SCM-11

Eleventh International Symposium on the Separation and Characterization of Natural and Synthetic Macromolecules

PROGRAMME

Rhone Events & Congress Centre
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Mission

SCM-11 is the premier meeting on polymer analysis!

It brings together scientists and industrial experts, who share an interest in the separation and characterization of “large” molecules. It offers a platform to interact, to discuss subjects of mutual interest, and to discover new synergies.

SCM-11 is organized by a team from the University of Amsterdam and the Vrije Universiteit, collaborating in the Centre for Analytical Sciences Amsterdam (CASA).

Organizing committee

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FRONTIER LAB

Materials Characterization for the 21st century

30 YEARS ANNIVERSARY

Tools to meet the analytical challenges of our time:

FOR OUR ENVIRONMENT AND SUSTAINABILITY

Biopolymer Characterization

Micro- and Nano Plastics: Identification and Quantification

Recycled Materials: Characterization & Detection of Contaminants

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Programme

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Masashi Serizawa (Mitsubishi)
Bastiaan Staal (BASF)

Wednesday morning January 22 Ephesus Room

Opening

9:30 Peter Schoenmakers

Plenary Session

Chair: Govert Somsen

9:40 *PL1 Packaging design from perspective of circularity*
Roland ten Klooster (CircularPlasticsNL, The Netherlands)

10:10 *PL2 Pushing the limits of chromatography to characterize complex biopharmaceutical products*
Davy Guillarme (University of Geneva, Switzerland)

10:40 *Young Scientist Award Lecture*
OR01 Coupling tandem mass spectrometry with ion mobility towards parallelization of synthetic polymer sequencing
Isaure Sergent (Aix Marseille University, France)

11:00 *Break – Exhibition opens – Poster mounting*

Chair: Jana Falkenhagen

11:30 *KN01 Dispersity and beyond: heterogeneity of polymers in terms of molar mass, but also chemical composition or branching*
Patrice Castignolles (Sorbonne Université, Paris, France)

12:00 *OR02 Anionic charge distribution chromatography (ACDC) of nanoparticles*
Ton Brooijmans (Covestro, Waalwijk, The Netherlands)

12:20 *OR03 Polyolefin recycling – challenges and opportunities from an analytical perspective*
Jan-Hendrik Arndt (Fraunhofer LBF, Darmstadt, Germany)

12:40 *OR04 Analytical sciences as enablers for high-value chemical recycling of composite materials*
Jasmijn Ruijgrok (Inholland University of Applied Science, Amsterdam, The Netherlands)

13:00 *Lunch – Exhibition – Posters*
EDESSA ROOM

Wednesday morning January 22 Palmyra Room

Chair: Anouk Rijs

11:30 *OR5 Advancing mRNA analysis: exploring possibilities of ion-pairing RPLC*
Jonathan Maurer (University of Geneva, Switzerland)

11:50 *OR6 Structural characterisation of oligonucleotides using infrared action spectroscopy inside a mass spectrometer*
Kevin Hes (Vrije Universiteit, Amsterdam, The Netherlands)

12:10 *OR7 Development of multiple heart-cutting 2D-LC-MS for oligonucleotide impurity profiling while preserving high-order structure*
Quang-Dong Bui (Free University Brussels, Belgium)

12:30 *KN02 Advancing polymer and nanoparticle analysis in pharmaceutical development*
Shijia (Sara) Tang (Genentech, South San Francisco, California, USA)

13:00 *Lunch – Exhibition – Posters*
EDESSA ROOM

Wednesday morning January 22 Edessa Room

TUTORIALS

Chairs: Thomas Holmark and Jasmin Schwarte

11:30 *TU1 Challenges in plastic circularity and the role of analytical sciences therein*
Harry Philipsen (Envalior, Geleen, The Netherlands)

13:00 *Lunch – Exhibition – Posters*
EDESSA ROOM

Wednesday afternoon January 22 Ephesus Room

13:00 *Lunch – Exhibition – Posters*
EDESSA ROOM

13:30 *Vendor seminar Waters – Wyatt*

Chair: Harry Philipsen

14:00 *OR08 Cloud point analysis and big data as a potential alternative to SEC*
Bastiaan Staal (BASF, Ludwigshafen, Germany)

14:20 *OR09 Finding the optimal gradient program: a comparison of optimization algorithms in automated method development*
Gerben van Henten (University of Amsterdam, The Netherlands)

14:40 *KN03 The power of 2D-LC for solving complex problems in the chemical industry*
Mubasher Bashir (Dow Chemical, Terneuzen, The Netherlands)

15:10 *Poster session 1 (odd posters presented)*
EDESSA ROOM

Chair: André Striegel

16:40 *SotA2 Analytical degradation for mass spectrometry of insoluble synthetic polymers*
Laurence Charles (Aix Marseille University, France)

17:20 *KN05 Going big: HRMS-hyphenated separations unleash the analysis of complex proteoforms over 100 kDa*
Andrea Gargano (University of Amsterdam, The Netherlands)

