FILTECH

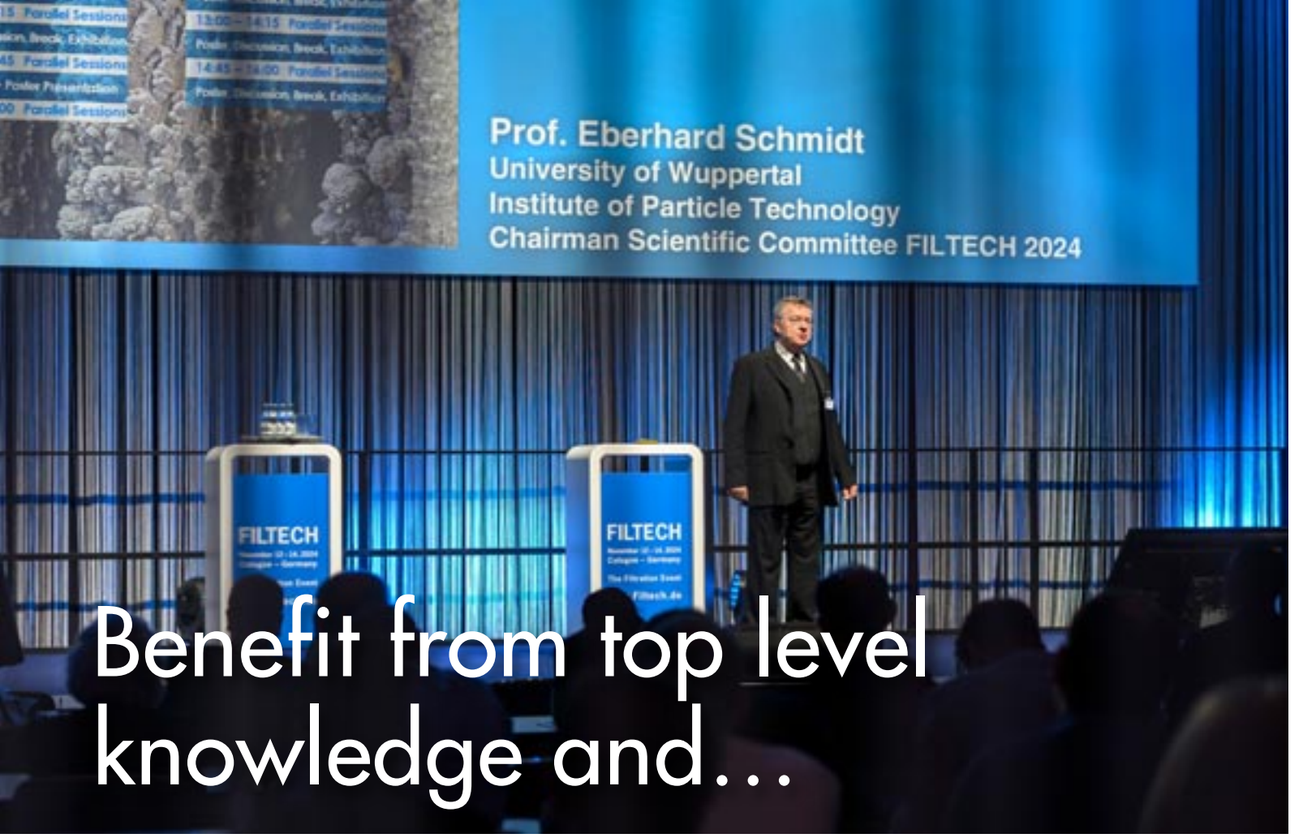
June 30 – July 02, 2026
Cologne – Germany

The Filtration Event
www.Filtech.de

Platform for your success

Conference Programme Short Courses & Trade Show

Koelnmesse
Cologne
Germany



Benefit from top level knowledge and…

… know-how transfer

The Filtration industry provides innovative solutions for current and future challenges. This dynamic industry is of further growing importance and turning into a key industry worldwide. At the FILTECH 2026 Show the latest innovations will be on display and will provide visitors an exclusive overview and insights into state-of the art science and technologies - no matter what sector they are in. The innovative power in the field of filtration and separation is strong. Particularly in air filtration, fine dust values and gases that affect the climate, germs that are harmful to our health, and other impacts are leading to ever new developments. But also for solids separation and solid-liquid separation there are always new developments with the striving for maximum efficiency, higher quality and sustainable solutions.

More than 160 Technical Papers

The programme gives a representative survey of the different procedures and applications of separation technology all across the industry, from the preparation of mineral raw materials, chemistry, environmental technology and water purification down to pharmaceutical and biotechnology, air cleaning and air monitoring technologies. Presentations also focus on the detection of micro pollutants, antibiotic-resistant bacteria/germs, micro plastics in water and their removal technologies. Also presented are new developments in battery manufacturing and recycling. On the basis of advanced hardware, most modern sensor techniques and deep understanding of physical fundamentals, AI applications are becoming more and more important also for separation technology. Digital twins and autonomous processes help to improve the solution of many separation problems. New approaches to face these and many other challenges are given at **FILTECH 2026** Conference.

