Covestro achieves a breakthrough in research

**Key chemical now derived from plants**

- Biomass as new raw material for aniline production
- Petroleum savings – better CO₂ footprint
- Completely new process jointly developed with partners

Covestro has scored a research breakthrough for the use of plant-based raw materials in plastics production: aniline, an important basic chemical, can now be derived from biomass. The materials manufacturer achieved this by collaborating with partners on the development of a completely new process, which is now being further developed and upscaled. The ultimate goal is enabling the production of bio-based aniline on an industrial scale. That would be an unprecedented achievement in the chemical industry.

Until now, only fossil raw materials had been used for the production of aniline, which plays an important role in the chemical industry and is used as starting material for numerous products such as drugs, paints and plastics. Covestro needs aniline as a precursor for rigid polyurethane foam, a highly efficient insulating material used in buildings and refrigeration systems.

Being able to derive aniline from biomass in now another key step towards making the chemical and plastics industries less dependent on fossil raw materials and market fluctuations. The process currently under development produces aniline with a much better CO₂ footprint than that manufactured with standard technology. And the reactions take place under milder conditions.

The newly developed process uses a microorganism as a catalyst to first convert the industrial sugar into an aniline precursor. The aniline is then derived by means of chemical catalysis in a second step. This means one hundred percent of the carbon in the aniline comes from renewable raw materials. This is a clear contribution towards a Circular Economy.
About Covestro:
With 2019 sales of EUR 12.4 billion, Covestro is among the world’s largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 17,200 people (calculated as full-time equivalents) at the end of 2019.

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