Supplementary Information

Enhanced Hydrogen Production by Assisted Biomass Gasification Using Lithium Manganate as a Bifunctional Material

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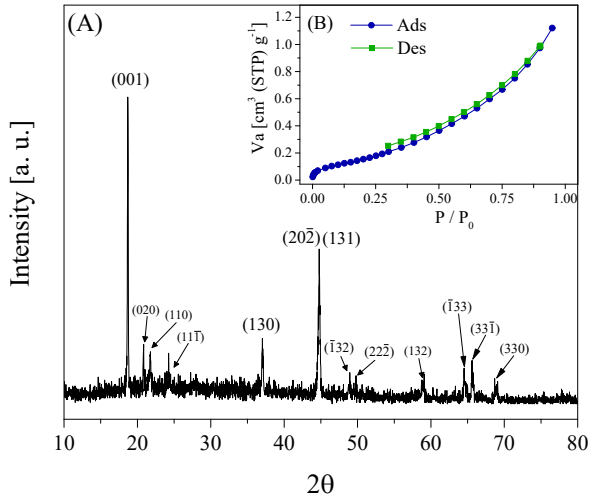

Figure S1. Characterization techniques of synthesized Li_2MnO_3; XRD (A) and Ads-des N_2 isotherm (B).

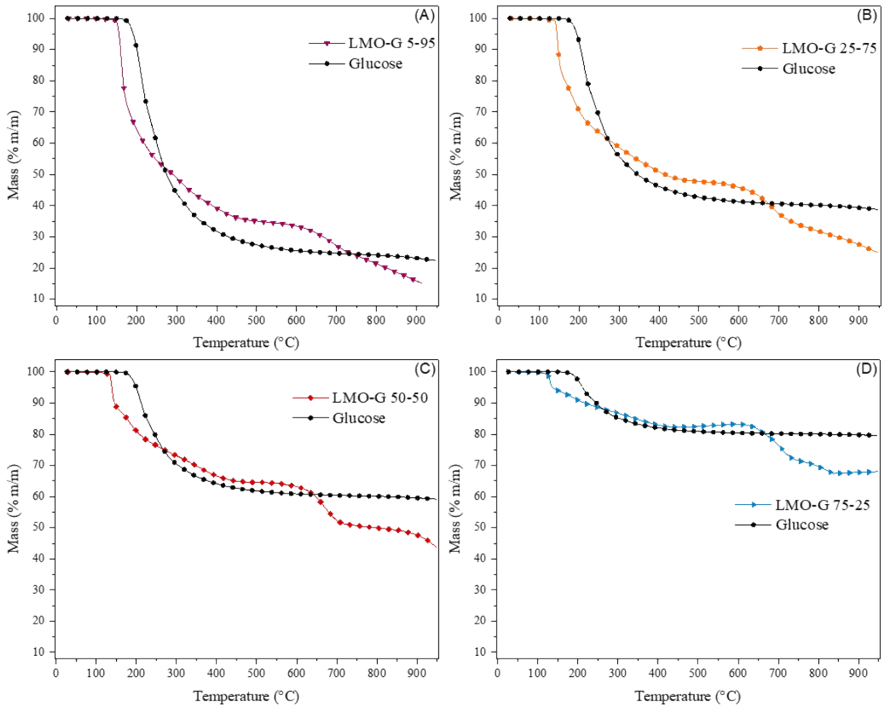

Figure S2. Thermogravimetric analyses from mixtures of different Li_2MnO_3 and glucose ratios: 5-95 (A), 25-75 (B), 50-50 (C), 75-25 (D) at 5 °C min^{-1} in N_2 flow. Glucose sample was added in all the cases normalized in every case for the weight content in the sample.

