

## Process for Producing Synthetic Liquid Hydrocarbon

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**Categories:**

- Chemical Engineering
- Green Technology

**Keywords:**

- Biofuels
- Biomass
- Chemical Engineering
- Clean Energy
- Fuel Cells
- Green Technology
- Hydrocarbons
- Hydrogen Storage

The transportation sector relies almost exclusively on liquid hydrocarbons as its energy source. The high energy density for gasoline far exceeds that of any proposed replacements. Additionally, the distribution system is efficient and already in place. Unfortunately this energy source is not sustainable forever and causes numerous environmental issues due to carbon dioxide emissions.

Purdue University researchers have developed a method to synthesize liquid hydrocarbon fuels using biomass and a carbon-free energy source. This process converts a larger amount of carbon in a biomass to hydrocarbon fuel than existing methods. Because of the increased efficiency in the carbon conversion, less land area is needed to produce the feedstock.

**Advantages:**

- Significant decrease in land area required to support entire transportation sector
- Conversion of all available carbon to liquid fuel

**Potential Applications:**

- Green technology
- Clean energy

**People:**

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**Intellectual Property:**

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