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(57) Abstract :
ABSTRACT: Title: A Banana Fibrous Based Eco-Friendly Concrete Composition with High Mechanical Properties The present disclosure proposes a banana fibrous based eco-friendly concrete composition with high mechanical properties. The composition (100) of banana fibrous concrete comprises a raw banana fibre mixed at 3 to 5 weight percentage of length about 2.5 mm with 0.5 to 2.5 percentage of Nano-silica, 100 weight percentage of M-sand as fine aggregate, at least one super plasticizer, and a Portland Slag Cement (PSC) to obtain a banana fibrous concrete mixture. The obtained banana fibrous concrete is sustainable, eco-friendly, economical, and exhibits superior mechanical properties compared to conventional concrete. The banana fibrous concrete exhibits better compression strength than any conventional concrete. The banana fibrous concrete has good ductile properties and exhibits better performance in tensile strength for M35 grade with or without adding Nano-silica.

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