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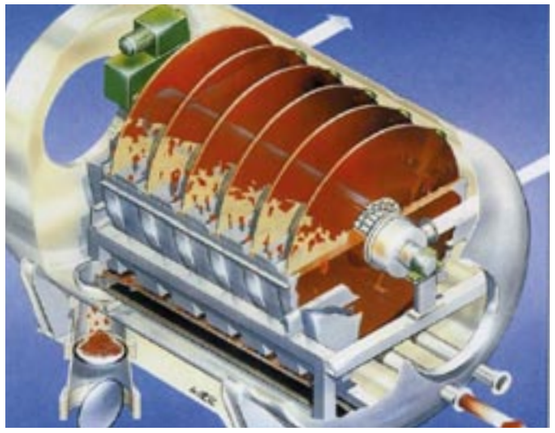
Short Course 1

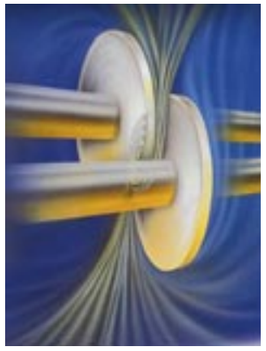
Solid/Liquid Separation



This 1-day Course "Solid/Liquid Separation" is of interest to engineers, scientists, managers and other technical personnel involved in solid-liquid separation in the process and other industries. They will find the course informative, regardless of whether they design, purchase, research or use filtration and separation equipment. Plant engineers, technicians and operators should find the course materials directly applicable, and graduate research students will value the expert introduction to the technologies. It is a comprehensive review of the processes involved in the separation of solids from liquids, which will emphasise practical aspects and present appropriate theoretical information as necessary.

Course Presenter

Dr.-Ing. Harald Anlauf was till March 2020 Academic Director at the Karlsruhe Institute of Technology (KIT), Institute of Mechanical Process Engineering and Mechanics and and has amassed more than 40 years of experience. in the field of solid liquid separation technology. He earned his academic degrees as Chemical Engineer 1980 and 1985 at Karlsruhe University. 1999-2006 he was Chairman of the VDI-GVC working party „Mechanical Liquid Separation", since 2000 Co-Chairman of the FILTECH Congress Scientific Committee. 2004-2008 he was Chairman of INDEFI and President of the 10th World Filtration Congress 2008 in Leipzig, Germany. He published more than 190 technical papers, books etc. and is internationally active in giving consultations and lectures.



Topics:

- Characterisation of Particles & Particle Separation
- Density Separation - Static Thickeners and Solid Bowl Centrifuges
- Depth, Cross Flow and Cake Filters
- Filter Media
- Suspension Pretreatment to Enhance Separation Properties
- Alternative Separation Solutions & Apparatus Combinations
- Selection Criteria for Separation Equipment

8.30 h Welcome Coffee

9.00 h **Introduction and Overview**
Systematic survey of separation processes, apparatus examples and separation strategies

10.00 h **Particle Characterization**
Characterization of single particles, particle collectives and particle separation.

10.45 h Coffee Break

11.00 h **Density Separation – Static Thickeners and Solid Bowl Centrifuges**
Separation mechanisms, equipment, mode of operation, application.

12.00 h **Depth and Cross Flow Filtration**
Separation mechanisms, equipment, mode of operation, application

12.45 h Lunch

13.45 h **Cake Filtration – Formation, Washing, Demoisturing**
Separation mechanisms, consequences for practical use.

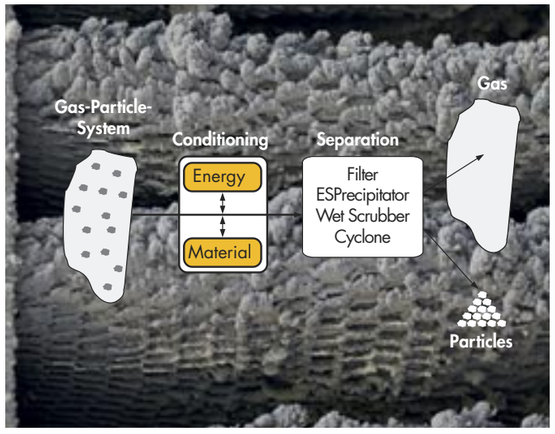
14.45 h Coffee Break

15.00 h **Cake Filters**
Equipment, mode of operation, application

16.00 h **Filter Media**
Overview and fields of application, influence of media properties on separation results.

16.30 h **Suspension Pretreatment to Enhance Separation Properties**
Additional techniques for enhancing solid-liquid separation processes, physiochemical influences on slurry stability, flocculation

17.00 h **Apparatus Combinations, Alternative Solutions and Apparatus Selection Criteria**
Strategies for process optimization & selection of suitable separation techniques.



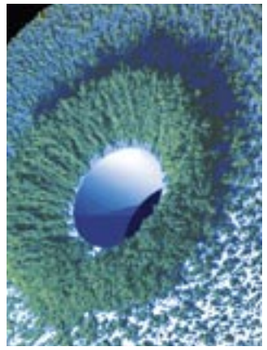
Short Course 2

Air Cleaning & Dust Separation

This 1-day Short Course is of interest to engineers, technicians, scientists, managers, and other personnel involved in gas-solid separation in indoor air systems and the process industries. This Course is informative, regardless of whether you design, purchase, research, or use dust separation equipment for product recovery, emission control, air conditioning systems or process gas cleaning. This course is a comprehensive review of the processes involved in the separation of solid or liquid particles from gases.

Course Presenter

Prof. Dr.-Ing. habil. Eberhard Schmidt is Full Professor for Safety Engineering/Environmental Protection at Wuppertal University. His academic degrees he earned 1991 and 1998 at Karlsruhe University. From 1993 to 1994 he was affiliated with the Joint Research Centre in Ispra/Italy. In the years 1998 and 1999 he was with Degussa company in the department of process engineering / particle technology.
He is Co-Chairman of the FILTECH Conference and was Scientific Secretary of 10th World Filtration Congress. He has published more than 100 technical papers, books, patents, etc. and consulted and lectured throughout the world.



