

News Release

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BASF partners with China BlueChemical and Wuhuan Engineering to develop new technology for use of CO₂ rich marine gas

- **BASF to develop and supply innovative catalyst solutions that enable CO₂ direct utilization via reforming and synthesis gas to chemicals**
- **Reduction of carbon footprint via improved process efficiency and carbon efficiency is the core of the partnership**
- **Focus is on utilization of Marine gas with a high CO₂ content**

BASF signed a joint development agreement with China BlueChemical Limited Company (China BlueChemical), a leading natural gas producer, and the chemical engineering company Wuhuan Engineering Co., Ltd. (Wuhuan Engineering) to promote low-carbon development and utilization of marine gas resources.

In the Dongfang Industrial Park of Hainan Province, China BlueChemical extracts large quantities of such offshore natural gas (marine gas) from gas fields in the South China Sea.

Marine gas, unlike the commercial natural gas, contains high concentrations of CO₂. The gas needs CO₂ removal to be usable for downstream large-scale applications. The process of separating CO₂ from natural gas not only increases energy consumption, but also contributes to yield loss and direct carbon emissions. These issues limit the systematic development and utilization of natural gas with high CO₂ content.

BASF will leverage its extensive expertise in catalyst development and will collaborate with the two companies to solve these challenges. Through technical

innovation in reforming catalysts, special reactor design and related process technology development, BASF's solution will improve process energy efficiency and carbon efficiency beyond existing commercial catalyst and process technology. The partnerships will promote lower-carbon development and utilization of marine gas resources, and ultimately achieve an economically competitive and environmentally friendly commercial process.

"Combining the advantages of our oil and gas development capacity in the South China Sea and BASF's expertise in catalyst technology, we hope to seize the opportunity to establish a good strategic partnership for cooperative development of green and low-carbon footprint using marine gas," said Wang Weimin, Chairman of China BlueChemical Limited Company.

"With our superior process research and development as well as engineering practice capabilities, Wuhuan will complete the design and research tasks with guaranteed quality. Through our joint efforts, we can effectively resolve the challenges of CO₂ rich oil and gas exploitation and large-scale resources utilization of CO₂," said Cheng Lachun, Chairman of China Wuhuan Engineering Co., Ltd.

"With our product development, scale up and production capabilities, BASF's catalysts can significantly contribute to the improvement of the process energy efficiency and carbon efficiency for marine natural gas utilization. Through our joint efforts, we aim to develop a commercially viable process for utilizing marine gas with a substantially reduced CO₂ footprint. We consider it an important step towards realizing our mutual target of carbon neutrality at economically competitive conditions," said Dr. Detlef Ruff, Senior Vice President Process Catalysts at BASF.

About BASF's Catalysts Division

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success. Further information on BASF's Catalysts division is available on the Internet at www.catalysts.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 110,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2020. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.