

Vortragsankündigung

- im Rahmen des UniCat-Kolloquiums -

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Es spricht: **Herrn Prof. Thomas Hirth**, Institut für Grenzflächenverfahrenstechnik, Universität Stuttgart

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Ort: **TU Berlin**
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Thema: **Catalytic conversion of renewable raw materials by combination of chemical and biotechnological routes**

Abstract: Prior to the background of reduced resources for raw materials and reduced green house emissions, the access to chemically important building blocks (platform chemicals) based on renewable raw materials e.g. lignocelluloses, starch, sugars, fatty acids, chitin has gained greater attention in industries and academia. From an economic point of view polymers, fine chemicals e.g. adhesives and surfactants, fibres and lubricants could be of real interest for the industrial use of renewable raw materials. In addition the importance of sustainable integrated processes (combination of chemical and biotechnological routes) is growing in industries.

For the use of renewable raw materials the synthesis of platform chemicals by three strategies can be recognised. First of all renewable raw materials e.g. sugars from various carbohydrates or lignocelluloses are transferred by biotechnological processes to platform chemicals e.g. ethanol, 1,3-propanediol, lactic acid or 3-hydroxycarboxylic acid. Secondly renewable raw materials e.g. sugars can be converted to platform chemicals e.g. furfural, 5-HMF or sorbitol. The third route comprises thermal processes e.g. gasification to syngas which can be followed by Fischer-Tropsch synthesis.

The potential of ethanol, lactic acid, sorbitol and 5-HMF as platform chemicals will be presented, comprises their use for the synthesis of ethylene, acrylic acid, 2,5-furandicarboxylic acid and corresponding polymeric products based on renewable raw materials.

Organisator: Prof. Dr. M. Ansorge – Schumacher (TUB)

Gäste sind herzlich willkommen!

Prof. Dr. Matthias Drieß
Sprecher des Exzellenz-Clusters UniCat