

Programme

Sunday October 7, 2018

13:00 Registration (until 19:00)

Foyer Hall Spectrum A

Workshops (subject to separate registration)

Session Workshop 1

Palladium 2.05

14:00 Multicolumn Processes: From Historical SMB to the Latest Advances in the Purification of Biomolecules

José Paulo MOTA (REQUIMTE/CQFB, FFCT, Caparica, Portugal)
Olivier DAPREMONT (SK PHARMTECO, Rancho Cordova, United States)

Session Workshop 2

Platinum 2.08

From Development to Commercial Scale: How to Integrate QbD Tools and Data Analysis

Alessandro BUTTE
(ETH ZURICH, Zurich, Switzerland)

15:30 Coffee Break

Session Workshop 3

Palladium 2.05

16:00 Preparative HPLC of Peptides and Small Molecules: Phase Screening, Method Optimisation, Process Design

Michael SCHULTE (MERCK KGAA, Darmstadt, Germany)
Jochen STRUBE (CLAUSTHAL UNIVERSITY OF TECHNOLOGY, Clausthal-Zellerfeld, Germany)
Ulrich EMDE (MERCK KGAA, Darmstadt, Germany)

Session Workshop 4

Platinum 2.08

Real Time Monitoring and Control of Process Chromatography

Alois JUNGBAUER
(UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES, Vienna, Austria)

17:45 Opening Ceremony

Hall Spectrum B+C

18:00 KL01 - A New View on Surface Diffusion from Molecular Dynamics Simulations of Solute Mobility at Chromatographic Interfaces

Ulrich TALLAREK
(PHILIPPS-UNIVERSITÄT MARBURG, Marburg, Germany)

18:45 Welcome Reception

Hall Spectrum A

20:00 End of the Day

Programme

Monday October 8, 2018

08:00 Registration

Foyer Hall Spectrum A

08:45 Welcome

Session 1: Joachim Kinkel Symposium

Hall Spectrum B+C

Session Chair

Michael SCHULTE
(MERCK KGAA, Darmstadt, Germany)

09:00 Opening Remarks

09:10 OC01 - Measurement, Description and Consistent Application of Adsorption Equilibria

Andreas SEIDEL-MORGENSTERN
(MAX PLANCK INSTITUTE FOR DYNAMICS OF COMPLEX TECHNICAL SYSTEMS, Magdeburg, Germany)

09:30 OC02 - How Continuous Chromatography Moved from Craftwork to Industry. A Tribute to Passion and Creativity.

(AM-PHARMA)

09:50 OC03 - Modified Inorganic Sorbents for the Fast and Efficient Separation of Biomolecules

Benjamin PETERS
(MERCK KGAA, Darmstadt, Germany)

10:10 OC04 - Centrifugal Partition Chromatography: new Possibilities with a Liquid Stationary Phase

Mirjana MINCEVA
(TECHNICAL UNIVERSITY OF MUNICH, Freising, Germany)

10:30 Coffee Break sponsored by MERCK

Hall Spectrum A

Session 2: Chromatographic Media

Hall Spectrum B+C

Session Chair

Tuomo SAINIO
(LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, Lappeenranta, Finland)

11:00 KL02 - On the Advantage of Ordered Chromatographic Media

Gert DESMET
(VRIJE UNIVERSITEIT BRUSSEL (VUB), Brussels, Belgium)

11:40 OC05 - Interplay of Mathematics and Physics of 3D Printing for Chromatography

Programme

Carlos GRANDE
(SINTEF, Oslo, Norway)

12:00 OC06 - New Adsorptive Technology and its Use Within Purification Platform for Antibody-Process Related Impurities Removal

Fabien ROUSSET
(CHIRAL TECHNOLOGIES, Illkirch, France)

12:20 OC07 - A New Cation Exchange Resin Designed for the Removal of Monoclonal Antibody Aggregates Using Flow-Through Frontal Chromatography

Romas SKUDAS
(MERCK KGAA, Darmstadt, Germany)

12:40 Lunch and Exhibition (until 14:00)

Hall Spectrum A

Session Vendor Seminar 1

Palladium 2.05

**13:00 Agilent Technologies
The New Benchmark for Preparative LC Workflows - Pathways to Achieve Exceptional Accuracy and Flexibility (13:00-14:00)**

Session Vendor Seminar 2

Platinum 2.08

**Osaka Soda Co., Ltd.
Taming the Devil (Advances in the Understanding of CIP in RP HPLC Processes) (13:00-14:00)**

Session 3: Theory and Simulations

Hall Spectrum B+C

Session Chair

Andreas SEIDEL-MORGENSTERN
(MAX PLANCK INSTITUTE FOR DYNAMICS OF COMPLEX TECHNICAL SYSTEMS, Magdeburg, Germany)

14:00 KL03 - Computational Fluid Dynamics to Understand Process Chromatography

Alois JUNGBAUER
(UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES, Vienna, Austria)

14:40 OC08 - When Adsorption Models or Intuition Fail at Describing Ion-Exchange Chromatography

Speaker to be confirmed
(YPSO-FACTO)

