

# Theoretical and Practical Aspects of Modern Liquid Phase Separation Techniques

## An advanced course on liquid chromatography and capillary electrophoresis

Presented by Dr. Gerard Rozing, ROZING.COM Consulting, Karlsruhe, Germany

Date: 15:00-17:00, Nov. 10-Nov.14, 2014 (Total 10 hours)

Location: Meeting Hall of Biotechnology Building

### ABSTRACT:

This series of educational tutorials on UHPLC will address theoretical and practical aspects of modern liquid phase separation techniques for chemical analysis. It is intended to explain fundamental aspects of (U)HPLC, multidimensional HPLC and LC and CE-MS to provide participants with insights and knowledge to help them make informed choices when they are preparing to apply these techniques in the laboratory in practice.

### LEARNING OBJECTIVES:

Deepen understanding both fundamental and practical aspects of (U)HPLC, MDLC, LC-MS and CE-MS

Learn best usage of modern separation techniques

Guidelines for instrument set-up to minimize performance losses and boost performance.

### COURSE DETAILS:

- (U)HPLC with following subjects
  - Definitions, basic aspects and fundamental equations of (U)HPLC
  - How to find the best column and conditions for (U)HPLC. Optimization in particular Kinetic Plot Method
  - Column technology for UHPLC. Totally porous vs. superficially porous particles
  - Instrumental aspects, practice and constraints of UHPLC
- Multidimensional HPLC
- How to optimize your (U)HPLC separation for optimal coupling with mass spectrometry:  
“do’s and do-not-do’s”
- CE-MS with coaxial sheath flow interface, practical aspects, and new CE-MS IF developments.

The course will be closed with a brief examination.

### **ABOUT THE AUTHOR:**

Dr. Gerard Rozing did his undergraduate and graduate Studies at University of Amsterdam from 1964-1976 and majored in Organic Chemistry and Chemical Engineering. In 1977 he was a post-doctoral researcher at the State University of Ghent, Belgium in synthetic organic chemistry and received post-doctoral training in analytical chemistry at University of Amsterdam, until 1979. Dr. Rozing joined Hewlett-Packard in Waldbronn, Germany as an R&D Chemist in 1979 and was later Group & Project Leader, R&D Section Manager responsible for HPLC column, HPLC module and HPLC system development till 1999.

Since 2000 Dr. Rozing has been Agilent Technologies University Relations and External Scientific Collaborations Manager and was nominated Agilent Research Fellow in 2006. Dr. Rozing retired from Agilent Technologies since September 1, 2012 and is now actively working in the fields of liquid chromatography and capillary electrophoresis on freelance basis.

*For further information, please contact Prof. Guowang Xu by 84379530.*