

Carbon Dioxide as a Sustainable Carbon Source – Activities of the German Federal Ministry of Education and Research

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Over the past years, the importance of CO₂ valorisation to broaden the raw material base, to support the goals of the energy transition and also to contribute to climate change mitigation has significantly increased. Promising technologies have been developed with a broad spectrum of application: CO₂ based polymers and fuels as well as construction materials and basic chemicals have become feasible and furthermore, the CO₂ valorisation value chains span different sectors and spark new forms of collaborations under the so-called industrial symbiosis.

The German Federal Ministry of Education and Research (BMBF) continuously supports the development of innovative technologies utilising CO₂ since 2010. With the new funding measure “CO₂-WIN – Pathways to industrial application” several new projects with an emphasis on the transfer from laboratory to industry will start in 2019. The new funding measure also addresses the topic of mineral carbonation for the first time in Germany in a dedicated manner. Other focus topics include artificial photosynthesis and electrochemical conversion.

To structure R&D support of this complex topic in the future, a comprehensive research and innovation agenda is currently under development.

BMBF also continues the efforts to a more consistent support of CO₂ valorisation RD&I on European level. As partner of the PHOENIX Initiative, BMBF supports activities to harmonise life cycle analysis and techno-economic assessment guidelines as a basis for decision making on European and membership level.