15:00 OC09 - Improvement of Multicapillary Packing Efficiency by Diffusional Bridging: A Theoretical and Dynamic Simulation Study

Francois PARMENTIER
(SEPARATIVE, Solaize, France)

15:20 OC10 - Chromatographic Separations with Focusing of Both the Weak and the Strong Component

Tuomo SAINIO
(LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, Lappeenranta, Finland)

15:40 Coffee Break sponsored by AMPAC FINE CHEMICALS

Programme

Hall Spectrum A

Session 4: Continuous Chromatography

Hall Spectrum B+C

Session Chair

Olivier DAPREMONT
(SK PHARMTECO, Rancho Cordova, United States)

- 16:10 OC11 - Design and Optimization of a Continuous Separation of Tartronic and Glyceric Acids by Simulated Moving Bed**
Lucas COELHO (UNIVERSITY OF PORTO, Porto, Portugal)
& (FEDERAL UNIVERSITY OF PERNAMBUCO, Recife, Brazil)
- 16:30 OC12 - Strategies for the Global Multicomponent Separation of Nadolol Stereoisomers by Chiral and Achiral Fixed-Bed and Simulated Moving Bed Chromatography**
António E. RIBEIRO
(POLYTECHNIC INSTITUTE OF BRAGANÇA, Braganca, Portugal)
- 16:50 OC13 - Inexiotech - This Disruptive Technology Allows for the Resolution of Multicomponent Mixtures in a Serial Continuous Process**
Alexandre MACIUK (UNIVERSITÉ PARIS-SUD, Chatenay-Malabry, France)
& (FAUQUET INNOVATION, Montmagny, France)
- 17:10 OC14 - Model Predictive Control of 4-Zone Simulated Moving Bed Chromatography for the Separation of Bicalutamide Enantiomers: Experimental Validation**
Ju Weon LEE
(MAX-PLANCK-INSTITUTE FOR DYNAMICS OF COMPLEX TECHINICAL SYSTEMS, Magdeburg, Germany)
- 17:30 OC15 - Evaluation of Continuous Purification of Therapeutic Extracellular Vesicles**
Mafalda MOLEIRINHO
(INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLÓGICA, Oeiras, Portugal)
- 17:50 Poster Session 1 & Beer Party**
- Hall Spectrum A*
- 18:50 End of the Day**

Tuesday October 9, 2018

Session 5: Peptides and Proteins

Hall Spectrum B+C

Session Chair

José Paulo MOTA
(REQUIMTE/CQFB, FFCT, Caparica, Portugal)

- 08:30 KL04 - Synthetic Peptide Manufacturing: Downstream Challenges and Innovations**
Olivier LUDEMANN-HOMBOURGER
(POLYPEPTIDE LABORATORIES FRANCE, Strasbourg, France)
- 09:10 OC16 - Hybrid Optimisation of Preparative Chromatography for a Difficult and Realistic Ternary Protein Mixture**
Vivien FISCHER
(UNIVERSITY COLLEGE LONDON / GLAXOSMITHKLINE, Stevenage, United Kingdom)
- 09:30 OC17 - Scalability of Mini-Columns in Protein Chromatography**
Dorota ANTOS
(RZESZOW UNIVERSITY OF TECHNOLOGY, Rzeszow, Poland)
- 09:50 OC18 - Process Analysis for Preparative Protein Chromatography Using In-Line Attenuated Total Reflection Fourier Transform Infrared Spectroscopy**
Adrian SANDEN
(KARLSRUHE INSTITUTE OF TECHNOLOGY, Karlsruhe, Germany)
- 10:10 OC19 - Cost Effective Peptide Purification via ZEOSphere DRP Mixed-Mode Chromatography**
Alessandro BUTTE
(ETH ZURICH, Zurich, Switzerland)
- 10:30 Coffee Break and Exhibition**

Hall Spectrum A

Session 6: Purification of Antibodies I

Hall Spectrum B+C

Session Chair

Dorota ANTOS
(RZESZOW UNIVERSITY OF TECHNOLOGY, Rzeszow, Poland)

- 11:00 OC20 - Continuous Biomanufacturing- Platform Alternatives for Antibody Production**
Steffen ZOBEL-ROOS
(CLAUSTHAL UNIVERSITY OF TECHNOLOGY, Clausthal-Zellerfeld, Germany)
- 11:20 OC21 - Antibody Aggregate Removal Using Frontal Chromatography: Performance Comparison Between Column and Membrane Adsorber**
Sebastian VOGG
(ETH ZURICH, Zürich, Switzerland)
- 11:40 OC22 - Continuous Conjugation of Antibodies By rMCSGP**
Nicole ULMER
(ETH ZURICH, Zurich, Switzerland)

Programme

12:00 OC23 - Temperature Dependence of Antibody Adsorption in Protein A Affinity Chromatography

Walpurga KREPPER
(UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES, Vienna, Austria)

12:20 Lunch Break and Exhibition (until 13:40)

Hall Spectrum A

Session Vendor Seminar 3

Palladium 2.05

**12:40 Kromasil-AkzoNobel PPC
Method Development and Purification of Biotherapeutics including Peptides and Oligonucleotides
(12:40-13:40)**

