

## Biological Hydrogen Production as a Renewable Energy

정규열\*

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Hydrogen has not only the highest energy content per unit weight among the known gaseous fuels, but also has the clean combustion by-product nothing worse than water vapor and heat energy. Thus, in contrast to fossil fuels, hydrogen does not contribute to the greenhouse effect, depletion of the ozone layer and acid rain. Over 90% of the world's hydrogen is produced from fossil fuels. Unfortunately, these processes are not always environmentally benign because of emission of carbon dioxide during the processes. On the other hand, evolution of carbon dioxide is zero-sum in the biological hydrogen production. Among various processes of biological hydrogen production anaerobic fermentation has several advantages over the others. It can utilize a wide range of substrates, both pure as well as waste products, and does not rely on the availability of light sources. In this presentation, current status of the biological hydrogen production technologies will be presented.