Topics:

- Evaluation & Selection of Dust Collection Equipment
- Wet Scrubbers and Electrical Precipitators
- Centrifugal Collectors / Cyclones
- Fibrous Filters / Deep Bed Filters
- Raw Gas Characterisation and Conditioning
- Fabric Filters / Surface Filters
- Health, Safety, and Environment

8.30 h Welcome Coffee

9.00 h **Introduction** | Particulate Matter (PMx); Dust Separation; Air Cleaning; Overview of the course

9.15 h **Evaluation of Dust Collection Equipment**
Particle size characterisation, concentration measurement, overall and fractional collection efficiency

10.00 h **Centrifugal Collectors (Cyclones)** | Mode of operation, basic designs, application, collection efficiency, pressure drop

10.45 h Coffee Break

11.00 h **Fibrous Filters (Deep-Bed Filters)**
Mode of operation, basic designs, application, collection efficiency, pressure drop

11.45 h **Air and Gas Cleaning**
Indoor air purification, automotive application, respiratory protection

12.30 h **Questions and answers**
An open-floor question and answer session

13.00 h Lunch

14.00 h **Wet Scrubbers**
Mode of operation, basic designs, design calculations, application, droplet separation

14.45 h **Electrical Precipitators**
Mode of operation, basic designs, design calculations, application, operating characteristics

15.30 h Coffee Break

15.45 h **Fabric Filters (Surface Filters)**
Mode of operation, basic designs, operating characteristics, design calculations

16.30 h **Industrial Dust Separation**
Selection of dust collection equipment, sustainable process integration, raw gas conditioning

17.15 h **Discussion**
An open-floor question and answer session.

Short Courses | FILTECH 2026 | June 29, 2026

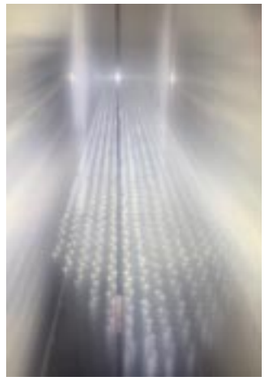
Short Course 3

The World of Nonwovens

This 1-day Short Course can be helpful to anyone wanting to learn more about nonwovens and where they are used. It is an introductory course covering topics like raw materials, introduction to the different nonwoven manufacturing technologies, as well as characterization and testing of nonwovens. It will also offer a glimpse into new technologies and future opportunities for nonwovens. Potential applications for bio-based polymers and other ideas around sustainability will be discussed.
This will be a very interactive session with lots of time to ask questions and engage in helpful discussions surrounding these different topics.

Course Presenter

Prof. Raoul Farer serves as the Executive Director of The Nonwovens Institute (NWI) and a Professor in the Wilson College of Textiles at NC State University. With over 24 years of experience in the nonwovens industry, Dr. Farer has an extensive background in textile technologies, research and development, and innovation leadership. Prior to joining NWI, Dr. Farer held leadership positions at Freudenberg Performance Materials, where he worked across multiple countries, including Germany, Spain, and the United States. His expertise spans various nonwoven technologies, including wet-laid, dry-laid, meltblown, and spunbond processes, as well as bonding techniques such as thermal, chemical, hydroentanglement, and needle-punching. He played a critical role in modernizing nonwoven manufacturing processes with a strong focus on sustainability and energy efficiency.



Topics:

- Fundamentals of Fibers & Materials
- Web Forming Technologies
- Web Bonding Technologies
- Web Finishing Technologies
- Nonwoven Characterization & Testing
- Opportunities and Challenges for the Nonwovens Industry
- New Technologies

8.30 h Welcome Coffee

9.00 h **Introduction** | Can I do that with a Nonwoven? – The World of Nonwovens – Nonwoven Products & Markets

9.30 h **Fundamentals of Fibers & Materials**
Polymers for Melt-Spinning, Fibers for Dry-Laid / Carded N Nonwovens, Fibers for Air-Laid Nonwovens, Fibers for Wet-Laid Nonwovens, Natural Fibers and Bio-based materials.

10.45 h Coffee Break

11.00 h **Web Forming Technologies**
Principles of Spunbond, Meltblown, Dry-Laid, Wet-Laid and Air-Laid Technologies

12.30 h **Questions and answers**
An open-floor question and answer session

13.00 h Lunch

14.00 h **Web Bonding Technologies**
Principles of Needlepunching, Hydroentanglement, Thermal Bonding and Chemical Bonding

15.00 h **Web Finishing Technologies**
Value-Add finishes and different ways to apply them.

15.30 h Coffee Break

15.45 h **Nonwoven Characterization & Testing**
Uniformity Measurement, Standard Tests, and Specialty Tests

16.30 h **Opportunities and Challenges for the Nonwovens Industry**
Sustainability & Nonwovens

17.00 h **New Technologies**

17.30 h **Discussion**
An open-floor question and answer session.

