

Curriculum Vitae

Kristel Bernaerts

Main expertise in summary

Research focuses on the investigation, development, modelling and optimization of biochemical processes. Current projects range from applications in industrial biotechnology, such as the optimization of heterologous protein production by *Streptomyces lividans* through metabolic flux analysis followed by metabolic engineering, to modelling and experimental analysis of metabolic interactions in multi-species systems such as oral biofilms (for the development of alternatives for antimicrobial treatments), to characterization of microbial communities in anaerobic bioreactors for waste water treatment.

Active as HSE coordinator of the dept. Chemical Engineering and the KU Leuven core facilities Leuven Chem&Tech and Leuven NanoCentre. Teaching safety courses in Advanced Master of Safety Engineering and Master of Engineering Sciences.

Professional experience

2013-present Associate professor at Department of Chemical Engineering, KU Leuven
2010-2013 Assistant professor at Department of Chemical Engineering, KU Leuven
2008-2010 Part-time assistant professor at Department of Chemical Engineering, KU Leuven
2008-2008 Postdoc research stay at Department of Biotechnology, TU Delft
2003-2010 Postdoctoral Fellow of Research Foundation - Flanders (FWO)
2002-2003 Postdoctoral Fellow of Special Research Fund of the KU Leuven

Education

2002 PhD in Applied Biological Sciences, KU Leuven
1997 Master's degree in Bioscience Engineering, KU Leuven

Other relevant information

Teaching activities

- Hazardous Materials and Safety in the Process Industries [Master Chemical Engineering]
- Safety of Chemical and Biological Products and of Chemical Processes [Advanced Master Safety Engineering & Master Bioscience Engineering - Thematic Minor: Environmental Coordinator - Catalysis]
- Reactor Technology [Bachelor Bioscience Engineering] (taught in Dutch)
- Microbial Process Technology [Master Chemical Engineering]
- Bioconversion Technology [Master Bioscience Engineering - option Environmental Technology]
- Systems biology [Bachelor Engineering Sciences: Living Systems] (taught in Dutch)
- Analytical Chemistry [Bachelor Engineering Sciences] (taught in Dutch)
- Analytical Chemistry [Master Chemical Engineering]
- Problem Solving and Engineering Design: Chemical Technology [Bachelor Engineering Sciences - option Chemical Engineering]
- Problem Solving and Design, Part 1 [Bachelor Engineering Sciences] (taught in Dutch)

HSE coordinator:

- 2008-present Department of Chemical Engineering
- 2014-present KU Leuven research facilities Leuven Chem&Tech and Leuven NanoCentre.

Publications: <https://lirias.kuleuven.be/cv?u=U0006977>

Division website: <https://cit.kuleuven.be/creas>

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