at University Grenoble Alpes, Laboratoire de Genie des procedés papetiers – LGP2). A strong interaction with Tarkett research team based in Wiltz (Grand Duchy of Luwembourg), means regular trips and stays in Tarkett R&D Center and Tarkett facility in Luxembourg.

Candidate Profile:

- ⊃ PhD degree/ doctorate appreciated
- ⊃ Given the multidisciplinary aspect of the project, several types of skills can be valued:
  - Expertise in the field of materials (polymers, functional materials)
  - Expertise in deposition processes (coating, printing)
  - Expertise in surface & interface engineering
- ⊃ Autonomy, professionalism, capacity to analyze and synthesize, motivation, ability to work in a team
- ⊃ Good level in English
- ⊃ Able to travel regularly – short stays in Luxembourg

To apply to this offer, please send a detailed CV, an application letter and the contact information of a referring person (or a referring letter) if possible.

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