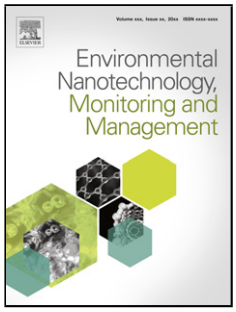

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Eco-friendly Cellulose Nano Fibers via First Reported Egyptian *Humicola Fuscoatra* Egyptia X4: Isolation and Characterization

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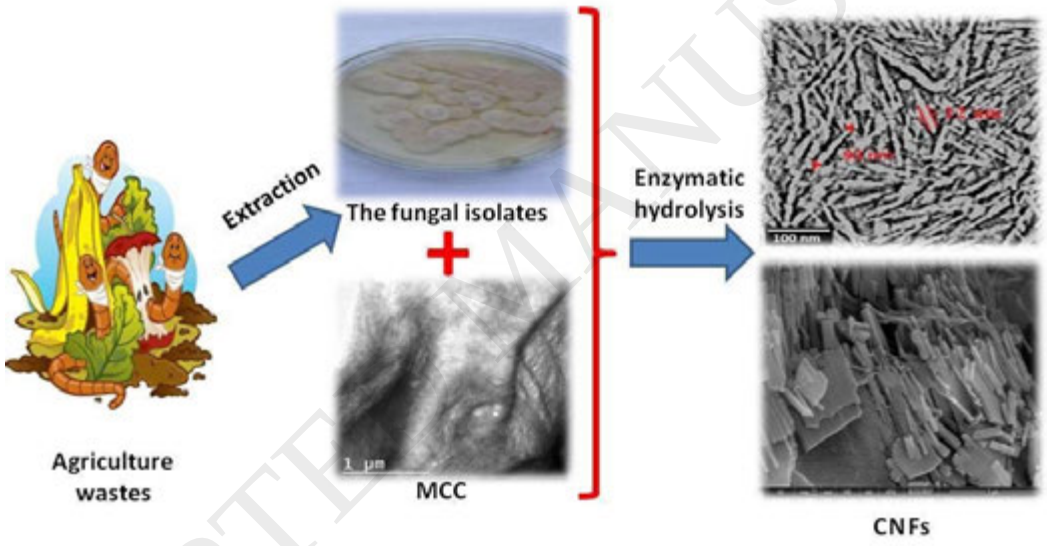
Graphical abstract



Highlights:

- Microbial enzymatic hydrolysis was studied a lot, but it is containing some of drawbacks overcome with unique in-suite incubation conditions.
- The new potential fungal strain (first reported in Egypt) is isolated from agriculture wastes to produce nanostructure cellulose.
- Advanced molecular biology technique used to identify the fungal isolate beside the traditional method.
- Cellulose nano fibers based on topographic and dynamic light scattering analysis found in nano scale, high thermal stability based on TGA analysis, and surface free radical based on zeta potential measurement.