

## 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, Lahti, 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, saint fons, France)

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

Tuomo SAINIO  
(LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, Lahti, 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, Orsay, 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

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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**