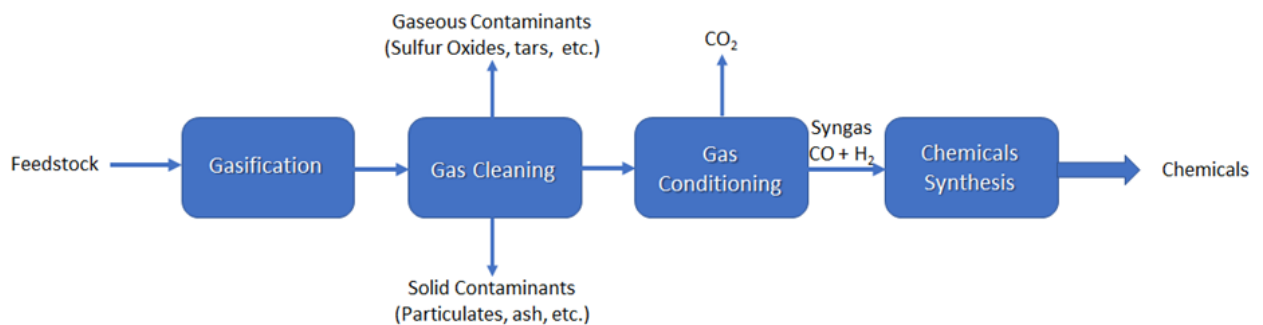


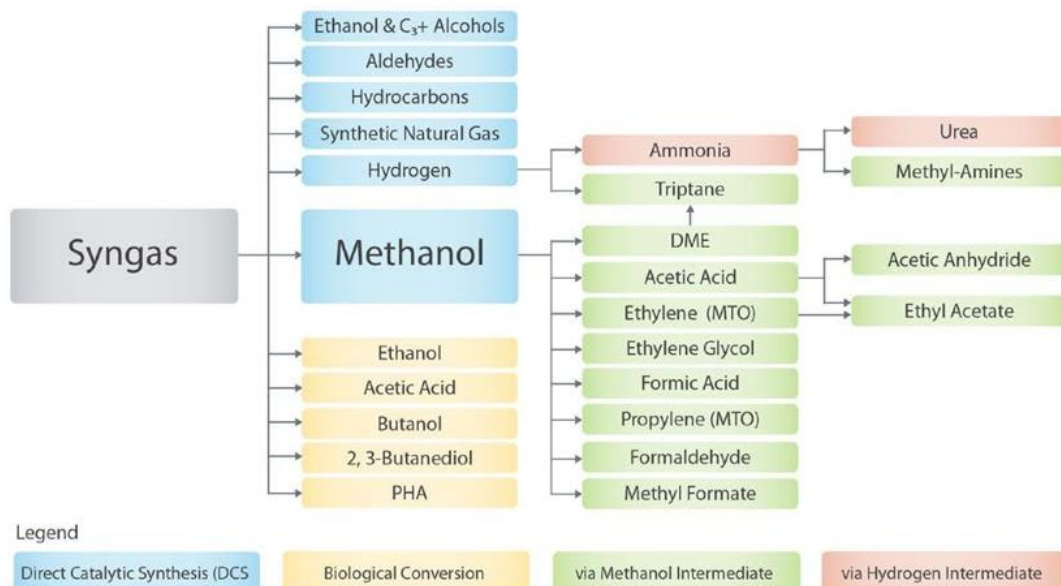


Biomass gasification for the chemicals production

Production of chemicals from synthesis gas is a well-established technology that is practiced world-wide to manufacture intermediates used in the chemical industry.



Typical examples include methanol and aldehydes and other alcohols by hydroformylation of olefins with carbon monoxide from syngas. Syngas from biomass can also be converted into renewable hydrocarbons and different oxygenated chemicals using the Fischer-Tropsch synthesis, or as a source of bio-hydrogen.



Adapted from J.A. Schaidle et al. 2017

An opportunity exists for production of chemicals with low carbon intensity from syngas by using a renewable carbon source - such as biomass - and employing carbon capture, utilization, and storage (CCUS) to greatly reduce or even eliminate GHG emissions.