

Prof. Dr.-Ing. Dieter Bathen

Lehrstuhl für Thermische Verfahrenstechnik

Fakultät für Ingenieurwissenschaften, Universität Duisburg-Essen, Sekretariat MD 135, Tel. 0203-379-2535

## Adsorption Technology (2V, 1Ü)

Adsorbers are used in a lot of technical products and processes of all scales; from small applications like odour control filters in car cabins to massive plants for water treatment or air separation. All of these processes are based on the separation capacity of microporous solids like activated carbon or silica gel.

The lecture covers the whole bandwidth of adsorption processes in gas and liquid phase with a focus on industrial applications. In addition to the lecture exercises and practical trainings on laboratory plants are offered.

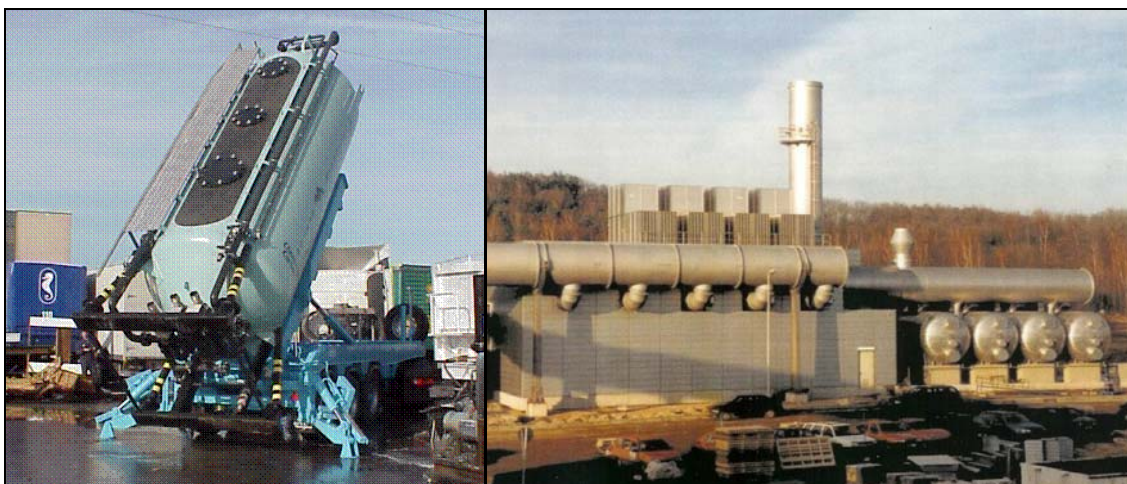
In detail the following topics will be addressed:

- Basics of Adsorption and Desorption
- Mathematical Description and Simulation
- Adsorption Equilibria
- Adsorption Kinetics
- Technical Adsorbents
- Technical Desorption Processes
- Industrial Gas Phase-Adsorptions-Processes
- Industrial Liquid-Phase-Adsorptions-Processes

Duration: 2 V, 1 Ü (Summer Term)

Exam: Written exam

Betreuer: Prof. D. Bathen



Fotos: Mobile adsorber on lorry (Chemviron Carbon) and adsorber in printing works (Donau Carbon)