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Selectively Convert Fructose to Furfural or Hydroxymethylfurfural on Beta Zeolite: the Manipulation of Solvent Effects

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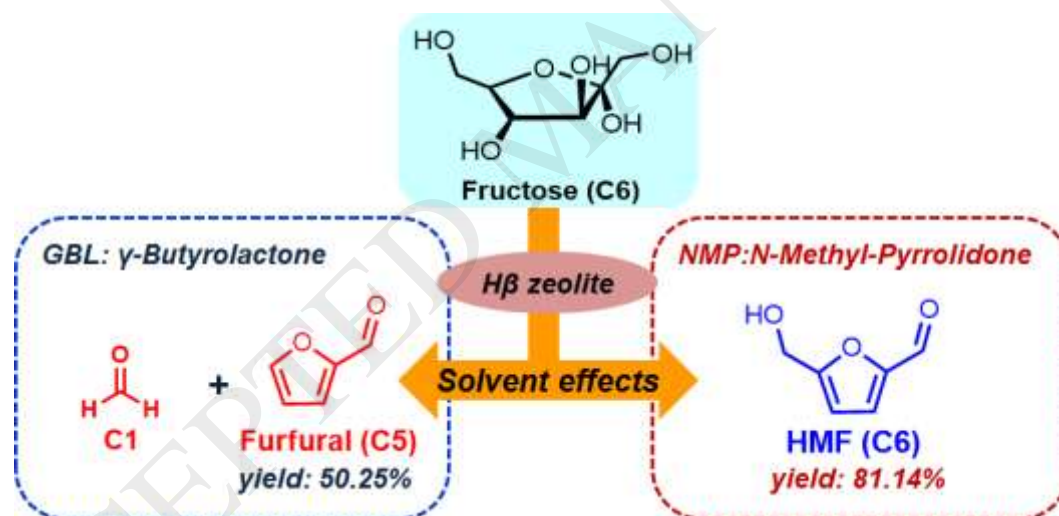
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Graphical abstract

The solvent effects, associated with coordinated environment of aluminum, proved to be an important factor in dehydration of fructose on H β .



*Highlights (for review)

Highlights

- Appropriated yield furfural was achieved in γ -butyrolactone, while high yield hydroxymethylfurfural (HMF) was obtained in N-methyl-pyrrolidone under the same H β zeolite.
- Solvent-catalyst interactions have been suggested to influence catalytic selectivity of H β zeolite for producing furfural or HMF from fructose.

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