FILTECH 2026 | Conference Program | Overview

Monday, 29.06.2026

09:00 18:00	SC	Short Course 1 – Solid/Liquid Separation, Dr. Harald Anlauf – Karlsruhe – Germany Short Course 2 – Air Cleaning and Dust Separation, Prof. Dr. Eberhard Schmidt - Wuppertal University – Germany Short Course 3 – The world of Nonwovens, Prof. Raoul Farer - Wilson College of Textiles at NC State University – USA

Tuesday, 30.06.2026

08:00 10:00		Registration – Welcome Coffee in the main lobby of the conference section					
10:15 10:45		Opening Session					
10:45 12:00	PL	Plenary Lecture – Prof. Dr.-Ing. Habil. Ioannis Nicolaou, Owner and Director of the Company NIKIFOS – Cyprus Cake-Forming Filtration of Suspensions – Challenges and Solutions					
		Room 1		Room 2		Room 3	Room 4
13:00 14:15	K1	Keynote Lecture 1	L1	Centrifugal Separation	G1	Face Masks	G2 Dust Separation
		Coffee Break					
14:45 16:00	K2	Keynote Lecture 2	F1	Sustainable Filter Elements and Media	G3	Air Purification	G4 Filter Test Systems
		Coffee Break					
16:45 18:00	K3	Keynote Lecture 3	F2	Advanced Materials for and Establishment of Test Facilities	L2	Digital Simulation Techniques for Filtration Processes	L3 Sieving - Magnetic Separation - Aeration

Wednesday, 01.07.2026

09:00 10:15	L4	Continuous Vacuum Cake Filtration	L5	Filtration and Adsorption I	G5	Industrial Applications	G6 Indoor Air Cleaners
		Coffee Break					
10:45 12:00	K4	Keynote Lecture 4	F3	Bio-based Polymers Versus Fossil Based Polymers	G7	Industrial Gas Cleaning	G8 Ambient Air Applications
		Lunch 1st Floor					
13:00 14:15	K5	Keynote Lecture 5	F4	Enhancement of Filter Performance I	L6	Press Filters I	L7 Filtration and Adsorption II
		Coffee Break					
14:45 16:00	F5	Room 1 Short Oral	L8	Room 2 Short Oral	G9	Room 3 Short Oral	G10 Room 4 Short Oral M1 Room5 Short Oral
16:00 16:45		All Poster Presentations in the Poster Section in front of Hall 7.					
16:45 18:00	F6	Enhancement of Filter Performance II	G11	Adsorption	L9	Press Filters II	M2 Water Treatment

Thursday, 02.07.2026

09:00 10:15	F7	PFAS-Free Filter Media and PFAS Separation	G12	Pleated Filter	L10	Depth Filtration I	M3 Biotechnical Applications
		Coffee Break					
10:45 12:00	F8	Filter Media Characterization	G13	Mist and Droplets	L11	Depth Filtration II	M4 Membrane Characterization
		Lunch 1st Floor					
13:00 14:15	F9	Surface Functionalization Media I	G14	Modelling and Simulation I	L12	Filtration Fundamentals and Lab Scale Tests	M5 Ultrafiltration
		Coffee Break					
14:45 16:00	F10	Surface Functionalization Media II	G15	Modelling and Simulation II	L13	Surry Pretreatment - Thickening - Flocculation	

Tuesday, 30 June 2026 – 10:15 - 12:00

Cake-Forming Filtration of Suspensions – Challenges and Solutions

PL

Opening and
Plenary Lecture
Prof. Dr.-Ing. Habil. Ioannis Nicolaou
Owner and Director of the Company NIKIFOS
Cyprus

The cake-forming filtration of suspensions, which includes the optional steps of washing and deliquoring of the filter cake, is a key method in solid-liquid separation. It is found in a wide range of industries where diverse continuous and batch filter apparatuses are used. Such fields include the chemical, petrochemical, food and beverages, pharmaceutical, pulp and paper, electronics, metallurgical, waste water industries just to name some. It is common for all filter apparatuses to have a filter area covered by a filter medium and the formation of a filter cake. The driving potential for the cake formation can be a gas pressure difference: vacuum (continuous vacuum belt, drum, disc and pan filters) or overpressure (continuous pressure drum and disc filters, pressure nutsche filters), a hydraulic overpressure (candle and pressure leaf filters, filter presses, filter press automats) or a centrifugal pressure (all types of batch and continuous filter centrifuges).

Tuesday, 30 June 2026

13:00 - 14:15

Filter Media Session
Liquid Session
Gas Session
Membrane Session

K1 Carbon Negative Biochar Filter: Market Development for ESG and Climate Solutions

room 1

Keynote Lecture 1
Prof. Dr. Yong Sik Ok
Korea University
Seoul – South Korea

Biochar, long valued for its role in soil enhancement and carbon sequestration, is now gaining momentum across diverse industries such as construction, waste management, textiles, and renewable energy. This talk explores how biochar is evolving into a scalable, carbon-negative solution aligned with ESG goals. Drawing on techno-economic analysis and global case studies, we identify key commercialisation barriers – such as inconsistent standards and policy gap – and propose solutions including life cycle assessments, inclusive governance models, and region-specific pyrolysis technologies. A coordinated effort across government, industry, and academia is essential to unlock the full environmental and economic potential of biochar filters.Biochar, long valued for its role in soil enhancement and carbon sequestration, is now gaining momentum across diverse industries such as construction, waste management, textiles, and renewable energy.

