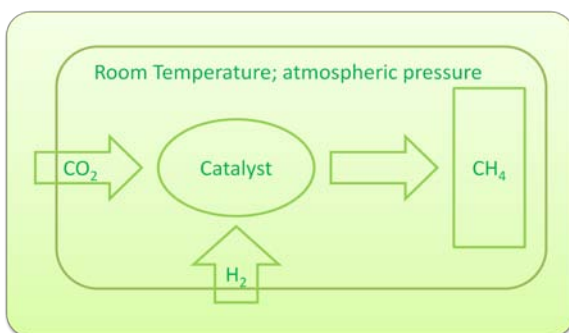




Recycling CO₂ into hydrocarbon fuel at room temperature and atmospheric pressure

Sopartec, the technology transfer company of the Université catholique de Louvain (UCL), presents a new catalyst for production of methane from CO₂ and H₂ at room temperature and atmospheric pressure.



Technology Keyword

- CO₂ recycling
- Catalyst

Technology Market – Oil, Gas, Chemicals

The use of fossil fuels creates important problem for the society. CO₂ emissions produced either directly (by cars, power stations) or indirectly (by steel industry, cement industry or chemical industry) is currently one of the main cause of global warming and climate change. Secondly, fossil-fuels are non-renewable sources of energy and at some point in the future the supply will not be enough to meet the world demand.

Carbon capture and Storage (CSS) is currently the most common solution for reducing CO₂ emissions. Such solution is very expensive and alternatives that would allow the recycling of the emitted CO₂ into fuel would be of great benefit for the humanity.

The UCL invention

Researchers at the Université Catholique de Louvain have identified a catalyst that convert CO₂ and H₂ into CH₄ at **room temperature** and **atmospheric atmosphere**. This is an important breakthrough, since it can be seriously envisaged that the **recycling of CO₂**, to produce chemicals, under friendly conditions, could be possible. Hydrogen can be produced from environmentally-friendly processes and renewable energy sources

Another key advantage of this technology is the selectivity of the catalysis process. Methane and water are the only products. Thus, methane is produced experimentally with a selectivity of 100%.

The results allow envisaging not only to produce methane with zero emission of CO₂ but also to consume existing or produced CO₂.

These results could give important guidelines for improving the efficiency in CO₂ sequestration processes. The production of methane at the geological subsurface could be envisaged

Technology Status

This work is subject of a patent application, and Sopartec would like to talk to companies interested in developing and commercializing this opportunity.

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