Surfactants and Polymers in Aqueous Solution

Based on the book
Surface Chemistry of Surfactants and Polymers

October 16-20, 2017
in Lisbon, Portugal
This five-day intensive course provides a comprehensive overview of the chemistry related to the behavior of surfactants and polymers in solution and at interfaces. All important aspects of surfactants and water soluble polymers, as well as combinations of the two, are covered during the course. Examples of topics are environmental and health aspects of surfactants, surfactant self-assembly, surfactant and polymer adsorption, mixed surfactant systems and surfactant-polymer systems in solution and at interfaces, polymers in solution, wetting, surface and interfacial tension, rheology, micro-emulsions, emulsions and foams, solid dispersions, colloidal stability, and the use of surfactants as templates for nanomaterials.

Surfactants and polymers are used in a wide range of application areas, including detergents, cosmetics, pharmaceuticals, food, and coatings. The surface and colloid chemistry that is taught and discussed on the course is to a large extent generic and applicable to many of the aspects of formulation science and technology in these areas. Reference to practical uses of surfactants and water soluble polymers will be made in the lectures. There will also be scheduled time for group discussions.

The course is of interest to scientists, engineers and project managers working in the above-mentioned, or related areas. The applicants are required to have general academic qualifications in chemistry, but no particular formal education in surface chemistry is required. All lectures and notes will be in English.

The book, *Surface Chemistry of Surfactants and Polymers*, is included in the course fee.

This course is being offered for the 26th consecutive time and it has been updated continuously. In previous years the course has attracted participants from almost every European country, as well as from the USA, Mexico, Venezuela, Brazil, China and South Korea.
Prof. Björn Lindman
Professor in Physical Chemistry at Lund University, Sweden, where he has built up a large international research group focusing on colloid and interface science. Over the years he has been a Visiting Professor at several top universities all over the world and has received several prestigious honors and awards. He is the President of the International Association of Colloid and Interface Scientists. Prof. Lindman has published more than 500 papers, co-authored 3 books and edited more than 10 books in the field of surface and colloid chemistry.

Furthermore, he serves on the editorial and advisory boards for a number of international journals and is a well-known lecturer and consultant for industry worldwide. Prof. Lindman has carried out extensive research in the areas of surfactant self-assembly, surfactants, polymers and their mixtures at interfaces, polymer-surfactant interactions, microstructure determination, lipid organization and micro-emulsions.

Prof. Krister Holmberg
Professor in Applied Surface Chemistry at Chalmers University of Technology, Gothenburg, Sweden. He is a former Director of the Institute for Surface Chemistry in Stockholm (1991–1998). Prior to that he worked in industry for 24 years, most recently as Research Director of Berol Nobel, a Swedish surfactants company (now AkzoNobel Surface Chemistry). His research interest covers surfactant chemistry, with an emphasis on environmentally benign surfactants, synthesis and applications of nanomaterials, use of micro-emulsions as reaction media, and biotechnological surface chemistry.

Prof. Holmberg has published around 300 papers, is the author or editor of 7 books and is cited as the inventor or co-inventor on 37 patents. He consults for industry and he is Editor of Current Opinion in Colloid and Interface Science, as well as a member of the Editorial Board of several other journals.

Prof. Stefan Ulvenlund
Professor in Formulation Technology at Lund University and Chief Scientific Officer at contract research and development company CR Competence. Stefan has extensive experience of physical chemistry problems and solutions from the industrial world, based on 13 years at Astra Zeneca and 5 years at CR Competence, in particular working with companies from the pharmaceutical, cosmetics, packaging and engineering industries.

In addition to industrial experience Stefan has published 35 papers and is the inventor or co-inventor of patents where surfactants and surface chemistry are key to the invention. Stefan is a lecturer appreciated for his enthusiastic manner and skill at making difficult concepts readily understandable.
The course will be held in Lisbon, Portugal.

The course will start at 8:30 am on Monday, October 16 and end on Friday, October 20 at 12:15 pm. On Wednesday, October 18 the afternoon is free for excursions.

The course fee includes printed lecture material and the book *Surface Chemistry of Surfactants and Polymers* (Wiley Ed.). Refreshments and evening meals together on Monday and Thursday are also included. Accommodation and lunches are not included in the course fee.

The course language is English.

### Lectures

- Introduction to surfactants
- Association of surfactants
- New surfactants
- Phase behavior of concentrated surfactant systems
- Properties of surfactants and polymers containing oxyethylene groups
- Mixed micelles
- Intermolecular interactions and regular solution theory
- Polymers in solution
- Surface active polymers
- Rheological behaviours of polymers and surfactants in solution
- Surfactant-polymer systems
- Surfactant-protein systems
- Surface tension and adsorption at the air-water interface
- Adsorption of surfactants at solid surfaces
- Wetting and wetting agents
- Interaction of polymers with surfaces
- Foaming of surfactant solutions
- Polymerizable surfactants
- Use of surfactants as emulsifiers
- Micro-emulsions
- Micro-emulsions for oil and soil removal
- Chemical reactions in micro-emulsions

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### Registration and Cancellation

- **Course fee is 28 875 SEK** (approximately 3 050 EUR according to the exchange rate in February 22, 2017), 10% reduction will be available for two or more enrolments from the same company at the same time for the same course. Taxes, VAT and governmental charges will be added when applicable.
- **Registration** shall be made using this [registration link](#), which can also be accessed from our website [www.crcom.se](http://www.crcom.se). Last day for registration is September 15, 2017.
- Registration will be confirmed and accompanied by a course schedule and further practical information. We will also issue an **Invoice** for the course fee amount to be paid.
- **Cancellations** with full refund can be made up until September 15, 2017. For cancellations after September 15, 50% of the course fee will be invoiced, and cancellations after September 30 will be invoiced in full.
- **Substitutions are allowed at any time** from the same company or institute.
Venue and Accommodation

The course will be held at Eurostars das Letras 5*
Rua Castilho, 6 - 12
1250 - 069 Lisbon, Portugal
www.eurostarsdasletras.com
+351 21 357 30 94

Accommodation is to be arranged by the participant, hence it is not included in the course fee. For convenience we recommend staying at the course hotel. Other recommendations are available upon request.

Further Questions?

For general questions about the course:
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For scientific questions do not hesitate to contact any of the lecturers:

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