Phoenix Project: Introduction

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biomass as feedstock

- new" chemistry
- low vapour pressure
- liquid processes
- high viscosity
- solid impurities
- aqueous hydrophilic separation
- thermodynamics

new products
strongly functionalized

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gravity settler
gravity settler
multiple interactions

foam production

coalescence
between drop and surface

swarm effect

coalescence

phase stabilization

interaction between solid particles and drops

sedimentation

prediction of multiple phenomena

design of technical equipment

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stirring cell

double-wall glass vessel

2 counter-rotating shafts

engine

second vessel for internals

stirring settling cell

stirring-cell experiment

sedimentation curve
coalescence curve
ReDrop program

holdup profile

height in m

time in s

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calibration device
Phoenix project (Horizon 2020)

- anaerobic digestion
- pyrolysis
- hydrothermal carbonization
- fermentation
- ...

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