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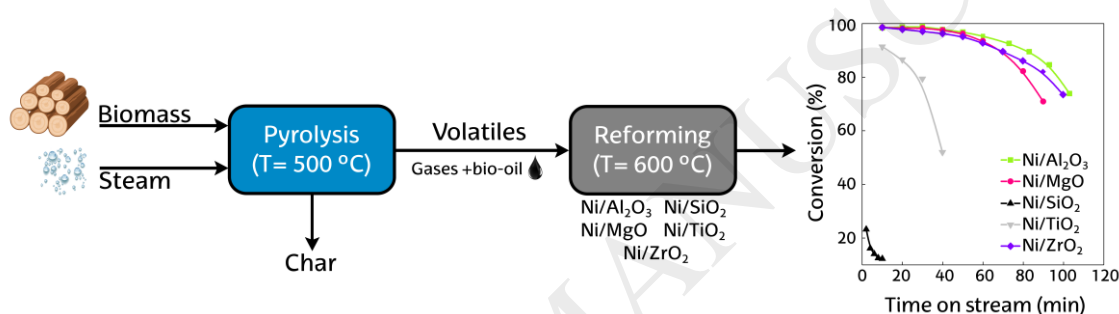
Stability of different Ni supported catalysts in the in-line steam reforming of biomass fast pyrolysis volatiles

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Graphical abstract



Research Highlights

- Ni/Al₂O₃, Ni/ZrO₂ and Ni/MgO are the most active and stable
- Ni/ZrO₂ is not highly active, but its deactivation rate is low
- Coke deposition is the main cause of catalyst deactivation
- Ni/SiO₂ has a poor performance regarding diffusional transport
- TiO₂ phase transformation affects the performance of Ni/TiO₂ catalyst

Abstract

The performance and stability of different Ni supported catalysts has been studied in a continuous bench scale plant fitted with a conical spouted bed reactor for biomass

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