## Supplementary information

## Efficient synthesis of Niobium pentoxide nanowires and

## application in ethanolysis of furfuryl alcohol

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Figure S1 XRD analysis of  $Nb_2O_5$  nanomaterials after different reaction time (a. 5h, b 10h, c 15h, d 25h.)



Figure S2 SEM analysis of Nb<sub>2</sub>O<sub>5</sub> nanomaterials after different reaction time (a. 5h, b 10h, c 15h, d 25h.)



Figure S3 TEM analysis of  $Nb_2O_5$  nanomaterials after different reaction time (a. 5h, b 10h, c 15h, d 25h.)



Figure S4. Gas chromatograph of the ethanolysis reaction







Figure S7. Mass spectrometry analysis of diFA



Figure S8 pyridine infrared spectroscopy analysis of 100-wNb, 300-wNb.