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(54) Title: INTEGRATED PROCESS TO PRODUCE ALDEHYDES FROM SYNTHESIS GAS

(57) Abstract: A process for preparing aldehydes from synthesis gas includes introducing a first feed stream comprising hydrogen gas and a carbon-containing gas comprising carbon monoxide into a reaction zone of a first reactor, converting the first feed stream into a first product stream comprising C2 to C4 hydrocarbons in the reaction zone in the presence of a first catalyst, wherein the first product stream further comprises carbon dioxide, removing water and C4 and higher hydrocarbons from the first product stream to form a second feed stream, and converting the second feed stream into a second product stream comprising propionaldehyde in the presence of a second catalyst in a second reactor. The propionaldehyde can further be converted to methyl methacrylate via oxidative esterification.



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