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Synthesis, Kinetic Analysis and Modelling of Galacto-Oligosaccharides Formation

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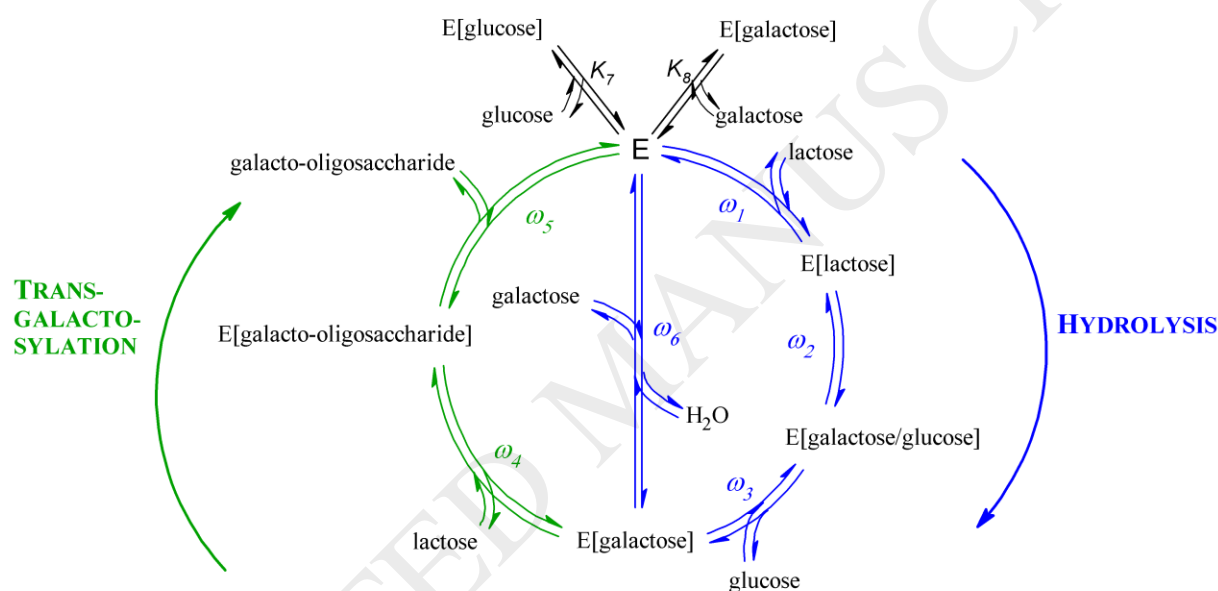
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Graphical Abstract



Highlights

- Kinetic analysis of galacto-oligosaccharides (GOS) formation from lactose in a broad range of operating parameters
- Static and dynamic perturbation experiments performed to identify inhibition effects and reaction network
- Catalytic cycle postulated and mechanistic kinetic models for GOS synthesis based on Christiansen methodology derived
- Sensitivity analysis by parameter reduction techniques performed to reduce kinetic models to sensitive parameters only
- Model validation successful, provides basis for process development and optimization

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