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(54) **Title:** PROCESSES FOR BIOCONVERSION OF CARBON BEARING MATERIALS

(57) **Abstract:** A process involving a microorganism consortium for converting at least one component in a carbon-bearing material to a different product comprising at least one hydrocarbon. In the process, a microorganism consortium is contacted with a composition that causes an increase or decrease of a relative population of at least one species of microorganism in said microorganism consortium, to enhance a yield or selectivity or alter a rate of said process. The composition may be selected from a composition that affects an intracellular pathway of said at least one species of microorganism, a composition that affects an intercellular signaling pathway that involves said at least one species of microorganism and at least one antisense RNA. Also, the microorganism consortium can be exposed to signals such as sound waves or electromagnetic signals or a condition of the environment of the microorganism consortium can be altered.



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