

From Waste to Resource – New developments in German CCU research and innovation

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The chemical industry heavily depends on fossil resources as carbon source for the organic chemicals sector. To limit the use of these non-sustainable feedstocks and to minimise the dependency, alternatives have to be found that can be incorporated into existing chemical value chains. A virtually everywhere abundant carbon source is carbon dioxide, which can be transformed into valuable C₁-platform chemicals and more complex materials in a sustainable fashion.

The German Federal Ministry of Education and Research (BMBF) has supported the development of innovative technologies utilising this greenhouse gas with the funding measure “Technologies for sustainability and climate protection – Chemical processes and use of CO₂” since the year 2010. Coming to an end, this successful programme showed however, that there are still questions to be answered and novel technologies to be explored in order to establish these so-called CCU-technologies on the market.

Within the new funding measure “CO₂Plus – utilisation of CO₂ to broaden the raw material base”, BMBF funds 13 joint projects with partners from academia and industry that are focused on topics in the highly innovative fields “Chemicals and polymers from CO₂”, “Electro and photo catalysis” and “Capture and separation of CO₂ from sources other than energy flue gases”. The projects of “CO₂Plus” have started in September 2016 and will finish in autumn 2019.