



Secteur des Sciences
et Technologies

Invitation à la soutenance publique de thèse de

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Pour l'obtention du grade de Docteur en sciences de l'ingénieur et
technologie

« Nanocomposites from novel polybenzoxazines – Thermal stability,
fracture toughness and thermo-mechanical properties »

qui se déroulera

le vendredi 13 septembre 2019 à 15h

Salle Jean-Baptiste Carnoy

Place Croix du Sud, 4-5

1348 Louvain-la-Neuve



 **UCLouvain**

« Polybenzoxazines have a unique set of thermal, mechanical and chemical properties, which makes them a versatile alternative to several other thermosetting resins. Nevertheless, further improving their thermal stability or thermo-mechanical properties could lead to additional applications. Moreover, benzoxazine share the low toughness characterizing high-performance thermosets. In this work, zinc oxide and carbon-based nanoparticles (CNPs) are used to improve the thermal and thermo-mechanical properties of benzoxazine resins. Next, addition of thermoplastics is shown to effectively activate a large number of toughening mechanisms. Last but not least, we investigate the impact caused by nanoparticles pre-dispersed in these thermoplastics on the mechanisms observed. This masterbatch approach paves the way to one-pot multi-property improvement of polybenzoxazines. »

Jury members :

Prof. Christian Bailly (UCLouvain), supervisor

Prof. Isabelle Huynen (UCLouvain), supervisor

Prof. Jacques Devaux (UCLouvain), chairperson

Prof. Thomas Pardoën (UCLouvain), secretary

Dr. Leïla Bonnaud (UMons, Belgium)

Prof. Patrick Terry McGrail (University of Limerick, Ireland)