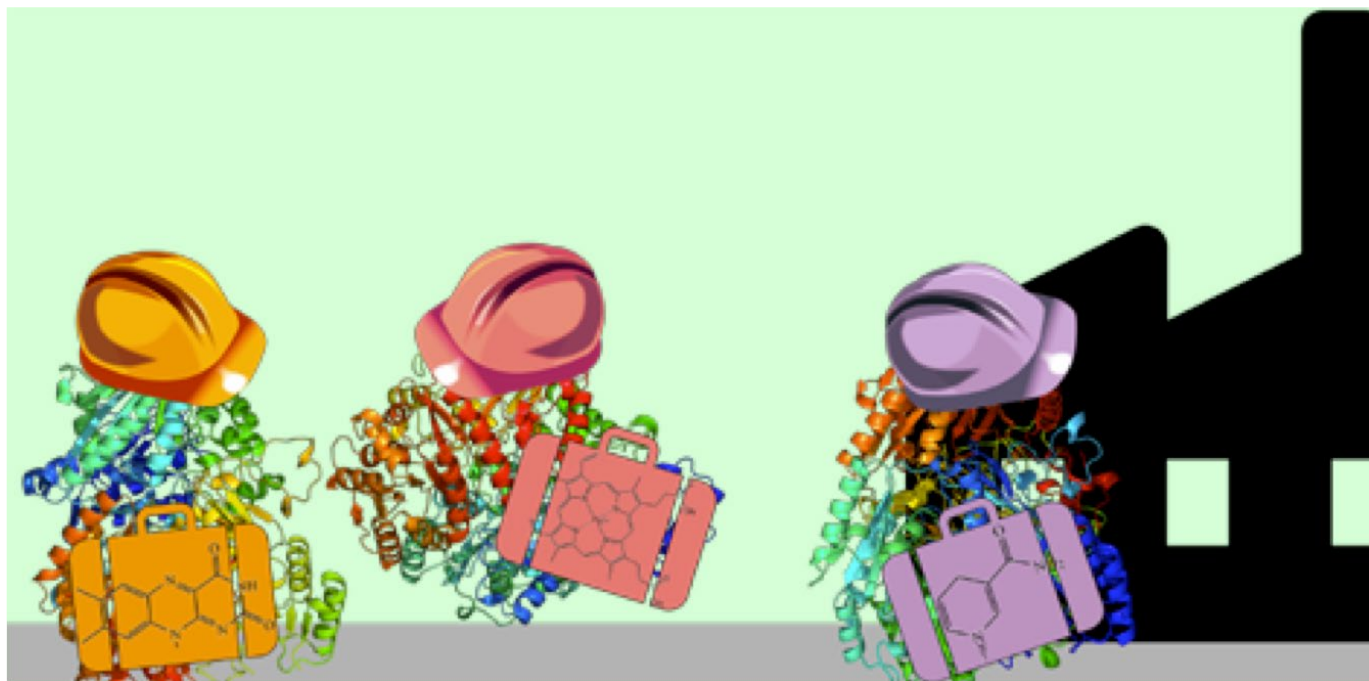




Masterclass Applied Biocatalysis

Wageningen, The Netherlands, 29 April-1 May 2019



BACKGROUND

Enzymes are used in various industrial processes ranging from the ton scale conversion of starch to the gram scale synthesis of active pharmaceutical ingredients. The enzymes used in these industrial processes need to be robust, cheap and work under varying conditions. This masterclass will provide detailed information on the basic principles of enzymes, their engineering and immobilisation, and matters relevant to their industrial use. In addition, emerging fields such as use of enzymes in combination with chemical catalysts, alternative cofactors, enzyme nanoreactors and the use of enzymes in the lab on a chip will be discussed. A special session will deal with the future possibilities of CRISPR-Cas technologies. Also issues relevant to industrial practice such as intellectual property will be presented.

COURSE DESIGN AND PROGRAMME TOPICS

The masterclass consists of a number of lectures given by experts from academia and industry and provides ample opportunity to exchange knowledge with the experts as well as the participants.

Attention will be paid to:

- Basic principles of enzymes including structure, function, kinetics, stability and inhibition
- Enzyme immobilisation
- Industrial production and downstream processing
- Enantioselectivity and promiscuity of enzymes
- Redox enzymes
- Enzymes in nanoreactors and the lab on a chip
- Enzyme engineering in theory and practice
- CRISPR-Cas technologies

PARTICIPANTS

The course will be valuable for those who are working with enzymes in academia and industry, or are considering to do so.

COURSE LECTURERS & ORGANIZERS

Lecturers:

Dr D.C. Swarts, Wageningen University & Research, NL
Prof. M.H.M. Eppink, Synthon / Wageningen University & Research
Prof. J. van der Oost, Wageningen University & Research, NL
Prof. U. Hanefeld, Delft University of Technology, NL
Dr C.E. Paul, Delft University of Technology, NL
Dr S. Hartmans, DSM, Delft, NL
Dr H.J. Wijma, University of Groningen, NL
Prof. J.C.M. van Hest, Eindhoven University of Technology, NL
Prof. J. Woodley, Technical University of Denmark, DK
Dr R. de Jong, DSM, Delft, NL
Prof. G.J. Poelarends, University of Groningen, NL

Organization:

Wageningen University & Research:

Dr M.C.R. Franssen, Organic Chemistry
Prof. W.J.H. van Berkel, (Course director), Food Chemistry
Eva Oudshoorn, MSc, The Graduate School VLAG

University of Groningen:

Prof. M.J.E.C. van der Maarel, Aquatic Biotechnology and Bioproduct Engineering, ENTEG
Prof. M. Fraaije, Faculty of Science and Engineering

COURSE FEE ¹

VLAG / WUR / ENTEG PhD candidates	€225
All other PhD candidates, VLAG Postdocs and staff	€450
Postdocs, and other academic staff	€625
Participants from the private sector	€1200

¹includes course materials, lunches/tea/coffee and one dinner.

REGISTRATION AND INFORMATION

<https://www.vlaggraduateschool.nl/en/courses/course/AB19-1.htm>

For information contact:
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