17:50 *INTERACTIVE SESSION (with drinks and snacks)*
Mimi den Uijl and Peter Schoenmakers
EDESSA ROOM

19:00 *Close*

Wednesday afternoon January 22 Palmyra Room

13:00 *Lunch – Exhibition – Posters*
EDESSA ROOM

Chair: Rob Edam

14:00 *KN04 Simplify to characterize: probing protein interactions by ion mobility-mass spectrometry hyphenated with IR action spectroscopy*
Anouk Rijs (Vrije Universiteit, Amsterdam, The Netherlands)

14:30 *SotA1 Exploring the structure/function relationship of therapeutic antibodies by LC and MS*
Koen Sandra (RIC, Kortrijk, Belgium)

15:10 *Poster session 1 (odd posters presented)*
EDESSA ROOM

Chair: Kevin Jooß

16:40 *KN06 Advancing HIC method development*
Sebastiaan Eeltink (Free University Brussels, Belgium)

17:10 *OR10 Middle-up and intact protein separations of glycoforms of monoclonal antibodies with acrylamide-based hydrophilic interaction chromatography - mass spectrometry*
Annika van der Zon (University of Amsterdam, The Netherlands)

17:30 *OR11 Microfluidic capillary electrophoresis - mass spectrometry for rapid charge-variant and glycoform assessment of monoclonal antibody biosimilar candidates*
Ruben Cageling (Polpharma Biologics, Utrecht, The Netherlands)

17:50 *INTERACTIVE SESSION (with drinks and snacks)*
Mimi den Uijl and Peter Schoenmakers
EDESSA ROOM

19:00 *Close*

Wednesday afternoon January 22 Edessa Room

13:00 *Lunch – Exhibition – Posters*

TUTORIALS

Chairs: Ziran Zhai and Thandekile Siwela

14:20 *TU2 Temperature responsive polymers as stationary phases for greener liquid chromatography: present practices, prospects and pitfalls*
Frederic Lynen (Ghent University, Belgium)

15:10 *Poster session 1 (odd posters presented)*

TOSOH

Chairs: Luca Tutiš and Miché Daniels

16:50 *TU3 Quantitative polymer analysis of LC(×LC) and LC-MS data*
Tijmen Bos (University of Amsterdam, The Netherlands)

17:50 *INTERACTIVE SESSION (with drinks and snacks)*
Mimi den Uijl and Peter Schoenmakers
EDESSA ROOM

19:00 *Close*

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Dr. Michael Soll, michael@frontier-lab.com, +49 171 64881 48

Thursday morning January 23 Ephesus Room

Chair: Gert Desmet

9:00 *SotA3 A portrait of the polymer as a young molecule – challenges and adventures in oligomeric SEC*
André Striegel (NIST, Gaithersburg, MD, USA)

9:40 *KN07 High-resolution polymer separation*
Gino Groeneveld (University of Amsterdam, The Netherlands)

10:10 *Coffee/Tea – Exhibition – Posters*

Chair: Laurence Charles

11:00 *KN09 Analysis of polysaccharide mixtures: challenges and possibilities*
Daniel Wefers (Martin Luther University, Halle, Germany)

11:30 *OR14 Reimagining cellulose SEC analysis: the power of DMSO activation*
Ivan Melikhov (BOKU University, Vienna, Austria)

11:50 *OR15 Chemometric strategies for characterization and optimization of oligonucleotide separations*
Sanne Boot (University of Amsterdam, The Netherlands)

12:10 *KN10 Crime at the macromolecular level - where perpetrators and polymers meet*
Arian van Asten (University of Amsterdam, The Netherlands)

12:40 *Lunch – Exhibition – Posters*
EDESSA ROOM

Thursday morning January 23 Palmyra Room

Chair: Wolf Hiller

9:00 *KN08 Raman spectroscopy of polymers: Advanced Raman modes for higher sensitivity, selectivity, and imaging speed*
Freek Ariese (Vrije Universiteit, Amsterdam, The Netherlands)

9:30 *OR12 Optical diffusion-ordered spectroscopy: adding size to optical spectroscopy)*
Giulia Giubertoni (University of Amsterdam, The Netherlands)

9:50 *OR13 Comparison of Raman- and fluorescence techniques for detection and identification of microplastics in environmental samples*
Merel Konings (Vrije Universiteit, Amsterdam, The Netherlands)

10:10 *Coffee/Tea – Exhibition – Posters*

Chair: Alina Astefanei

11:00 *OR16 Hyphenation of field-flow fractionation and Raman microscopy for the analysis of submicroplastics*
Gerhard Heinzmann (Postnova Analytics, Landsberg, Germany)

11:20 *OR17 Multidetector high temperature thermal field flow fractionation – a gamechanger in the characterization of complex polyolefins*
Martin Geisler (Leibnitz IPF, Dresden, Germany)

11:40 *OR18 Evaluation of metal-organic matter interactions using asymmetric flow field-flow fractionation with nanofiltration membranes*
Akhil Gopalakrishnan (Karlsruhe Institute of Technology, Germany)

