

Squeezing more synthetic fuel from abundant supplies of coal

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Scientists in Italy are reporting that a new process could eliminate key obstacles to expanded use of coal gasification to transform that abundant domestic energy resource into synthetic liquid fuels for cars and trucks. The study is scheduled for the November 19 issue of ACS' bi-monthly journal, *Energy & Fuels*.

In the study, Maria Sudiro and colleagues note that coal is the only conventional energy source with the potential for meeting global energy demands in the near future.

World coal reserves, they note, are 25 percent greater than crude oil and the United States alone has enough coal to supply its own energy needs for centuries. However, existing processes for converting coal into much-needed liquid fuels are uneconomical and release too much carbon dioxide, a greenhouse gas, and other air pollutants.

Based on laboratory simulations and comparisons with conventional coal gasification, their system was 70 percent more energy efficient, yielded 40 percent more fuel and released 32 per cent less carbon dioxide. "The new process configuration can represent a valuable alternative route to obtain syngas both for electric power generation and for synthetic fuel production," the report states.

Article: "Improving process performances in Coal Gasification for Power and Synfuel Production" [dx.doi.org/10.1021/ef800293h](https://doi.org/10.1021/ef800293h)

Source: ACS

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