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Process for Thermal Oligomerization

A mild, high-yield process converts olefins to gasoline/diesel with little methane waste.

Researchers at Purdue University have discovered a method to convert olefins to gasoline and diesel fuels at higher rates and yields than is currently possible. Some geographical regions

do not have a robust chemical industry but are rich in shale gas reserves, so this method provides an opportunity for local fuel production. The gas phase reaction results in little methane or

coking and can run for many days without significant loss of conversion. The method does not require harsh reaction conditions; effective conversion occurs at pressures between ambient and 45 bar and above 200 degrees Celsius.

Technology Validation: The gas phase reaction results in little methane or coking and can run for many days without significant loss of conversion.

Advantages:

- Fast

- High yield

- Simple

Applications:

- Gasoline and diesel fuel production

TRL: 2

Intellectual Property:

Provisional-Gov. Funding, 2021-11-05, United States

PCT-Gov. Funding, 2022-11-04, WO

Technology ID

2022-MILL-69587

Category

Chemicals & Advanced Materials/Specialty & Performance Chemicals

Semiconductors/Packaging & Integration

Chemicals & Advanced Materials/Materials Processing & Manufacturing Technologies

Further information

Will Buchanan
wdbuchanan@prf.org

View online

NATL-Patent, 2024-05-02, United States

Keywords: Chemical Engineering, CISTAR, Diesel Fuel, Fuels Production from Shale Gas, Gasoline