

» Our Vision: CO₂ Fixation in Polymers

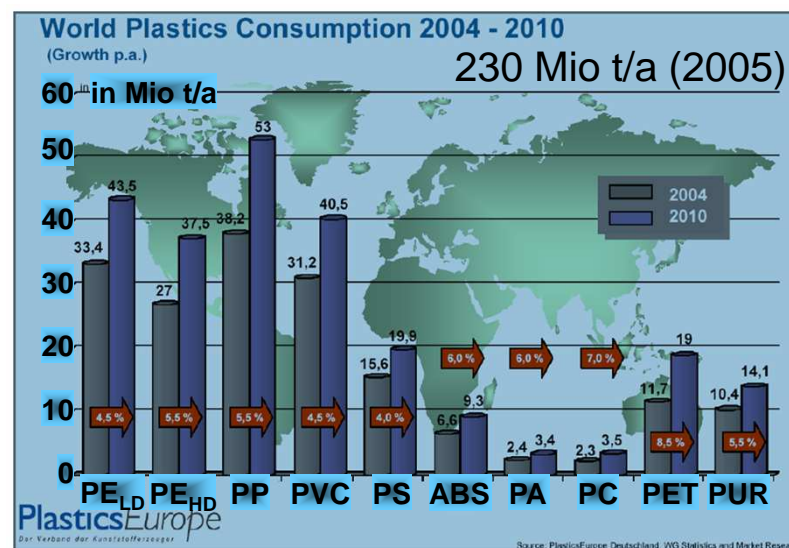
An attractive option in global CO₂ management

The use of CO₂ is an attractive option in global CO₂ management.

- » CO₂ is an interesting raw material, which can be used as C1-building block for chemical syntheses.
- » **Fixation in polymers is particularly attractive.**
- » The energetically low level can be overcome by
 - Reaction with reactive molecules;
 - Appropriate reaction engineering, which enables high yields also in equilibrium-limited reactions;
 - Use of an external energy sources (heat, light) to drive the reaction to the products.
- » CO₂ is an inert molecule requiring activation by the use of appropriate catalysts

The use of CO₂ can not provide a single solution for the reduction of CO₂ emissions.

Overall energy balance needs to be considered to implement sustainable chemical processes.



Classic thermoplastics

Engineering thermoplastics

More oxidised,
Lower energy content

Shift to more oxidized
materials anticipated