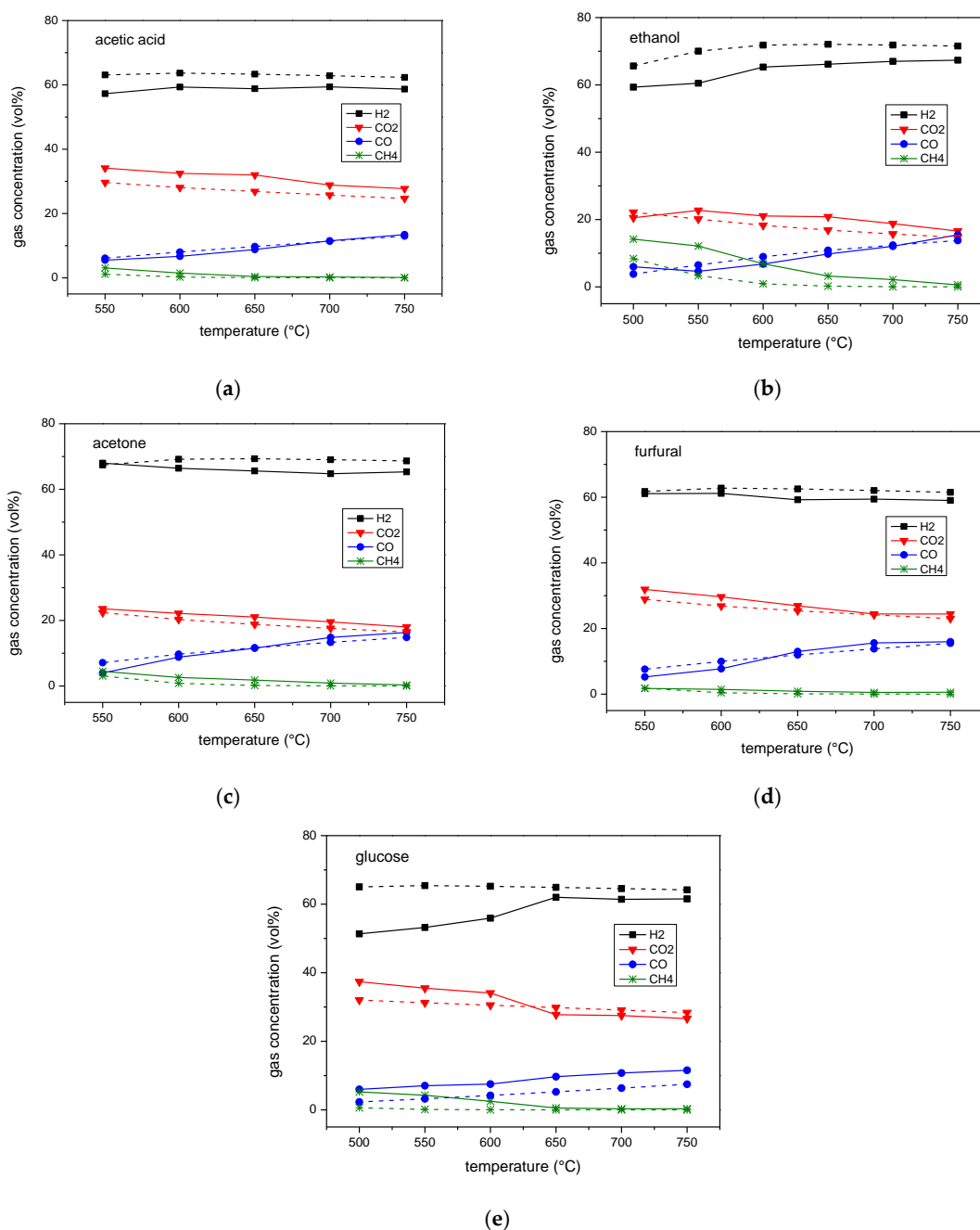
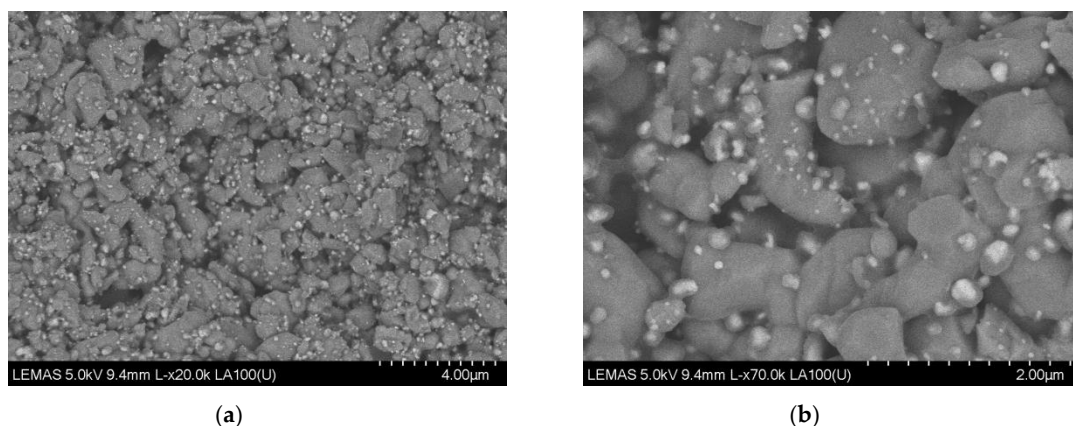


# Supplementary Materials: Steam Reforming of Bio-Compounds with Auto-Reduced Nickel Catalyst

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**Figure S1.** Dry gas composition from steam reforming of bio-compounds with the auto-reduced catalyst. (a) acetic acid; (b) ethanol; (c) acetone; (d) furfural; (e) glucose. Note: Dry gas composition (in vol %) from steam reforming of bio-compounds at 1 atm with S/C of 6 for glucose and S/C of 3 for the rest (solid line: experimental data, dashed line: equilibrium data).



**Figure S2.** SEM image (LA-BSE signal) of the Ni catalyst (a) 20 k magnification, (b) 70 k magnification.

Low angle back-scattered electron (LA-BSE) signals of the reduced catalyst were collected and the LA-BSE image is shown in Figure S2. LA-BSE images are able to provide topographical information and composition contrast by brightness contrast. The heavier the element is, the brighter the corresponding site is in a LA-BSE image. Figure S2 confirms that the small particles with high brightness on the catalyst surface were Ni granules rather than carbon deposits, in accordance with the EDX analysis (Table 3 in the manuscript).