UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Laboratory of Physical Chemistry II

2021-2-E2702Q089-E2702Q091M

Aims

To integrate the learning of thermodynamics and kinetics

Contents

The course is based on the execution of physical chemistry experiments, which provide manual skills and methodologies useful for deepening learning of thermodynamic and kinetic arguments.

Detailed program

Laboratory experiments: Calorimetric measurements of phase transitions. Heat combustion determination by calorimetric bomb. Rate law determination. Determination of kinetic reaction parameters by conductimetric methods and UV-vis spectroscopy. Determination of thermodynamic reaction parameters by UV-vis spectroscopy.

Prerequisites

Basic knowledge of thermodynamics and kinetics. Basic knowledge of mathematics

Teaching form

Laboratory activities and exercises in computer classroom

Textbook and teaching resource

Lecture notes

Semester

2nd semester

Assessment method

Oral examination supported by the analysis of a laboratory report prepared in advance by the student. Questions will regard the discussion of experimental techniques in the following fields:

- calorimetric measurements of phase transitions

- heat combustion determination by calorimetric bomb

- rate law determination and determination of kinetic reaction parameters

- determination of thermodynamic reaction parameters by UV-vis spectroscopy.

The underlying theoretical principles are also object of the oral examination.

Office hours

On appointment (by email request)