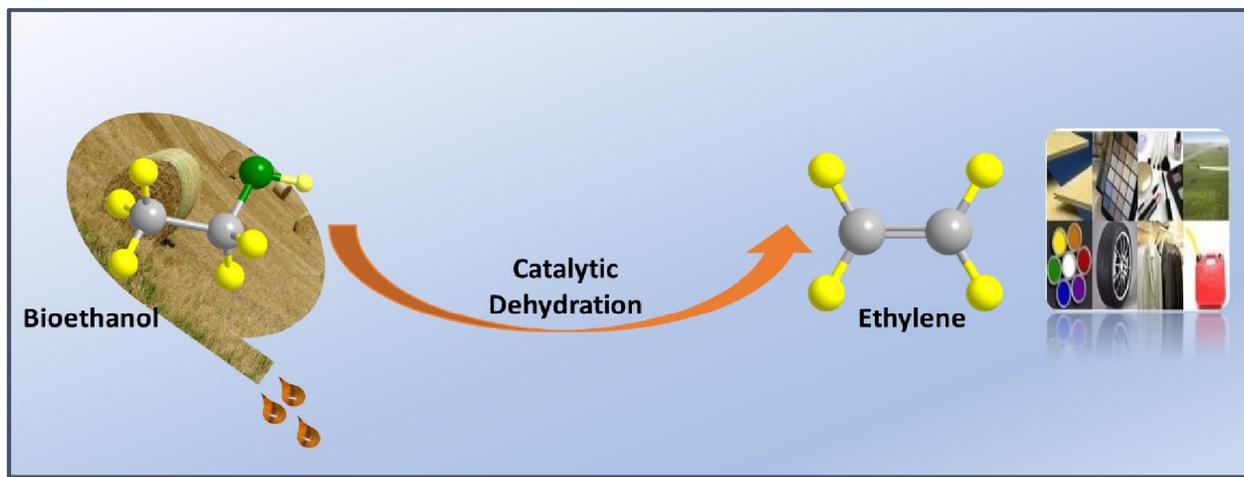


Dehydration of Bioethanol to Ethylene



Ethylene is one of the leading petrochemicals produced worldwide with the annual consumption of 140 MMT and is the key building block of the polymer industry. Majorly it is being produced by naphtha cracking, the traditional ethene production process in one of the most energy intensive process, which eventually ends up with large carbon footprints.

Global concern about sustainability has prompted researchers to find the alternative route of ethylene synthesis. Ethylene produced by dehydration of bioethanol obtained from renewable sources such as sugarcane, cellulose, lignocellulose, or agriculture waste is one such green alternative. The advantage of using bioethanol, which contains 6 to 30 mass% of ethanol, is to reduces expensive distillation and dehydration techniques required for its use as fuel.