12:00 *SotA4 Trends in field flow fractionation for the characterization of synthetic polymers*
Albena Lederer (Leibnitz IPF, Dresden, Germany and Stellenbosch University, South Africa)

12:40 *Lunch – Exhibition – Posters*
EDESSA ROOM

Wednesday, January 22, 2025

Ephesus Room

09:00
09:10
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09:40 P — **Plenary 1** — Roland ten Klooster — Packaging design from perspective of circularity
09:50 1
10:00
10:10 P — **Plenary 2** — Davy Guillarme — Limits of chromatography for complex biopharmaceuticals
10:20 2
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10:40 O — **OR01: Isaure Sergent** — Tandem MS-IMS for synthetic-polymer sequencing
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11:30 K — **Keynote 01** — Patrice Castignolles — Dispersity and beyond: heterogeneity of polymers
11:40 1
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12:00 O — **OR02: Ton Brooijmans** — Anionic charge distribution chromatography (ACDC)
12:10 2
12:20 O — **OR03: Jan-Hendrik Arndt** — Polyolefin recycling
12:30 3
12:40 O — **OR04: Jasmijn Ruijgrok** — High-value recycling of composite materials
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14:00 O — **OR08: Bastiaan Staal** — Cloud-points and big data as alternatives to SEC
14:10 8
14:20 O — **OR09: Gerben van Henten** — Optimal gradient programs
14:30 9
14:40 K — **Keynote 3** — Mubashar Bashir — Power of 2DLC in the chemical industry
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16:40 S — **State-of-the-Art 2** — Laurence Charles — MS of insoluble synthetic polymers
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17:20 K — **Keynote 5** — Andrea Gargano — LC-HRMS of complex proteoforms
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Palmyra Room

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11:30 O — **OR05: Jonathan Maurer** — Advancing mRNA analysis
11:40 5
11:50 O — **OR06: Kevin Hes** — Oligonucleotides with IRMS
12:00 6
12:10 O — **OR07: Quang Dong Bui** — Oligonucleotide impurity profiling with 2DLC-MS
12:20 7
12:30 K — **Keynote 02** — Shijia Tang — Liposome morphology and hydrogel characterization
12:40 2
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14:00 K — **Keynote 4** — Anouk Rijs — Protein aggregation by IM-MS integrated with IR
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14:30 S — **State-of-the-Art 1** — Koen Sandra — Structure/function relationship of therapeutic antibodies
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16:40 K — **Keynote 6** — Sebastiaan Eeltink — Advancing HIC method development
16:50 6
17:00
17:10 O — **OR10: Annika van der Zon** — Glycoform separation with HILIC-MS
17:20 10
17:30 O — **OR11: Ruben Cageling** — Microfluidic CE-MS of monoclonal antibodies
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Edessa Hall

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14:20 T — **Tutorial 2** — Temperature responsive polymers as stationary phases — Frederic Lynen
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16:40 T — **Tutorial 3** — Quantitative polymer analysis with LC(×LC) and LC-MS — Tijmen Bos
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Ephesus Room

09:00 S — **State-of-the-Art 3** — André Striegel — Portrait of the polymer as a young molecule
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09:40 K — **Keynote 7** — Gino Groeneveld — High-resolution polymer separation
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10:30 — Coffee/Tea - E
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11:00 K — **Keynote 9** — Daniel Wefers — Analysis of polysaccharide mixtures
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11:30 O — **OR14: Ivan Melikhov** — SEC of cellulose with DMSO activation
11:40 14
11:50 O — **OR15: Sanne Boot** — Chemometric strategies for oligonucleotide separations
12:00 15
12:10 K — **Keynote 10** — Arlan van Asten — Crime at the macromolecular level
12:20 10
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12:50 — Lunch - Ext
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13:20 — Seminar — POSTNOVA
13:30 K — **Keynote 11** — Laszlo Majoros — Characterisation of polymers for regulatory purposes
13:40 11
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14:00 K — **Keynote 12** — Timo Beskers — Polymer regulation in the EU
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16:20 S — **State-of-the-Art 5** — Gert Desmet — State-of-the-art in column technology
16:30 5
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17:00 O — **OR22: Luca Tutis** — Ion-pairing HILIC for impurities in oligonucleotides
17:10 22
17:20 O — **OR23: Anna Lehrhofer** — Reversing chiral elution order on cellulose phases
17:30 23
17:40 O — **OR24: Peter O'Connor** — MS approaches to study microplastic degradation
17:50 24

Opening

Break - Exhibition opens and posters mounted by 11:00

Lunch - Exhibition - Posters

Seminar — Waters | WYATT TECHNOLOGY

TOSOH

Poster session 1
All odd posters presented

TOSOH

INTERACTIVE SESSION
(with drinks and snacks)
Highlighting exhibitions and posters
Mimi den Uijl and Peter Schoenmakers

CONFER

Thursday, January 23, 2025

Palmyra Room

K — Keynote 8
Freek Ariese
Raman spectroscopy of polymers and particles

O 12 — OR12: Giulia Giubertoni
Optical diffusion-ordered spectroscopy

O 13 — OR13: Merel Konings
Microplastics in environmental samples

Exhibition - Posters

O 16 — OR16: Gerhard Heinzmann
Hyphenated AF4 - Raman microscopy for nanoplastics