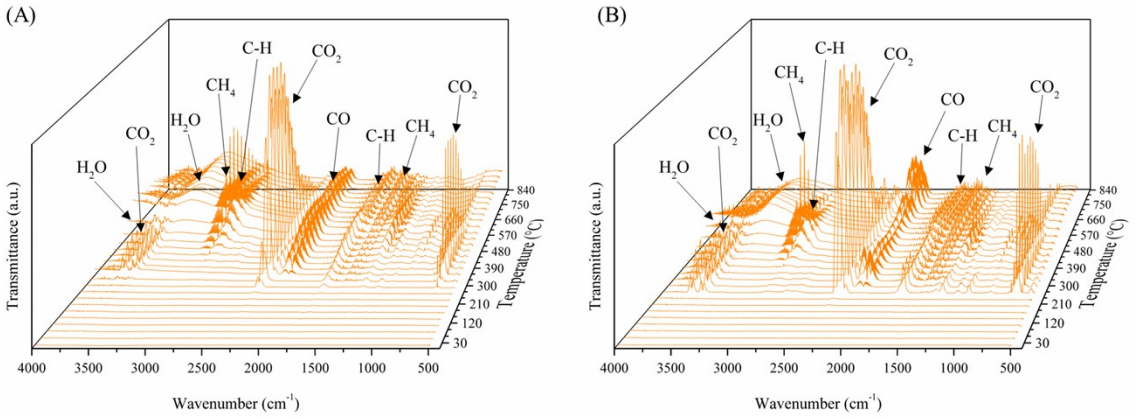

Figure S3. FTIR gas-cell measurements of the gas products from pyrolysis of glucose (A) and LMO-G 25-75 (B) samples, as a function of temperature.