L1 Centrifugal Separation

room 2

Recent developments in process modeling for solid-liquid separation in solid bowl centrifuges

M. Gleiß*, Karlsruhe Institute of Technology (KIT), Germany

Experimental study on the separation efficiency and pressure drop of selected industrial hycrocyclone geometries with 2-inch inlet dimension

T. Condrut*, T. Senfter, C. Mayerl, M. Berger, T. Kofler, E. Leusmann, M. Pillei, MCI - The Entrepreneurial School, Austria

Numerical investigation of the filling process in discontinuous filter centrifuges as a basis for improved process design

L. Künkler*, Karlsruhe Institute of Technology (KIT), Germany

Face Masks — G1

room 3

Next generation FFP2: Simulation-based optimization of processes and media for filtering face pieces

R. Kirsch*, C. Mercier, W. Arne, S. Antonov, Fraunhofer Institute for Industrial Mathematics (ITWM); E. Dahrmann, IMSTec GmbH; T. Kara, Reifenhäuser Reicofil, Germany

Limited gas protection in filtering facepiece respirators containing activated carbon

D. Tobjörk*, M. Sundqvist, FOI, Swedish Defence Research Agency, Sweden

Design and development of 3D structured personalised nose mask for better protection of human respiratory health from air pollutants in asthma patients

M. Basak*, S. Bakshi, S. Mukherjee, National Institute of Fashion Technology (NIFT); A. Mitra, Visva Bharati University; A. Mukhopadhyay, Dr. B.R. Ambedkar National Institute of Technology Jalandhar, India

Dust Separation — G2

room 4

Flow field improvement for the optimization of the performances of a pulse-jet baghouse

A. Ginestet*, D. Pugnet, M. Robitu, CETIAT - Centre Technique des Industries Aérauliques et Thermiques, France

Operations For The Bag Filter System: PROJET MEGA®

M. Garg*, Intensiv-Filter Himenviro Gmbh, Germany

Enhancing hot gas filter performance in earthquake-prone regions and other extreme environments

A. Barker*, ALKEGEN, USA

Tuesday, 30 June 2026

14:45-16:00

Filter Media Session
Gas Session
Liquid Session
Membrane Session

K2 Insights into shear-enhanced dynamic filtration: Advancements and applications in solid–liquid separation

room 1

Keynote Lecture 2
Prof. Su-En Wu
Chung Yuan Christian University
Taiwan

Membrane technology has been widely adopted for filtration and separation applications to enhance production quality and operational efficiency over the last decade. In practical chemical and biochemical separation processes, multicomponent suspensions often lead to membrane fouling, which becomes the primary contributor to filtration resistance. Therefore, reducing membrane fouling and filtration resistance is crucial for improving filtration performance and ensuring cost-effective membrane processes. Shear-enhanced dynamic filtration presents a promising alternative to traditional cross-flow filtration by introducing additional mechanical forces that significantly reduce cake-fouling resistance. Although the power consumption for dynamic filtration supply may be higher than the others in solid–liquid separation processing, there is more beneficial for preventing fouling from attaching to the membrane surface.
This presentation will provide an overview of recent developments and applications of dynamic filtration.

F1 Sustainable Filter Elements and Media

room 2

Green competitiveness in action: How filtration and separation technologies are powering the sustainable economy, J. Verde*, Global Authority on Economic Resilience and Sustainable Development, Puerto Rico

From circular filtration materials to audit-proof sustainability data: Physical–digital traceability enabled by SMX and validated with CETI, P. Wijns*, CleverSustainability, Germany; M. Marival, M. Vulliet, CETI - Centre Européen des Textiles Innovants, France

Sustainability-by-design in filtration: Pilot testing and fundamental research for sustainable filtration innovations, P. Wijns*, CleverSustainability, Germany; M. Marival, M. Vulliet, CETI – Centre Européen des Textiles Innovants, France

Air Purification

G3

room 3

Miniature electrostatic precipitator

H. Salmela*, I. Kulmala, A. Säämänen, VTT Technical Research Centre of Finland, Finland

Aeromobil: Testing and mathematical modelling of bioaerosol decontamination and evaluation of infection risk in indoor spaces

C. Hartl*, V. Sharp, C. Kirchnawy, G. Ettenberger, OFI - Austrian Research Institute for Chemistry and Technology; R. Zweiler, M. Goritschnig, K. Paar, K. Plank, GET - Güssing Energy Technologies GmbH, T. Neuhuber, B. Glinsner, ZSI - Centre for Social Innovation Ltd., Austria

Thermo-mechanical causes of microfiber release and fiber micro-damage in tumble drying: Filtration and emission control

M. Atila Özer*, M. Emin Çoban, H. Koc, Senol Çavusoglu, Beko; U. Kıvanç Sahin, Istanbul Technical University, Turkey

Filter Test Systems

G4

room 4

Integrated HEPA/ULPA filter qualification: Linking ISO 29463 laboratory testing with ISO 14644 3 in situ cleanroom verification

S. Schütz, K. Oelschlägel, S. Grosse, Topas GmbH, Germany, K. Alderson, Topas Inc., USA*

Filter testing according to ISO 29461 – Air intake filter systems for rotary machinery

C. Kappelt*, M. Neukirch, J. Landgraf, R. Adam, J. Müller, Topas GmbH, Germany

Testing of human pathogenic microorganisms & allergens with a newly developed BSL 2 safety work bench compatible compact filter test rig

C. Hartl*, V. Sharp, C. Kirchnawy, G. Ettenberger, OFI - Austrian Research Institute for Chemistry and Technology; R. Zweiler, M. Goritschnig, K. Paar, K. Plank, GET - Güssing Energy Technologies GmbH; T. Neuhuber, B. Glinsner, ZSI - Centre for Social Innovation Ltd., Austria

Tuesday, 30 June 2026

16:45-18:00

Filter Media Session
Gas Session
Liquid Session
Membrane Session

K3 How can we bridge the gap between indoor air quality and energy efficiency?

room 1

Keynote Lecture 3
Prof. Dr. Jennifer Niessner
Heilbronn University of Applied Sciences
Heilbronn – Germany

We spend most of our time in indoor environments. Thus, indoor air quality is of paramount importance for our health and well-being. Ventilation and air purification are essential for maintaining good indoor air quality, addressing a wide range of contaminant sources such as wood treatment in furniture, building materials, cleaning agents, indoor combustion processes but also the occupants. While the energy crisis is increasing challenges with respect to energy efficiency window ventilation, stationary ventilation systems, and mobile air purifiers require energy for heating, cooling, and/or air circulation. To ensure a healthy and comfortable indoor environment with minimal energy consumption, advanced strategies are needed, which combine ventilation and air purification measures based on factors such as room occupancy, outdoor temperature, desired health levels, and other relevant parameters in a clever way.