O 17 — OR17: Martin Geisler
Multidetector high-temperature thermal FFF

O 18 — OR18: Maria Hayder
AF4 of polymeric particles

S 4 — State-of-the-Art 4
Albena Lederer
Trends in FFF of synthetic polymers

hibition - Posters

O 19 — OR19: Nadine Kohlhuber-Musil
Lignin particle-size distributions with AF4

O 20 — OR20: Leena Pitkänen
Lignin nanoparticles by AF4-DLS

O 21 — OR21: Joshika Verduin
Analysis of oligonucleotide-containing lipid nanoparticles

r session 2
osters presented

O 25 — OR25: Rebekah Morrow
Global food-contact notifications

O — OR26: Till Gruendling
Polymers and NLP – Pitfalls and Strategies

O 27 — OR27: Jana Falkenhagen
SEC Round-robin tests

S O — Industry Round Table
Issues faced by industry
Bastiaan Staal
Ron Peters

ENCE PARTY

Edessa Hall

T 4 — Tutorial 4
Peaks and signals in 2D chromatography
Nino Milani

T 5 — Tutorial 5
LC x benchtop NMR
Marion Gaborieau

T 6 — Tutorial 6
Polymer analytics for safe and sustainable materials
Ron Peters

T 7 — Tutorial 7
CE-MS of biomacromoleculed
Kevin Jooß

T 8 — Tutorial 8
Worm chromatography and active polymers
Sander Woutersen

Friday, January 24, 2025

Ephesus Room

09:00 K 13 — Keynote 13
Jeroen Kool
Analytical profiling of toxins in venoms

09:20
09:30 K 14 — Keynote 14
Noortje de Haan
Cellular glycomics
09:40 14
09:50
10:00 O 28 — OR28: Mátyás Bittenbinder
Organ-on-chip technology
10:10 28
10:20
10:30

Coffee/Tea - Posters

10:40 O 31 — OR31: Xiaoyi Zhang
Nanofractionation of venom toxins
10:50 31
11:00 O 32 — OR32: Yasmin van der Velden
Intact polysaccharides by MALDI ISD FT-ICR MS
11:10 32
11:20 O 33 — OR33: Ziran ZHai
Nanoflow SEC-MS of Intact Proteoforms
11:30 33
11:40 O 34 — Snežana Đorđević
Crosslinked polypeptide-based nanoconjugates
11:50 34
12:00 O 35 — OR35: Julien Slagboom
High-Throughput venom glycoproteomics
12:10 35
12:20
12:30

Lunch
Top 8 posters announced

12:40
12:50
13:00
13:10 O 38 — OR38: Pieter Stam
Food hydrocolloids using SEC-MALS-RI
13:20 38
13:30 O 39 — OR39: Althea Carstens
Self-assembly behaviour of bio-derivable polymers
13:40 39
13:50 O 40 — OR40: Nicole Najjoum
Hemicellulose heterogeneity through free solution CE
14:00 40
14:10
14:20

Short break

14:30
14:40
14:50 P 3 — Plenary 3
Matthias Pursch
Status of synthetic-polymer characterization and challenges in industrial research
15:00 3
15:10
15:20 P 4 — Plenary 4
Adriana Carvalho de Souza
Characterization of Polymers in Nutrition, Health & Beauty
15:30 4
15:40
15:50 — Roundup and Awards
16:00
16:10 — Farewell
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Palmyra Room

O 29 — OR29: Michael Soll
Airborne particles by Py-GC-MS

O 30 — OR30: Michael Pollard
Loop collection for low field NMR detection

S 6 — State-of-the-Art 6
Wolf Hiller
Title

K 15 — Keynote 15
Manfred Wilhelm
Potential of low-field DOSY-NMR to study polymers

K 16 — Keynote 16
Anthony Ndiripo
Fractionation of complex polyolefins

O 36 — OR36: Tijmen Bos
Block-length distribution of copolymers

O 37 — OR37: Vincent Darcos
Hydrophilic polymers by LAC

K 17 — Keynote 17
Deirdre Cabooter
Taylor-Aris method for high-MW analytes

K 18 — Keynote 18
Rick van den Hurk
Tackling solvent mismatch for nitrocellulose in SEC-RPLC

Pitches Top-8 Posters

14/01/2025

Thursday morning January 23 Edessa Room

TUTORIALS

Chairs: Sanne Boot and Felicia Cilenov

9:30 *TU4 Evaluation of the relationship between peak and signal characteristics and the performance of common peak-detection methods in comprehensive two-dimensional chromatography*
Nino Milani (University of Amsterdam, The Netherlands)

10:10 *Coffee/Tea – Exhibition – Posters*

Chairs: Raya Sadighi and Chiara Kennedy

10:30 *TU5 How to get the most out of LC × benchtop NMR?*
Marion Gaborieau (Karlsruhe Institute of Technology, Germany)

