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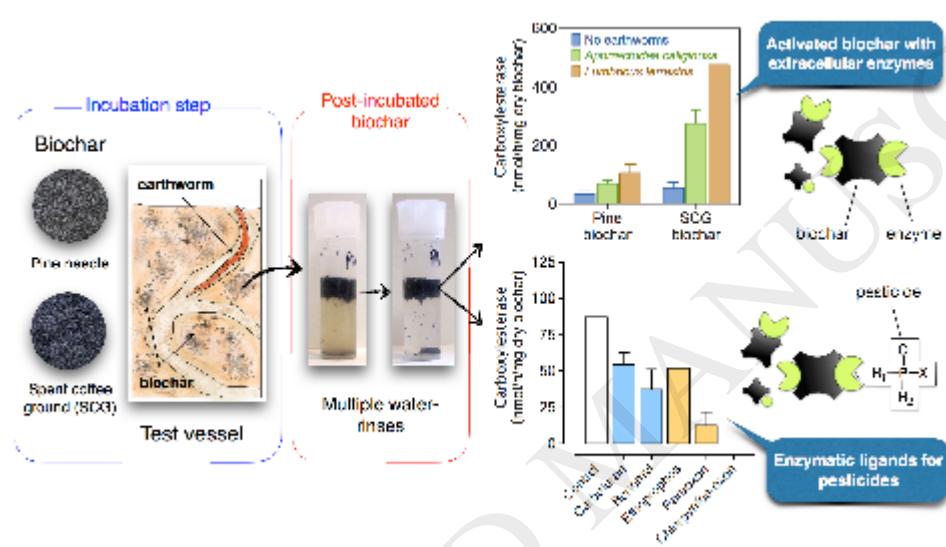
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Biochar activation with exoenzymes induced by earthworms: a novel functional strategy for soil quality promotion

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Graphical abstract



Highlights

- Post-incubated biochar displayed high extracellular enzyme activities
- Enzymatic activation of biochar was facilitated in the presence of earthworms
- Biochar-bound enzymes showed a high stability
- Biochar-bound carboxylesterases: novel ligands for organophosphate pesticides
- Spent coffee ground-derived biochar retained the highest enzyme activities

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