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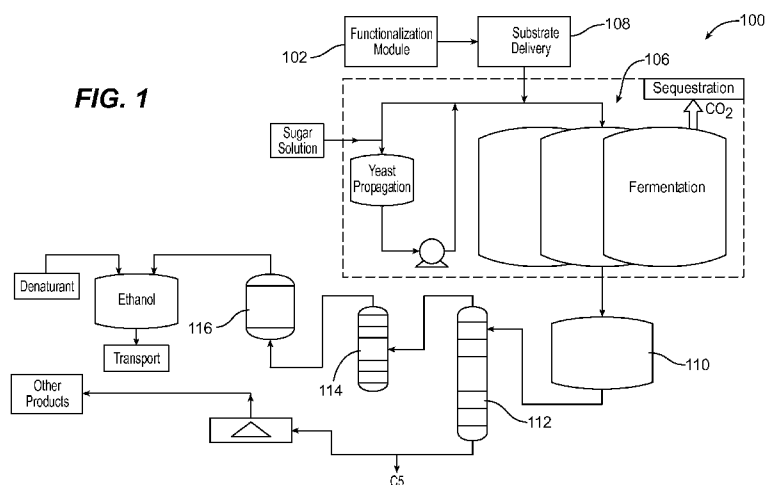
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FIG. 1



(57) Abstract: Functionalized substrate materials, for example inorganic particles and/or synthetic polymeric particles, are used to enhance bioprocesses such as saccharification and fermentation.