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# Continuous flow synthesis of tetrahydrofurfuryl ethyl ether via reductive etherification of furfural

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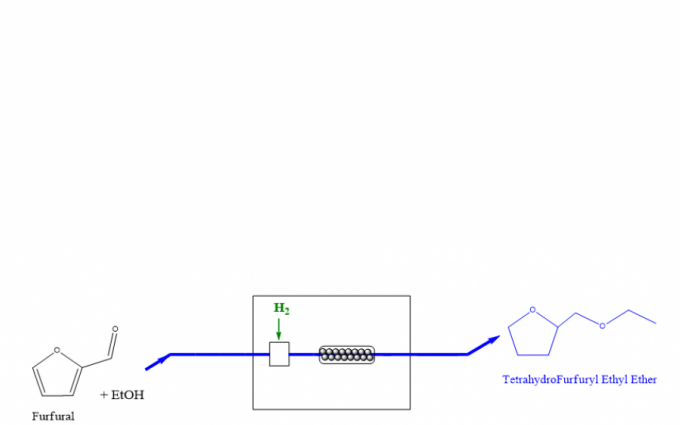
## PURPOSE OF THE ABSTRACT

Continuous flow system has been reported to provide several relevant advantages because of their better heat and efficient monitoring of reaction parameters and the good reproducibility [1]. Moreover, the conversion of biomass using this type of process is an alternative technology in term of green chemistry and sustainable development.

Furthermore, lignocellulosic biomass derived furfural is the most important and renewable biobased chemicals [2]. Indeed, furfural is a versatile industrial chemical with a varied range of applications and can provide a large variety of high added value compounds such as ethyl furfuryl ether and tetrahydrofurfuryl ethyl ether.

In the present study, a single-step process has been developed for the reductive etherification of furfural into tetrahydrofurfuryl ethyl ether using palladium supported on activated carbon as catalyst under continuous flow conditions. The catalyst activity has been investigated and the various reaction parameters were also optimized.

## FIGURES




## FIGURE 1

Continuous flow synthesis of tetrahydrofurfuryl ethyl ether

single-step process

## FIGURE 2


## KEYWORDS

Continuous flow | Furfural | Reductive etherification | Palladium catalyst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