



SUMMER SCHOOL

REDOX (BIO)CHEMISTRY: FUNDAMENTALS AND APPLICATIONS (2ND EDITION)

RICHTING
MORGEN

MET WETENSCHAP, TECHNOLOGIE,
CREATIVITEIT & INNOVATIE

Organised by Prof. Dr. K. De Wael
Lectured by Dr. H.A. Heering



August 19 - 23, 2013



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Aim

Modern electrochemistry is a discipline at the interface between chemistry, physics and biology. The lecture series will cover the breadth and depth of modern interdisciplinary electrochemistry. The aim is to provide the students with the knowledge to understand and critically evaluate the literature and to provide the foundations for innovative and cross-disciplinary research and applications.

Topics

Redox chemistry: basics/Bio-electrochemistry/Redox chemistry in everyday life/Equilibrium electrochemistry/Electron transfer kinetics/Measuring techniques/Electrochemistry of proteins/Electrocatalysis/Biological electron transfer thermodynamics/Sensors/Applications and new frontiers

Short biography of the lecturer

Hendrik (Dirk) Heering studied Molecular Sciences at Wageningen University, The Netherlands and obtained his PhD in 1995 from the same university for studies in bio-electrochemistry under the supervision of professors W. R. Hagen and C. Veeger. He carried out postdoctoral research projects with professor F. A. Armstrong at Oxford University, England, with Dr. G. Smulevich at University of Florence, Italy, and with professors S. de Vries and C. Dekker at Delft University of Technology, The Netherlands. He currently is leader of the protein electrochemistry group in the section Protein Chemistry at the Leiden Institute of Chemistry, The Netherlands.

His expertises are electrochemistry, enzymology, bio-energetics, biophysics, mathematical modelling and computer simulations, spectroscopy, single-molecule methods, and nano-technology. His research mission is to obtain fundamentally new insight in the chemistry and physics of biological processes by integrating multiple disciplines and exploring new cross-disciplinary frontiers.