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
12:00  **OC06 - New Adsorptive Technology and its Use Within Purification Platform for Antibody-Process Related Impurities Removal**  
Fabien ROUSSET  
(CHIRAL TECHNOLOGIES, Illkirch, France)

Romas SKUDAS  
(MERCK KGAA, Darmstadt, Germany)

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

**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
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 - 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 TECHNICAL SYSTEMS, Magdeburg, Germany)

17:30 OC15 - Evaluation of Continuous Purification of Therapeutic Extracellular Vesicles
Mafalda MOLEIRINHO
(INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA, 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
(UNIVERISTY 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)
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)

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

Session 7: Green Purification Technologies

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

Session 8: Natural Products

http://www.spica2018.org
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
(NOVA RTS 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**
Jérome 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**
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