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A novel enzyme catalysis reactor based on superparamagnetic nanoparticles for biotechnological applications

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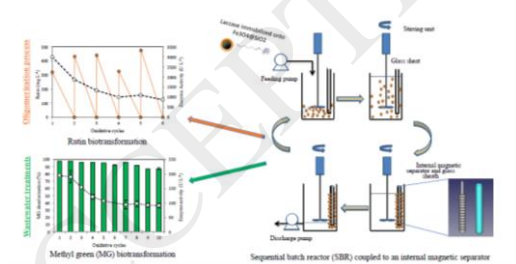
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Graphical abstract



Highlights

- A magnetic separation unit of toroidal magnets in alternate polarity was designed.
- Laccase immobilized on magnetic nanoparticles was successfully recovered.
- Methyl green and rutin were successfully transformed in the magnetic enzymatic reactor.
- The scalability and economic feasibility of the process were investigated.

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