



CDS RESEARCH CENTER DYNAMIC SYSTEMS SYSTEMS ENGINEERING

Chemical Production

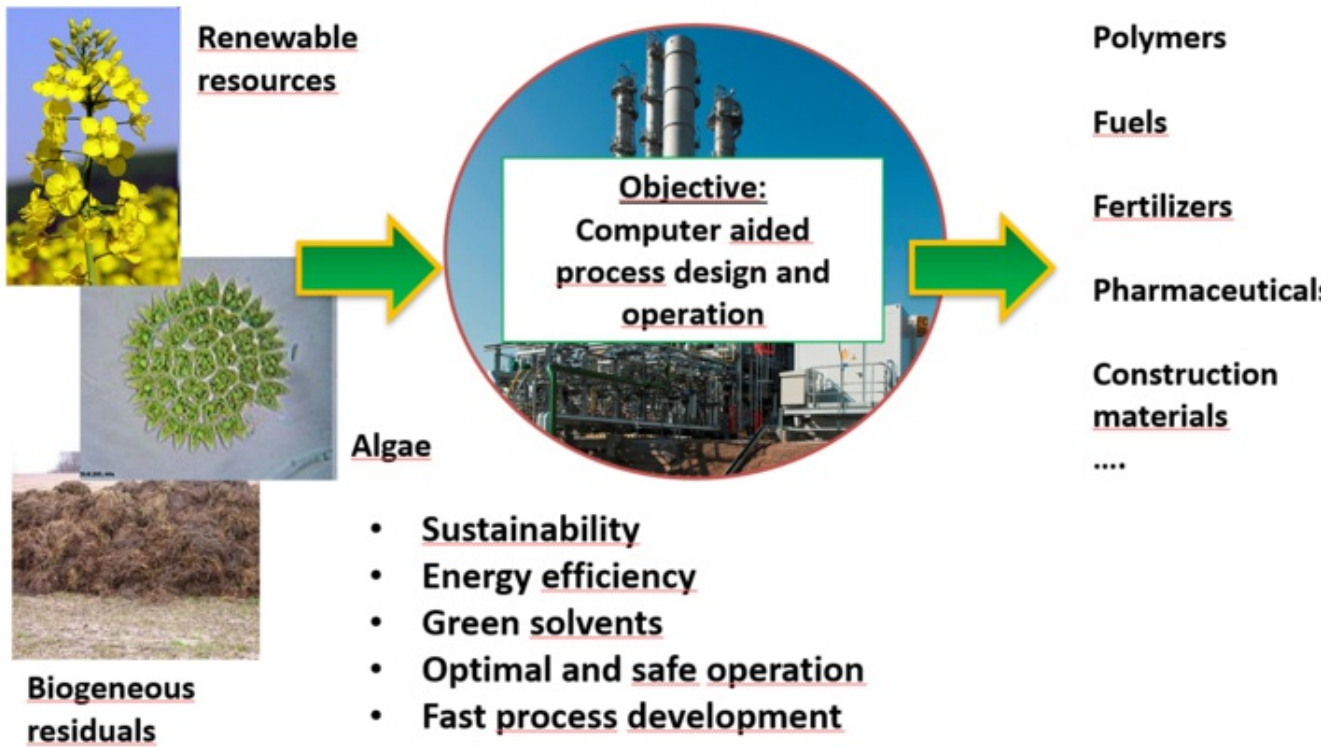
The area of Chemical Production deals with the development of new chemical processes from renewable raw materials and biogenic residues as well as for the synthesis of customised particles, which play an important role in many areas application. Due to the complexity of such production systems, new methods of model-based system design, optimisation and control are required.

The research on chemical production systems within the CDS focuses on **methods for systematic development** and **robust operation of particle processes** as well as **sustainable chemical production**. In this context, the **increased use of residues and renewable raw materials, energy efficiency and automatic adjustment of desired product properties** play an important role. Beyond chemical composition, particle size distribution and morphology are of major interest in the field of particle processes. The effectiveness of pharmaceutical products, for example, often also crucially depends on these issues.

Important collaborative projects in the field of fundamental research are the **RTG Priority Programmes 2080** on 'Catalysts and reactors under dynamic operation for energy storage and energy transformation'.

Important application-oriented projects funded by the European Structural Fund (ERDF) include the microbial production of biopolymers from residues of the food industries in Saxony-Anhalt, model-based optimizing process control of biotechnological processes with uncertain process models, and the development of new crystallization and fluidized bed agglomeration processes.

Sustainable Chemical Production



Research

- ▶ Energy Conversion
- ▶ Chemical Production
- ▶ Active Substances
- ▶ Key Technologies