**Cover Letter**

September 16th, 2019.

Professor Dr Ying Huang

Journal of Building Material Science

Dear Professor Huang,

**Subject: Submission to Journal of Building Material Science**

You will find attached the article: *“Cementitious composites containing multifunctional sugarcane fibres”* to be considered for a possible publication in the *Journal of Building Material Science*. Part of this work was presented at the 4th Brazilian Conference on Composite Materials (BCCM), held in Rio de Janeiro in 2018. This is the second paper developed by the authors about the use of sugarcane bagasse (SCB) in engineering applications. The first one was focused on the use of SCB as biosorbents for the treatment of effluents contaminated with engine-oil (doi: 10.2166/wst.2016.476). This particular piece of work is focused on the incorporation of SCB already used as oil absorbents into cementitious composites for application especially in precast products for civil engineering. The paper also presents relevant information on the limitation of ultra-pulse velocity (a non-destructive technique) to characterise composites containing fibres, in which the interfacial adhesion condition has a significant effect on its mechanical performance. A robust statistical planning based on full factorial design is conducted to evaluate the effects of fibre type, fibre length, fibre amount and fibre condition on apparent density, water absorption, apparent porosity, ultra-pulse velocity, dynamic modulus, flexural strength and modulus. This work also contributes to extend the end of life of SCB, previously used as raw material to produce ethanol and oil biosorbents. We believe that the sustainable and low-cost cementitious composites proposed in this work will be of interest to the Journal community.

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Yours sincerely*,*

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