Special session on regulation

Chairs: Guusje van Schaick and Rebecca Gibkes

12:00 *TU6 The role of polymer analytics to ensure safe and more sustainable materials*
Ron Peters (Covestro, Waalwijk, The Netherlands)

12:40 *Lunch – Exhibition – Posters*

Advance Book Information

All information is subject to change without notice

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THEMA:	PNF, 4CT, 4TC
BISAC:	SCI013010

Analytical Separation Science

Bob W J Pirok University of Amsterdam, The Netherlands
Peter J Schoenmakers University of Amsterdam, The Netherlands

Synopsis

There is a pervasive need for analytical separations in many fields of science and in many different industries. This book teaches (almost) all the important aspects of analytical separation sciences to students and practicing analysts. For those new to separation science, it features basic modules in which fundamental concepts and analytical practice are described. Master modules provide more in-depth treatments intended for graduate students. Advanced modules bring the reader to the current frontiers of separation sciences and encourage further reading. Emphasis is on the main analytical separation techniques of gas chromatography, liquid chromatography and capillary electrophoresis, but due attention is paid to a number of other methods and to sample preparation. Knowledge on statistics and chemometrics is provided. Finally, the book describes how a sound understanding can be used to successfully develop optimal separation methods.

Key Features and Highlights

- Covers a very broad range of separation methods across three different levels, from (vocational) BSc to analytical scientists.- Will also be of interest to researchers in industrial settings.
- Divided into modules that meet the needs of lecturers, who can design their courses to suit their students and their own competences or preferences.
- Established authors that have taught, and will continue to teach, the subjects that will be treated in this book.

Brief Contents

- Fundamentals of Chromatography
- Gas Chromatography
- Liquid Chromatography
- Size-based Separations
- Capillary Electrophoresis
- Supercritical Fluid Chromatography
- Multi-dimensional Chromatography
- Sample Preparation
- Data Analysis
- Method Development and Optimization

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ROYAL SOCIETY OF CHEMISTRY

12:40 *Lunch – Exhibition – Posters*
EDESSA ROOM

13:00 *Vendor seminar Postnova*

Special session on regulation

Chair: Mubasher Bashir

13:30 *KN11 Analytical characterisation of polymers for regulatory purposes*
Laszlo Majoros (ECHA European Union, Helsinki, Finland)

14:00 *KN12 Polymer regulation in the EU: a polymer chromatography viewpoint on what to expect*
Timo Beskers (BASF, Ludwigshafen, Germany)

14:30 *Poster session 2 (even posters presented)*
EDESSA ROOM

Chair: Sebastiaan Eeltink

16:20 *SotA5 State-of-the-art in column technology*
Gert Desmet (Free University Brussels, Belgium)

17:00 *OR22 Ion-pairing hydrophilic interaction chromatography for resolving deaminated impurities in therapeutic phosphorothioated oligonucleotides*
Luca Tutiš (University of Amsterdam, The Netherlands)

17:20 *OR23 Elution revolution: reversing chiral compound elution on cellulose-based stationary phases in high-performance liquid chromatography by swapping D- for L-cellulose*
Anna Lehrhofer (BOKU University, Vienna, Austria)

17:40 *OR24 Advanced mass-spectrometry approaches to study microplastic degradation*
Peter O'Connor (University of Warwick, Coventry, UK)

12:40 *Lunch – Exhibition – Posters*
EDESSA ROOM

Chair: Albena Lederer

13:30 *OR19 Journey to accurate lignin particle size distributions with asymmetric flow flied-flow fractionation*
Nadine Kohlhuber Musl (BOKU University, Vienna, Austria)

13:50 *OR20 Size profiling of lignin nanoparticles by AF4-DLS*
Leena Pitkänen (Aalto University, Aalto, Finland)

14:10 *OR21 Analysis of size and drug loading of oligonucleotide-containing lipid nanoparticles by online size-exclusion chromatography coupled to hydrophilic interaction chromatography*
Joshka Verduin (Vrije Universiteit, Amsterdam, The Netherlands)

14:30 *Poster session 2 (even posters presented)*
EDESSA ROOM

Special session on regulation

Chair: Anthony Ndiripo

16:20 *OR25 Global food contact notifications of polymeric materials and supporting analytical techniques*
Rebekah Morrow (Intertek Assuris, Boca Raton, FL, USA)

16:40 *OR26 Characterization and quantification of polymers and NLP – pitfalls and strategies*
Till Gruendling (BASF, Ludwigshafen, Germany)

17:00 *OR27 Challenges of SEC and the necessity of round robin tests*
Jana Falkenhagen (BAM, Berlin, Germany)

17:20 *INDUSTRY ROUND TABLE*
Coordinated by Bastiaan Staal (BASF) and Ron Peters (Covestro)

Thursday afternoon January 23 Edessa Room

TUTORIALS

Chairs: Kevin Hes and Amélie Willemse

13:50 *TU7 Capillary electrophoresis – mass spectrometry for biomacromolecular analysis*
Kevin Jooß (Vrije Universiteit, Amsterdam, The Netherlands)

