

CARE-O-SENE

Catalyst Research for Sustainable Kerosene

CARE-O-SENE (Catalyst Research for Sustainable Kerosene) is a German-South African research project for the new and further development of catalysts in the Fischer-Tropsch (FT) process. These FT catalysts play a key role in the large-scale production of green kerosene. With the help of optimised catalysts, sustainable aviation fuels (SAF) can be produced more efficiently.

The international consortium has received funding of around 30 million euros from the Federal Ministry of Education and Research. Furthermore, CARE-O-SENE is the first project of the German National Hydrogen Strategy in which solutions for a worldwide challenge are being developed in global cooperation.

Key data of the research project:

- **By 2025**, CARE-O-SENE wants to set the course for large-scale production of green kerosene with a new generation of catalysts
- Goal: **More than 80 percent** process yield, significantly more fuel production with the same resource input
- **30 million euros in funding** from the Federal Ministry of Education and Research (BMBF)
- International consortium partners contribute an additional **10 million euros**
- Important component of the **National Hydrogen Strategy** of the Federal Republic of Germany

Seven German and South African project partners contribute their expertise:

- [Sasol Ltd.](#) and [Sasol Germany GmbH](#)
- [Helmholtz-Zentrum Berlin fuer Materialien und Energie \(Helmholtz Centre for Materials and Energy, HZB\)](#)
- [Fraunhofer Institute for Ceramic Technologies and Systems \(IKTS\)](#)
- [Karlsruhe Institute for Technology \(KIT\)](#)
- [University of Cape Town, Department of Chemical Engineering \(UCT\)](#)
- [INERATEC GmbH](#)

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About Sasol:

Sasol Germany GmbH is a manufacturer of high-quality chemical products with production sites in Brunsbuettel and Marl and its head office in Hamburg. Around 1,700 employees and almost 60 trainees produce innovative, sustainable products and develop solutions for the processing industry. The company offers a wide range of products, including substances for the production of detergents and cleaning agents, paints and coatings, cosmetics and pharmaceutical products. In addition, specialities such as high-purity and ultra-high-purity aluminas are used, for example, as catalyst carriers in catalytic converters for the automotive industry, industrial applications and high-performance abrasives.

Sasol Germany GmbH is part of the South African Sasol Group, a leading integrated chemical and energy company with almost 28,000 employees in 22 countries manufacturing and marketing first-class products. The Sasol Group includes the business divisions of Sasol Chemicals, Sasol Energy and Sasol ecoFT. The Sasol ecoFT division, newly founded in 2021, uses both Sasol's protected technology as well as expertise and experience to manufacture sustainable fuels and chemicals made of green hydrogen and sustainable carbon sources via the power-to-liquids process (PtL).

About HZB:

The Helmholtz-Zentrum Berlin fuer Materialien und Energie (HZB) is researching solutions for a climate-neutral society. Re-searchers are developing and optimising efficient and cost-effective energy materials for photovoltaic cells, batteries and catalysts. The HZB uses a research infrastructure with the accelerator-based x-ray source BESSY II which enables unique insights into materials and permits operando analyses. With around 1,200 employees, HZB is one of the largest non-academic research centres in Berlin in the field of energy research and is member of the Helmholtz Association. More information: www.helmholtz-berlin.de