F2 Advanced Materials for Filters and Establishment of Test Facilities

room 2

Polyurethane applications in filtration and regulation (EU) 2020/1149: Requirements, implications and recommendations for action. Challenge or opportunity?

F. Steegmanns*, Stockmeier Urethanes GmbH, Germany

Ensuring safety and performance in drinking water filtration through advanced resin formulations

L. Schifano*, F. Bertani, F. Campanini, ELANTAS Europe, Italy

Establishment of an advanced separation and filtration technology centre: Laboratory-based innovation, performance validation, and industrial application

M. Rasooly*, M. Saadatpour*, F. Khalili*, Isfahan Science and Technology Town, Iran

Digital Simulation Techniques for Filtration Processes L2

room 3

From theory to practice: Leveraging scientific methods in industrial applications

T. Dobler*, BOKELA GmbH, Germany

The potential of data-driven modelling in filtration processes

M. Fuhrmann*, H. Nirschl, M. Gleiß, Karlsruhe Institute of Technology (KIT), Germany

Towards 3D CFD-DEM simulation of solid-liquid multi-pass filter testing

K. Schmidt*, IT for Engineering (it4e) GmbH; G. M. Burhan, BinNova Microfiltration GmbH, Germany

Sieving - Magnetic Separation - Aeration L3

room 4

Introduction of an innovative separation plant consisting of a sieve and magnetic filter for the reduction of radioactive waste

A. Heneka*, M.J. Chaudhry, S. Gentes, C.-O. Krauß, Karlsruhe Institute of Technology, Germany

Monitoring the conventional biological aerobic process performance in a climate-changing environment using multilayer perceptron artificial neural network algorithm

M. Muloiwa*, C. Zvinowanda, Tshwane University of Technology, South Africa

Impact of climate temperature changes and excessive airflow rates on volumetric mass transfer coefficient in the activated sludge process: Sustainable development goal 13 – climate action.

M. Muloiwa*, Tshwane University of Technology; C. Zvinowanda, University of Johannisburg, South Africa

Wednesday, 01 July 2026

09:00-10:15

Filter Media Session

Liquid Session

Gas Session

Membrane Session

L4 Continuous Vacuum Cake Filtration

room 1

Separation of fine non-ferrous metal sulfide precipitates by vacuum filtration

S. Jayasekara*, T. Kinnarinen, S. Virolainen, LUT School of Engineering Sciences, Finland

From idea to production – New XL352 high-performance disc filter – The biggest in tailings

J. Hahn*, BOKELA GmbH, Germany

Development of an autonomous vacuum belt filter for the adaptive filtration of mining waste

P. Hartmann*, M. Gleiß, Karlsruhe Institute of Technology (KIT), Germany

L5 Filtration and Adsorption I

room 2

Sustainable surface engineering of coconut shell based activated carbon using green hydrophobic modifiers for enhanced pesticide sequestration

M. Shroff Rama*, I. Ramakrishnan, Filtrex Technologies, India

Advancing FDM and SLS 3D-printed scaffolds for enhanced ammonium capture from water

N. Dehbashi Nia*, T. Kim, Bokseong Kim, Y. Park, Y. Hwang, Seoul National University of Science and Technology, Korea; E. Repo, A. Hurskainen, LUT Lappeenranta University of Technology, Finland

Technical fiber of chemically transformed Polyacrylonitrile as a performant adsorbent of toxic industrial and pharmaceutical pollutants

M. Tahiri*, M. Saadouni, Hassan II University; O. Cherkaoui, A. Nadi, ESITH - REMTEX, Morocco

Industrial Applications

G5

room 3

Nanofiber based filtration media for ultra clean and stable semiconductor manufacturing processes

S. Van Landuyt*, M. Wahib, NV Bekaert, Belgium

An integrated filtration management framework for natural gas value chain: From upstream production to distribution networks

M. Rasooly*, M. Saadatpour, F. Khalili, E. M. Homagerani, Isfahan Science and Technology Town, Iran

Sustainable antibacterial electrospun nanofiber media for high-performance air filtration applications

M. M. Shirmohammadi*, Termeh Mask Co.; Z. Shafiei, F. Golbabei, V. Shahbazian, S. Kalantary, M. R. Pourmand, E. Masoorian, K. Azam, Tehran University of Medical Sciences, Iran

Indoor Air Cleaners

G6

room 4

New standardized test methods for air cleaners – Influence of measurement instrumentation and test aerosol

S. Schumacher*, C. Asbach, N. Rudnik, A. Säämänen, Institute of Environment & Energy, Technology & Analytics e.V. (IUTA), Germany; I. Ehder-Gahm, H. Salmela, VTT Technical Research Centre of Finland, Finland

Controlled evaluation of performance degradation in stand-alone air cleaners under progressive particle loading

