



CHIM2211 Combustion physicochemistry I

[22.5h+0h exercises] 2.5 credits

This course is taught in the 1st semester

Teacher(s): Jacques Vandooren
Language: French
Level: Second cycle

Aims

The aim of the course is to introduce to the conversion of chemical energy into heat and mechanical work.

Main themes

After summing up the basic principles of chemical kinetics in gaseous phase as well as reviewing the different phenomena involved in heat and mass transfer, we analyse the theory of straight- and branched chain reactions. Self-ignition, and problems about the chain- and thermal explosions are reviewed in details. Cool flames are investigated in closed and open systems.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: physical chemistry (general chemical kinetics).
Evaluation: oral examination with written preparation.
Support: course notes and books on combustion.
Supervision: by the teacher.

Other credits in programs

CHIM21 Première licence en sciences chimiques
CHIM22 Deuxième licence en sciences chimiques