

# Sunfire produces sustainable crude oil alternative



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**Sustainable alternative to crude oil: Sunfire has produced more than three tons of the synthetic crude oil substitute 'Blue Crude' using green energy, CO<sub>2</sub> and water. In order to do this, Sunfire's power-to-liquid plant in Dresden was operated continuously for more than 1,500 hours. The industrial-scale endurance test was part of a project funded by Germany's Federal Ministry for Economic Affairs and Energy (BMWi). "Our amazing team has achieved another milestone on the journey towards industrial commercialisation," said Nils Aldag, Chief Commercial Officer at Sunfire. Almost ten tons of CO<sub>2</sub> was used to generate the energy-rich crude oil substitute.**

"Many areas in our economy are dominated by crude oil. Everyday products from sports shoes to cosmetics would be unthinkable without crude," emphasizes Nils Aldag. "Our Blue Crude is a CO<sub>2</sub>-neutral alternative to crude oil that can be manufactured anywhere in the world using our technology. It has huge potential for the world's decarbonisation efforts and the fight against climate change."

Car manufacturer AUDI AG received some of the product produced by Sunfire and their tests confirmed the presence of premium properties typically found in Fischer-Tropsch products – the synthetic fuel (Audi e-diesel) has a high cetane value and therefore features excellent combustion properties. Importantly it does not contain sulphur or aromatic compounds and produces almost no soot particles during combustion.



## **Blue Crude for mobility and everyday products**

The product has comparable properties with racing fuel, even without additional processing. “Blue Crude can be used with the existing refinery, fuelling stations and transportation infrastructure,” said Christian von Olshausen, Chief Technology Officer at Sunfire. “As such, it is the most efficient way of electrifying transport routes, long-haul traffic and air traffic and transitioning these sectors to renewable systems in the medium term.”

It remains to be seen how much of the crude oil substitute can be manufactured over the coming years. Aircraft manufacturers, airlines, truck manufacturers and manufacturers of speciality chemicals have all shown commercial interest in Sunfire’s technology in recent months. Even existing rail networks that would otherwise be extremely expensive to electrify can become 100-percent renewable and CO<sub>2</sub>-neutral through a combination of reliable diesel-hybrid railcars and e-fuel.

## **Sector coupling with Sunfire electrolysis**

In the run-up to the market launch, the green hydrogen produced by Sunfire’s electrolysis process (SOEC) currently has to be supplied to the chemicals and mobility sectors through refineries. This will start to bring these industries together with the energy sector and allow Blue Crude production facilities to be established in collaboration with industry partners.

## **About Sunfire**

Sunfire is a global leader in the production of industrial electrolyzers based on pressurized alkaline and solid oxide (SOEC) technologies. With its electrolysis solutions, Sunfire is addressing a key challenge of today’s energy system: Providing renewable hydrogen and syngas as climate-neutral substitutes for fossil energy. Sunfire’s innovative and proven electrolysis technology enables the transformation of carbon-intensive industries that are currently dependent on fossil-based oil, gas, or coal. The company employs more than 650 people located in Germany and Switzerland.

For more information visit [www.sunfire.de](http://www.sunfire.de)

