

TPCIM

Technologie des
Polymères et
Composites &
Ingénierie Mécanique

POSITION OPENING

POST-DOC in ADDITIVE MANUFACTURING / 3D PRINTING OF SMART PLASTIC PARTS “Integration of electronics using polymer additive manufacturing (WENERGY Project)”

Polymers and Composites Technology & Mechanical Engineering Department of IMT Lille Douai (Douai, France) recruits a post-doctoral researcher to work on **plastics & composites additive manufacturing**.

Context: Launched early-2018 and coordinated by the research center and engineering graduate school IMT Lille Douai (France), the WENERGY project, funded by Carnot MINES Institute, aims at developing an additive manufacturing facility dedicated to **integration of electronics in parts and components made of plastics and composite materials**.

Mission: The candidate will focus on:

- compounding of PEO/MMT materials that are potentially used as electrolyte for batteries. The aim is to investigate the fabrication of flexible batteries based on our knowledge and experience of compounding of these materials. The feasibility of integration of micro-batteries in parts obtained by additive manufacturing will be evaluated. Our research activity in the field of additive manufacturing currently uses the Freeformer technology, developed by Arburg. It opens the possibility to use any kind of thermoplastics to manufacture parts. Thus, the aim is to evaluate if the fabrication of micro-batteries is possible using polymer electrolyte and conducting polymer.
- electronic integration using polymer additive manufacturing. The aim is to evaluate the possibility to use LPKF technology to integrate 3D circuitry on parts obtained using Freeformer technology. In parallel, the possibility to use conducting polymer will also be investigated.

Candidate profile: PhD in polymer materials science or polymer processing technologies. Strong expertise in polymer additive manufacturing process and extrusion. Good communication skills in both written and spoken English. Knowledge of CAD softwares would be a plus.

Conditions: This position is open ASAP for 12 months. The work place is Douai (France). The postdoc fellow will receive a gross salary of 2550 € / month.

Application: Send by e-mail a CV and a letter of motivation at the address below. A list of publications and a couple of letters of recommendation will be also appreciated.

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