Ni and/or Ni-Cu Alloys Supported over SiO₂ Catalysts Synthesized via Phyllosilicate Structures for Steam Reforming of Biomass Tar Reaction

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Fig. S1. DT/TG analyses of cellulose material.

Fig. S1 shows most of the cellulose can be gasifies to gaseous products below 400 °C in air atmosphere. That explains cellulose may not yield char during steam reforming reaction.
Fig S2. TEM images of (a) 10Ni/SiO$_2$, (b) 25Ni/SiO$_2$P, (c) 35Ni/SiO$_2$P, (d) 45Ni/SiO$_2$P, (e) 30Ni-5Cu/SiO$_2$P and (f) 25Ni-10Cu/SiO$_2$P catalysts reduced at 750°C/1 h.
Fig S3. XRD patterns of spent 35Ni/SiO$_2$P and 30Ni-5Cu/SiO$_2$P catalysts. Reaction condition: W = 200 mg; cellulose = 150 mg.min$^{-1}$; He = 90 mL.min$^{-1}$; S/C = ~0.5; reaction temperature = 600 °C; reduction temperature = 750 °C/1 h.