R. Rezaei*, Agentis Air LLC, USA

Optimal filter thickness for indoor air purifiers

C. Lin, Massachusetts Institute of Technology; M. Lin, Johns Hopkins University, J. Lin, University of California; USA; Y.-M. Kuo, Chung Hwa University of Medical Technology, P-Y. Tsai, C.-W. Lin, S.-H. Huang, C.-C. Chen*, National Taiwan University, Taiwan

Wednesday, 01 July 2026

10:45-12:00

Filter Media Session | Gas Session | Liquid Session | Membrane Session

K4 The dirty side of filtration – Possibilities, limits, and new developments in filter cake washing

room 1

Keynote Lecture 4
Prof. Dr.-Ing. Bernhard Hoffner,
Technical University of Applied Science
Mannheim – Germany

Prof. Dr. Urs Peuker,
TU Bergakademie
Freiberg – Germany

Filter cake washing is a critical process in mechanical solid-liquid separation, particularly in industrial applications where high purity, efficiency (time, equipment, wash liquid demand, ..) and process stability and predictability are required. Additionally, there are specific boundary conditions imposed on the washing process, since it is usually an integral part of the process chain cake formation – pre-deliquoring – cake washing – post-deliquoring on the same filter. As a consequence, there are a variety of process options with respect to stage numbers, type of wash fluid, etc. In the course of the washing process, a wash fluid penetrates the filter cake and displaces the pore liquid that contains dissolved substances (impurities, products) to be removed from the particle system.

F3 Bio-based Polymers Versus Fossil Based Polymers

room 2

Biobased polymers for meltblown nonwovens

T. Hiller*, S. Ringger, L. Bonten, M. Azimian, German Institutes for Textil- and Fiber Research (DITF), Germany

Antimicrobial biobased meltblown filter materials functionalized with inorganic nanoparticles

G. Masione*, M. Tichonovas, D. Ciužas, E. Krugly, D. Martuzevicius, Kaunas University of Technology, Lithuania

Reimagining filtration: Biopolymer-based woven and nonwoven media for a circular future

A. Mukherjee*, National Institute of Fashion Technology, India

Industrial Gas Cleaning

G7

room 3

How high efficiency fabric filtration enables stable amine based carbon capture: insights from awg wuppertal

B. Karlsson*, Ahlstrom Sweden AB, Sweden; M. Koller, ANDRITZ AG, Austria

Industrial-scale field demonstration of integrated pm and nox removal using pleated SCR pellet catalyst filter bags in a wood waste incineration boiler

Y.-O. Park*, D.-K. Shin, K.-D. Kim, Deahan PNC Co., Ltd; S.-D. Kim, KIER - Korea Institute of Energy Research, South Korea

Purenat, the new biomimetic media that reinvents photocatalysis

N. Kinadjian Caplat*, C. Teixeira, Purenat, France

Ambient Air Applications

G8

room 4

Results of the aerosolfd project on how air purifiers can improve air quality at metro stations

M. Lehmann*, S. Kunze, K. Kedwell-Simmering, MANN+HUMMEL GmbH; C. Asbach, Institute of Environment & Energy, Technology & Analytics e.V. (IUTA), Germany; T. Canas, Metropolitano de Lisboa; Portugal; S. Agathokleous, T. Moreno, CSIC-IDAEA; C. Casado, Fundacion CARTIF, Spain; K. Alstrup-Jensen, The National Research Centre for the Working Environment, Denmark

Filtration performance of moss

S. Holfeld*; R. Heidenreich, M. Lauer, Institute of Air Handling and Refrigeration (ILK), Germany

Molecular filtration media, tailored to better air quality and new market needs

C. Prost*, S. Pigeot-Rémy, Ahlstrom Specialties SAS, France; L. Cerra, Ahlstrom Italia SpA, Italy

Wednesday, 01 July 2026

13:00-14:15

Filter Media Session | Gas Session | Liquid Session | Membrane Session

K5 PM removal from combustion fumes – How to tackle regulation, energy efficiency and decarbonation

room 1

Keynote Lecture 5
Prof. Dr. Laurence Le Coq
IMT Atlantique Nantes
Nantes – France

Manufacturing industry (excluding waste treatment) represents 20% of the greenhouse gas emission in France with 67 MteqCO2 in 2023 of which 80% or more comes from combustion processes in most sectors except cement and lime, where decarbonation processes play a predominant role. Considering waste treatment sector, it is worth to consider 7 MteqCO2 due to incineration plant.
The industry's decarbonization strategy must address environmental challenges by reducing GHG emissions by 35% by 2030, while complying with European regulations on other pollutants from combustion, such as particles, and taking into account the challenges related to industry and energy sovereignty. This decarbonization strategy must also address the issue of capturing CO_2 emitted by combustion or oxy-combustion processes, which requires improving existing flue gas treatment units or developing new ones to enable the separation of flue gas and CO_2.