14:30 *Poster session 2 (even posters presented)*

Chairs: Gerben van Henten and Merel Konings

15:40 *TU8 Active polymers: from living blobs to worm chromatography*
Sander Woutersen (University of Amsterdam, The Netherlands)

THE SCM-11 WORKFORCE

- **Alexandra Chojnacka**
- Tom Aalbers
- Jelle Alderden
- Laura Bastiaans-Tomé
- Daniël van Beekhuizen
- Thijs Beekwilder
- Daniël Bertram
- Lars de Bie
- Mátyás Bittenbinder
- Sanne Boot
- Tijmen Bos
- Ceyda Bulut
- Ruben Cageling
- Pascal Camoiras Gonzalez
- Althea Carstens
- Felicia Cilenov
- Miché Daniels
- Kyndra Farrow
- Rebecca Gibkes
- Gino Groeneveld
- Maria Hayder
- Kevin Hes
- Thomas Holmark
- Rick van den Hurk
- Chiara Kennedy
- Merel Konings
- Antonia Kritsima
- Esmee van der Lingen
- Jiaxing Liu
- Ebru Memet
- Nino Milani
- Raya Sadighi
- Guusje van Schaick
- Jasmin Schwarte
- Thandekile Siwela
- Julien Slagboom
- Luca Tutiš
- Chuck van der Veen
- Joshka Verduin-Weijers
- Amélie Willemse
- Ziran Zhai
- Xiaoyi Zhang
- Annika van der Zon

Friday morning January 24 Ephesus Room

Chair: Leon Coulier

9:00 *KN13 Analytical profiling of toxins in venoms for evoking zebrafish paralysis with parallel assessment of ion channel modulation*
Jeroen Kool (Vrije Universiteit, Amsterdam, The Netherlands)

9:30 *KN14 Cellular glycomics: zooming-in at the cell surface*
Noortje de Haan (Leiden University Medical Centre, The Netherlands)

10:00 *OR28 Bloody insights: using organ-on-chip technology to study haemorrhagic activities of snake venoms on endothelial tubules*
Matyas Bittenbinder (Vrije Universiteit, Amsterdam, The Netherlands)

10:20 *Coffee/Tea – Posters*

Chair: Karin Lubbers

10:40 *OR31 Development of nanofractionation analytics for identification of venom toxins hitting muscarinic receptors*
Xiaoyii Zhang (Vrije Universiteit, Amsterdam, The Netherlands)

11:00 *OR32 Structure characterization of intact polysaccharides by MALDI – ISD – FT-ICR MS*
Yasmin van der Velden (Leiden University Medical Centre, The Netherlands)

11:20 *OR33 Nanoflow Size Exclusion Chromatography – Native Mass Spectrometry of Intact Proteoforms and Protein Complexes*
Ziran Zhai (University of Amsterdam, The Netherlands)

11:40 *OR34 A multimodal analytical platform for characterization of crosslinked polypeptide-based nanoconjugates*
Snežana Đorđević (Polymer Therapeutics Lab, Valencia, Spain)

12:00 *OR35 High-throughput venom glycoproteomics*
Julien Slagboom (Vrije Universiteit, Amsterdam, The Netherlands)

12:20 *Lunch – Top-8 posters announced*

Friday morning January 24 Palmyra Room

Chair: Patrice Castignolles

9:00 *OR29 "Up in the air" – the plastics we breath… (and measure at nanogram sensitivity by Py-GC/MS)*
Michael Soll (Frontier Laboratories, Essen, Germany)

9:20 *OR30 Implementation of slow- and stop-flow without external loop collection to widen the scope for low field NMR detection in 1-D HPLC*
Michael Pollard (Karlsruhe Institute of Technology, Germany)

9:40 *SotA6 - DOSY – a powerful tool for the separation and characterization of polymers and the determination of molar masses*
Wolf Hiller (TU Dortmund, Germany)

10:20 *Coffee/Tea – Posters*

Chair: Ron Peters

10:40 *KN15 Potential of DOSY NMR at low field (90 MHz) to determine polymer molar masses and explore their chemical heterogeneity*
Manfred Wilhem (Karlsruhe Institute of Technology, Germany)

11:10 *KN16 Application of several strategies and tactics in the fractionation of complex polyolefins using advanced tools coupled to information rich detectors*
Anthony Ndiripo (SABIC, Geleen, The Netherlands)

11:40 *OR36 Determining block-length distributions of co-polymers*
Tijmen Bos (University of Amsterdam, The Netherlands)

12:00 *OR37 Analysis of hydrophilic polymer by liquid adsorption chromatography (LAC)*
Vincent Darcos (IBMM, University of Montpellier, Montpellier, France)

12:20 *Lunch – Top-8 posters announced*

Friday afternoon January 24 Ephesus Room

Chair: Andrea Gargano

13:10 *OR38 Characterization of food hydrocolloids using SEC-MALS-RI*
Pieter Stam (DSM-Firmenich, Delft, The Netherlands)

13:30 *OR39 Investigation of the molecular structure and self-assembly behaviour of bio-derivable polymers using advanced analytical techniques*
Althea Carstens (Stellenbosch University, South Africa)