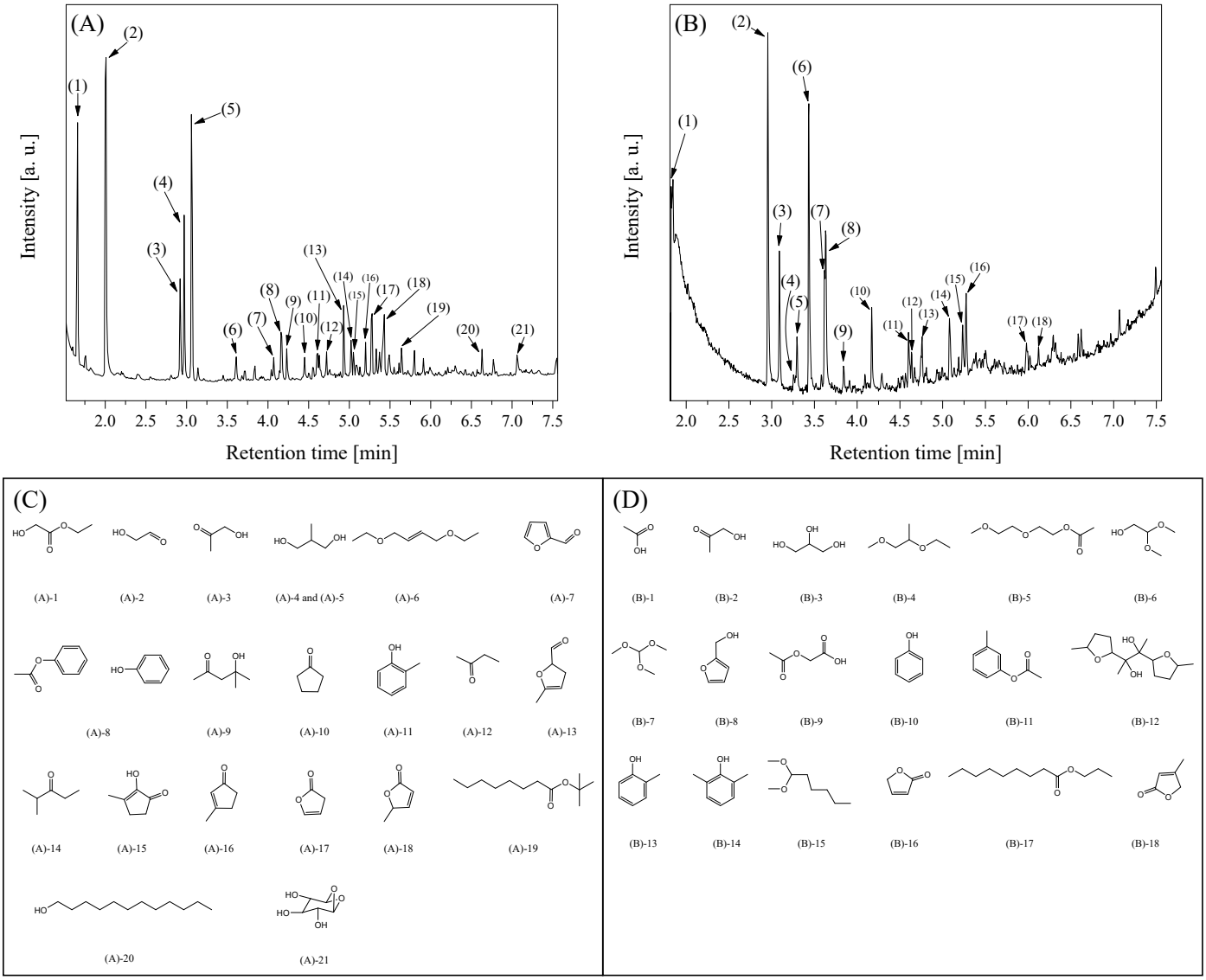

Figure S4. Gas chromatographs of the condensable volatile products of pyrolysis of glucose (A) and LMO-G 25-75 (B) samples, as well as the identification of the numbered peaks through mass spectrometry (C) and (D), respectively.

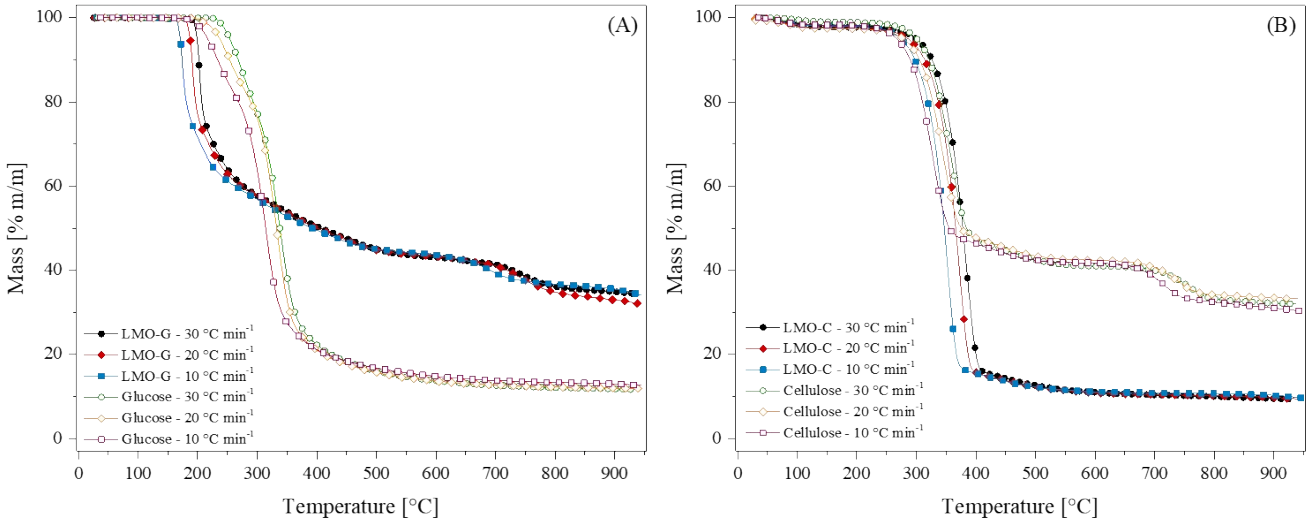

Figure S5. Thermogravimetric analyses from mixtures of different biomass types: glucose (A) and cellulose (B), with or without Li_2MnO_3 at different heating rates, from 10 to 30 °C min^{-1} in N_2 flow.