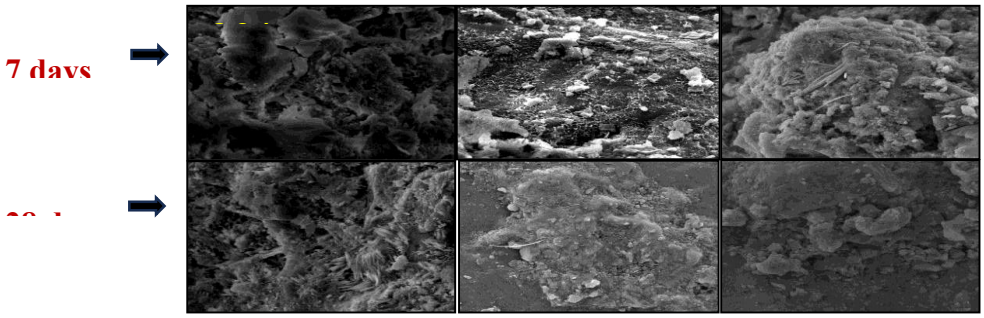
Process Know-How for Preparation of Biomass Derived Materials

Technology in Brief

Biochar can be characterized as the lightweight black residue, made of carbon and ashes, remaining after biomass pyrolysis. The conversion of biomass to biochar is accomplished using thermo-chemical decomposition under oxygen-constrained conditions at temperatures around 450-550^{0}C i.e., pyrolysis, which results in negligible emission of greenhouse gases. It can be used because the cost of production is the least expensive compared to all the by-products.

Salient features/Advantages

- Carbon Sequestration & Sustainability.
- Enhanced Thermal Insulation.
- Lightweight & Strength Improvement.
- Reduction in Cement Usage & CO_2 Emissions.



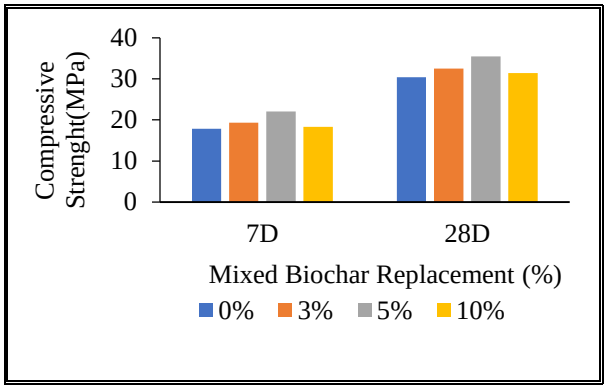


Fig:

End Product(s)	**Biochar-cement composites** (mortar, paste, concrete); Lightweight eco-friendly blocks/bricks
License/Commercialization	-
TRL	06
Environmental Impact	Carbon Sequestration; Carbon Footprint Reduction; Waste Valorization
Setup - Equipment required	Programmable Muffle Furnace