

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 (UNIVERSIDADE NOVA DE LISBOA, Caparica, Portugal)

Olivier DAPREMONT (AMPAC FINE CHEMICALS, 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

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

Hector OSUNA
(YPSO-FACTO, Nancy, France)

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
(AMPAC FINE CHEMICALS, 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 - Inxiotech - 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 TECHNICAL 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
(UNIVERSIDADE NOVA DE LISBOA, 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

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, 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