Session Vendor Seminar 4

Platinum 2.08

**Tosoh Bioscience GmbH
Reduce your Downstream Processing Costs and Know More About your Target Molecules (12:40-13:40)**

13:40 Poster Session 2

Hall Spectrum A

Session 7: Green Purification Technologies

Hall Spectrum B+C

Session Chair

Pilar FRANCO
(CHIRAL TECHNOLOGIES EUROPE, Illkirch, France)

14:40 KL05 - SFC-MS in Drug Discovery: The Technology Shaping Tomorrow's Innovation

Gerard ROSSE
(DART NEUROSCIENCE, San Diego, United States)

15:20 OC24 - Alternative Approaches in Preparative Chromatography for Purifying Lipophilic Compounds and the Elimination of Chlorinated Solvents

Markus JUZA
(CORDEN PHARMA SWITZERLAND, Liestal, Switzerland)

15:40 OC25 - Studies on Robustness of SFC: Examples from Chiral and Peptide Separations

Torgny FORNSTEDT
(KARLSTAD UNIVERSITY, Karlstad, Sweden)

16:00 OC26 - Operating Mode Selection for Ternary Separations with Liquid-Liquid Chromatography

Raena MORLEY
(TECHNICAL UNIVERSITY OF MUNICH, Freising, Germany)

16:20 Coffee Break and Exhibition

Hall Spectrum A

Session 8: Natural Products

Programme

Hall Spectrum B+C

Session Chair

Mirjana MINCEVA
(TECHNICAL UNIVERSITY OF MUNICH, Freising, Germany)

- 16:50** **KL06 - Accessing Nature's Chemical Diversity for Drug Discovery**
Philipp KRASTEL
(NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, Basel, Switzerland)
- 17:30** **OC27 - Development of a Chromatographic Based Purification Strategy for Artemisinin from Artemisia Annua L. Extract**
Fabian MESTMÄCKER
(CLAUSTHAL UNIVERSITY OF TECHNOLOGY, Clausthal-Zellerfeld, Germany)
- 17:50** **OC28 - Chromatographic Recovery of Hydroxy Acids, Lignin, and Pulping Chemicals from Spent Alkaline Pulping Liquors**
Jari HEINONEN
(LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, Lappeenranta, Finland)
- 20:00** **Gala Dinner**

Wednesday October 10, 2018

Session 9: Antibodies and Proteins II

Hall Spectrum B+C

Session Chair

Olivier LUDEMANN-HOMBOURGER
(POLYPEPTIDE LABORATORIES FRANCE, Strasbourg, France)

- 08:30 OC29 - Visualization and Quantification of Protein Bind and Elute Processes to the IEX Hydrogel of a Membrane Adsorber**
Adrian LEY
(SARTORIUS STEDIM BIOTECH GMBH / INSTITUTE OF PHYSICAL CHEMISTRY, GEORG-AUGUST UNIVERSITY GOETTINGEN, Goettingen, Germany)
- 08:50 OC30 - Water on Hydrophobic Surfaces - Mechanistic Modeling of Polyethylene Glycol-Induced Protein Precipitation**
Steffen GROSSHANS
(KARLSRUHE INSTITUTE OF TECHNOLOGY (KIT), Karlsruhe, Germany)
- 09:10 OC31 - Membrane Based Separation of Aqueous Two-Phase Systems for the Purification of Monoclonal Antibodies**
Thomas KRUSE
(SARTORIUS STEDIM BIOTECH & CLAUSTHAL UNIVERSITY OF TECHNOLOGY, Göttingen, Germany)
- 09:30 SPICA 2018 Poster Prizes**
- 09:50 Coffee Break and Exhibition**

Hall Spectrum A

Session 10: Process Optimization Chromatography and Case Studies

Hall Spectrum B+C

Session Chair

Jochen STRUBE
(CLAUSTHAL UNIVERSITY OF TECHNOLOGY, Clausthal-Zellerfeld, Germany)

- 10:20 KL07 - Efficient Simulation and Control of Chromatographic Processes**
Achim KIENLE
(OTTO VON GUERICKE UNIVERSITY MAGDEBURG, Magdeburg, Germany)
- 11:00 OC32 - Automatic Determination of Optimum Operating Concepts and Process Variables for Multi-Component Separations**
Johannes SCHMÖLDER
(FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG, Erlangen, Germany)
- 11:20 OC33 - Optimization of Processes Combining Chemistry & Purification - Strategies & Case Studies**
Jérôme BONI
(NOVASEP FINORGA, Chasse-sur-Rhone, France)
- 11:40 OC34 - Continuous Centrifugal Partition Chromatography: Using a Mass Transfer Model for Process Optimization and Various Mode Comparison**

Programme

Luc MARCHAL
(UNIVERSITÉ DE NANTES, Saint Nazaire, France)

12:00 OC35 - Model-Based Quality by Design: Challenges, Pitfalls and Best Practices

Maria CASALS PERAVAREZ
(GOSILICO, Karlsruhe, Germany)

12:20 Kinkel Symposium Award

12:25 Closing Remarks