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Hydrogenation of sodium hydrogen carbonate in aqueous phase using Metal / activated carbon catalysts

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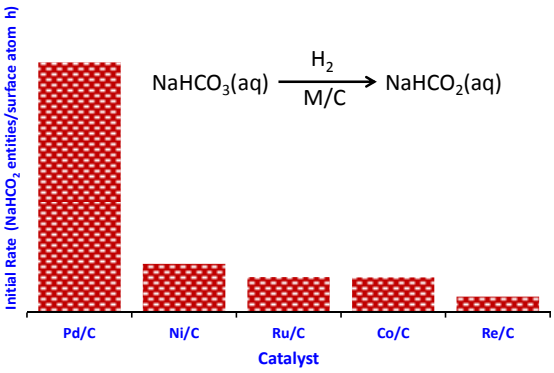
Graphical abstract



Highlights

- The Pd/C and Ru/C were the most active catalysts in hydrogenation of $NaHCO_3$
- Only the $NaHCO_2$ formation was detected on five catalysts studied.
- The lower activity of Re, Ni and Co catalysts was due to the oxidation of metals
- Pd and Ru catalysts activity after four recycles was due to reduced phase's stability

The catalytic hydrogenation of sodium hydrogen carbonate in aqueous phase ($NaHCO_3$) to produce sodium formate (or formic acid) on activated carbon-supported