13:50 *OR40 Detection of hemicellulose and insights into chemical heterogeneity through free solution capillary electrophoresis*
Nicole Najjoum (Sorbonne Université, Paris, France)

14:10 *Short break*

Chair: Peter Schoenmakers

14:30 *Pitches Top-8 posters*

14:50 *PL3 The Trends in polymer analysis and characterization - An industry perspective*
Matthias Pursch (Dow Chemical, Wiesbaden, Germany)

15:20 *PL4 Characterization of Polymers in Nutrition, Health & Beauty*
Adriana Carvalho de Souza (DSM-Firmenich, The Netherlands)

15:50 *Round up and Awards*

16:00 *Farewell (drinks)*

Friday afternoon January 24 Palmyra Room

Chair: Wolfgang Radke

13:10 *KN17 Application of the Taylor-Aris method for high-molecular weight analytes*
KN17 – Deirdre Cabooter (KU Leuven, Belgium)

13:40 *KN18 Characterization of nitrocellulose by tackling solvent mismatch in SEC-RPLC*
Rick van den Hurk (University of Amsterdam, The Netherlands)

14:10 *Short break*
Programme continues in the Ephesus Room

Poster programme

Edessa Room

Sponsored by Tosoh

Wednesday from 15:10-16:40 – Poster session 1: odd numbered posters presented.

Thursday from 14:30-16:20 – Poster session 2: even numbered posters presented.

Friday 12:20 – Top-8 posters announced.

Friday from 14:30-14:50 – Poster pitches of Top-8 posters (2 min each).

PO01 Chemometric strategies for characterization and optimization of oligonucleotide separations
Sanne Boot (University of Amsterdam, The Netherlands)

PO02 Characterization of monoclonal antibody charge variants under near-native separation conditions using nanoflow sheath liquid capillary electrophoresis-mass spectrometry
Annika van der Zon (University of Amsterdam, The Netherlands)

PO03 Agglomeration of nanoplastics in the human digestive tract by AF4 and light scattering techniques
Maria Hayder (University of Amsterdam, The Netherlands)

PO04 – Generation of metabolite-like compounds from n,n-dimethylpentylone using hydrogen peroxide
Jiaxing Liu (Vrije Universiteit, Amsterdam, The Netherlands)

PO05 – Revealing extensive glycoform diversity OF C1-INH by integrated mass spectrometric approaches
Sigourney Karijodikoro (LUMC, Leiden, The Netherlands)

PO06 – High-resolution impurity profiling and oligonucleotide conformation preservation by multiple heart-cutting 2D-LC-MS
Quang-Dong Bui (Free University Brussels, Belgium)

PO07 – Exploring liquid chromatography modes for therapeutic phosphorothioated oligonucleotide diastereomer profiling
Antonia Kritsima (University of Amsterdam, The Netherlands)

PO08 – Insight in stability, unfolding, and aggregation of cross-linked protein by collisional induced activation and ion mobility mass spectrometry

Raya Sadighi (Vrije Universiteit, Amsterdam, The Netherlands)

PO09 - Identifying β-2-glycoprotein-1 conformations with native anion-exchange chromatography – mass spectrometry
Daniël Bertram (Vrije Universiteit, Amsterdam, The Netherlands)

PO10 – Advanced characterization of iron oxide nanoparticles by asymmetric flow field-flow fractionation and X-ray diffraction
Maria Marioli (Ardena, Oss, The Netherlands)

PO11 – Separation and characterization of high molar mass polymers using thermal field-flow fractionation hyphenated with triple detection
Gerhard Heinzmann (Postnova Analytics, Landsberg, Germany)

PO12 – A multimodal analytical platform for characterization of crosslinked polypeptide-based nanoconjugates
Snežana Đorđević (Polymer Therapeutics Lab, Valencia, Spain)

PO13 – Combining asymmetric flow field-flow fractionation with Py-GC/MS for analysis of nanoplastics
Maria Hayder (University of Amsterdam, The Netherlands)

PO14 – Functional antibacterial polymer blends for 3D printing
Miché Daniels (Stellenbosch University, South Africa)

PO15 – Dead or alive: sequence determination and functional group analysis for polymers vs. proteins
Rebecca Gibkes (ATLAS, Amsterdam, The Netherlands)

PO16 – Quantitative assessment of 2D-LC analysis of polyolefins for multiway applications – calibration of the log M axis
Jan-Hendrik Arndt (Fraunhofer LBF, Darmstadt, Germany)

Po17 – Biobased and biodegradable polymers with a focus on sustainability and circular economy
Jana Falkenhagen (BAM, Berlin, Germany)

PO18 – From bench to mini – classification of technical lignins with NIR
Friedrich Fink (BAM, Berlin, Germany)

PO19 – Multidimensional analytical protocols for branching analysis of complex polyolefins
Thandekile Siwela (Stellenbosch University, South Africa)

PO20– Molar mass distribution and chemical composition distribution of PS-b-PMMA block copolymers determined by diffusion ordered spectroscopy
Bastian Grabe (TU Dortmund, Germany)

