

Intratec Evaluates the Economic Potential of Renewable Ethylene Production

HOUSTON, TX, July 5, 2013 /EINPresswire.com/ -- [Intratec](#) has released the publication "Green Ethylene from Ethanol" detailing the economics of an ethylene via ethanol dehydration process suggested by BP Chemicals R&D staff

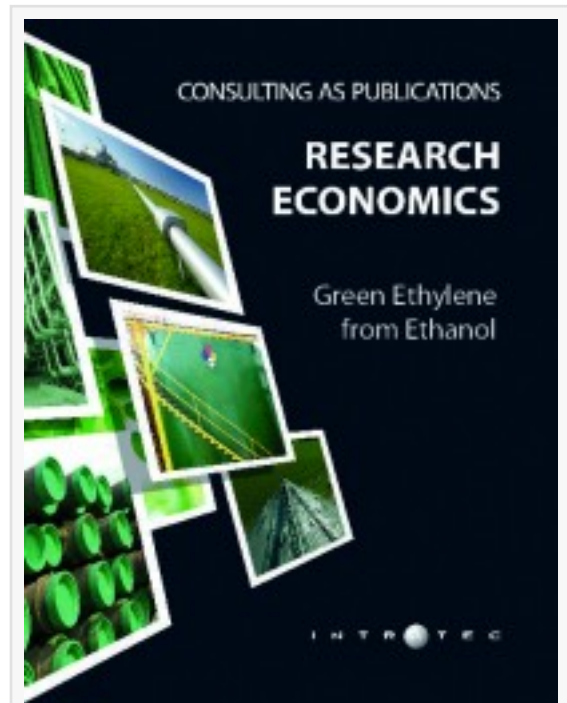
Seeking to reduce the chemical industry's dependence on fossil raw materials, several companies have been researching ways to substitute petroleum-derived chemical building blocks for renewable equivalents. A patent issued by BP Chemicals (Application US 2009/0082605) discloses a process to produce green ethylene from biomass ethanol dehydration.

In the proposed process, ethanol is dehydrated in a fixed bed reactor under mild conditions. According to BP Chemicals, milder reaction conditions lead to improved ethylene selectivity and yield, since moderate reaction temperatures reduce the formation of undesirable by-products, such as alkanes. Therefore, the use of some expensive cryogenic separation equipment could be limited, reducing associated capital requirements and operating costs.

The assessment, "Green Ethylene from Ethanol", published by Intratec Solutions LLC, evaluated the technical aspects and economic performance of this process based on capital and operating expenses estimates for a 190 kta plant utilizing the process patented by BP.

The study notes that the construction of such a plant demands investments of about US\$ 230 million. In one of the process scenarios evaluated by Intratec, it was confirmed that the formation of by-products would require additional purification equipment, increasing the necessary investment by approximately US\$ 20 million. A sensitivity analysis also evaluated the impact of the reaction conversion on both capital and operating costs (CAPEX and OPEX).

In addition, an analysis of the plant operating costs showed that, at the current process development stage and under the pricing conditions of Q3 2012, green ethylene does not compete with petrochemical ethylene on pricing; however, there are niche consumer markets



Techno-Economic study on ethylene production from biomass-derived ethanol.



There are niche consumer markets eager for the benefits of an environmentally friendly product and willing to pay more for them.”

Intratec Solutions LLC

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“Green Ethylene from Ethanol” is available at established distribution channels like [Amazon.com](https://www.amazon.com) and [HP Magcloud](https://www.hp.com). A preview of the publication can be found at <http://www.intratec.us/publications/green-ethylene-from-ethanol>.

About Intratec Solutions

Intratec (www.intratec.us) offers online the most affordable and reliable advisory services on mature process technologies, emerging chemical process technologies and chemical process improvements. Intratec also provides techno-economic publications for chemical and allied industries. Intratec's expertise resides at the intersection of technology and strategy - a natural fit for clients looking for thought-provoking technological analysis and visionary strategic thinking.

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