PO21 – No lignins left behind—using sec for the quantification and molar mass characterization of technical lignins in black liquors
Margaritha Ritscher (BOKU University, Vienna, Austria)

PO22 – Size-exclusion chromatography–electrospray-ionization mass spectrometry to characterize end group and chemical distribution of poly(lactide-co-glycolide) co-polymers
Masashi Serizawa (University of Amsterdam, The Netherlands)

PO23 - Describing chromatograms in two-dimensional liquid chromatography: an overview of chromatographic response functions
Jelle Alderden (University of Amsterdam, The Netherlands)

PO24 – Automated method development for liquid chromatography a forensic test case
Esmee van der Lingen (University of Amsterdam, The Netherlands)

PO25 – Combining retention factor and retention index: a new approach for enhancing retention prediction using chemometrics
Jasmin Schwarte (University of Amsterdam, The Netherlands)

PO26 – Identifying optimal selectivity combinations for 2D-LC – an alternative selectivity screening method for heart-cut 2D-LC
Thijs Beekwilder (University of Amsterdam, The Netherlands)

PO27 - Characterization of complex polymer mixtures by multiple detection SEC: determination of molar masses and architecture from deconvoluted multimodal chromatograms
Gaëlle Pembouong (Sorbonne Université, Paris, France)

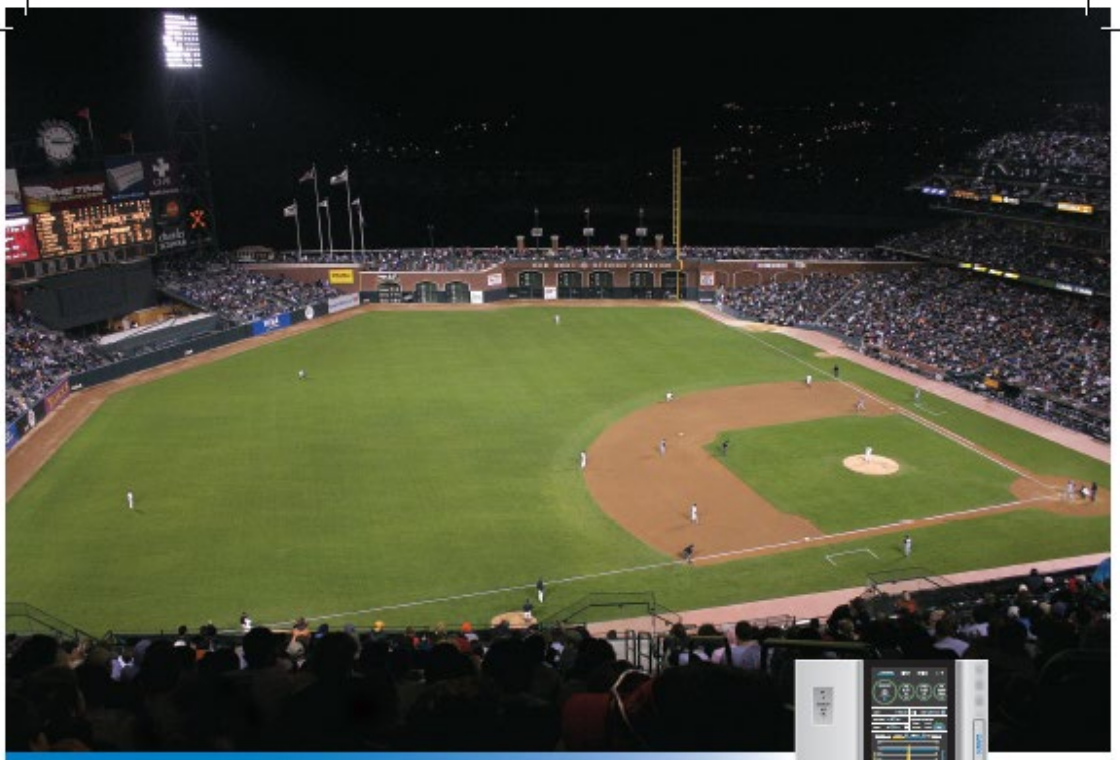
PO28 – Investigating the polymerization mechanism at work during ethyl cyanoacrylate fuming: a challenge for mass spectrometry
Mariska Banidol (Aix Marseille University, France)

PO29 – Comprehensive analysis of low-density polyethylene using analytical methods
Jan-Hendrik Arndt (Fraunhofer LBF, Darmstadt, Germany)

PO30 – Evaluation of metal-organic matter interactions using asymmetric flow field-flow fractionation with nanofiltration membranes
Akhil Gopalakrishnan (Karlsruhe Institute of Technology, Germany)

PO31 - Composition and structural characterization of biobased monomers: dimer acids
Morgan Raguideau (Sorbonne Université, Paris, France)

PO32 - Size and Composition Analysis of Polymeric Drug-Delivery Systems by Two-Dimensional Liquid Chromatography with Online Sample Transformation
Joshka Verduin (Vrije Universiteit, Amsterdam, The Netherlands)



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