F4 Enhancement of Filter Media Performance I

room 2

Mission zero disruptive & sustainable water filtration media

T. Gerdes*, F. Edelmeier, F. Meyer, Haver & Boecker, Germany

AGXX – Clean and long-lasting filter performance through effective microbial prevention

O. Asmus*, M. Danz, T. Schwob, Heraeus Precious Metals, Germany

Sintered nonwovens: Using the advantages of hydro- entangled nonwovens and converting them into metal or ceramic sintered filter media

T. Thiem*, Norafin Industries GmbH , Germany

Press Filters I — L6

room 3

A machine vision-based solution for cloth inspection and anomaly detection in filter presses,

F. Dalmonte*, D. Collini, Diemme Filtration Srl, Italy

Modeling non-uniformities in plate-and-frame filter press operations,

L. Dipilato*, G. Krammer, Graz University of Technology; J. Tausendschön, Research Center Pharmaceutical Engineering (RCPE), Austria

Advances in membrane filter plates for enhanced filter press efficiency

B. Fischer*, K. Podratzky, G. Börste, Lenser Filtration GmbH, Germany

Filtration and Adsorption II — L7

room 4

Bamboo based activated carbon - New products and applications development

M. Shen*, Huaqing Activated Carbon; H. Mingyu, Ningbo Tianyi Activated Carbon Co. Ltd., China

Enhancing commercial active carbon filters with locally sourced high-performance biomaterials

V. Rissanen*, A. Aguilar-Sánchez, K. Salminen, T. Tammelin, VTT Technical Research Centre of Finland; O. Manninen, J. Aalto, AQVA Finland, Finland; K.-Y. Lee, Imperial College London, UK

PAC-assisted precoat filtration for removal of micropollutants in sewage and industrial wastewater

T. Buchwald*, A. Klinkert, Hoffmann Maschinen- und Apparatebau GmbH, Germany

Wednesday, 01 July 2026

14:45-16:45

F5 Short Oral + Poster Session

room 1

Development of electrospun recycled polystyrene nanofibrous media supported by 3d-printed structures for efficient air filtration, F. A. Lima*, D. S. Correa, Nanotechnology National Laboratory for Agriculture (LNNA); M.L. Aguiar, V.G. Guerra, Federal University of São Carlos, Brazil

The operating pressure on stability of polypropylene hollow fiber verified by porometers, K.-S. Liao*, L.-W. Ku, Poretech Instrument Inc.; K.-Y. Lin, S.-E. Wu, Chung Yuan Christian University, Taiwan

Water interactions in nano- to macroscopic scale – Beyond state-of-the-art analytical tools for filter and membrane research T. Virkkala*, A. Aguilar-Sanchez, V. Rissanen, T. Tammelin, VTT Technical Research Centre of Finland, Finland

Development of air filter media produced by solution blow spinning using polylactic acid (pla)/lignin for nanoparticle removal, F. A. Lima*, G. M. J. Cabrini, L. A. C. Gonzaga, D. S. Correa, Embrapa Instrumentation; M. L. Aguiar, V. G. Guerra, Federal University of São Carlos, Brazil

Tailored filtration media for reliable and efficient industrial liquid purification, J. Krauß*, MANN+HUMMEL GmbH, Germany

Composite-cloths as filter media: Combining smallest pores sizes and mechanical robustness in one filter medium, M. Müller*, SPÖRL KG, Germany

Enhanced removal of per- and polyfluoroalkyl substances (PFAS) using activated carbon modified with surfactant containing cationic groups, M. Shroff Rama*, I. Ramakrishnan, Filtrex Technologies Pvt Ltd, India

Sustainability in cleanrooms: How regulations are shaping filtration technology, F. Spehl*, A. Price, M. Johnsson, Z-Y. Cui, MANN+HUMMEL GmbH, Germany

Production of cellulose acetate nanofibers derived from sugarcane bagasse for application in air filtration membranes, L. A. Pimentel*, P. A. M. Chagas, G. da Mata Cardoso, M. L. Aguiar, Federal University of São Carlos, Brazil

Simulation-driven design and optimization of woven mesh regenerators for high-temperature heat pumps, J. Warnecke*, H. Schlebusch, C. Boltersdorf, GKD - Gebr. Kufferath AG, Germany

Filter Media Session | Gas Session | Liquid Session | Membrane Session

Short Oral + Poster Session

L8

room 2

PFAS removal from the fuel cell exhaust stream using ion exchange resins, S. Leininger*, MANN+HUMMEL GmbH, Germany

Tailoring ZIF-8 surface chemistry via amine modification for efficient p-Cresol adsorption, M. Iftikhar*, University Technology Malysia (UTM), Malaysia

Experimental and numerical investigation of surface-induced coalescence in liquid-liquid phase separators, S. Temiz*, R. Jesse, Franken Filtertechnik KG, Germany

Development of a high-precision filtration and classification system using cross-flow filtration and centrifugal field, H. Satone*, K. Iimura, S. Taguchi, T. Yamamoto, University of Hyogo, Japan

Short Oral + Poster Session

G9

room 3

Wetting behavior of different liquids on electret filters and on the base material of the filters, D. Stoll*, S. Antonyuk, University of Kaiserslautern-Landau (RPTU); S. Schumacher, B. Kroll, C. Asbach, Institute of Environment & Energy, Technology & Analytics e.V. (IUTA), Germany

Ageing of fine fiber polypropylene meltblown in dynamic conditions, C. Desquilles*, Alkegen, France

The next generation of nanofiber-based air filtration: Nanofiber media vs. glass fiber, V. Demirel*, HIFYBER, Turkey

Optimizing the use of room air purifiers in combination with HVAC filters for IAQ and energy efficiency for PM2.5 and ultrafine particle removal, L. Rothenberg*, Agentis Air LLC, USA

Mathematical strategies for designing energy-efficient and sustainable air filtration systems: a review, M.S. Giri Nandagopal*, Excelair Filters, United Arab Emirates

Adhesion force measurements between particles under variation of relative humidity, F. Belter*, E. Schmidt, University of Wuppertal; V. Brandt, H. Kruggel-Emden, Technische Universität Berlin, Germany

Fiber entanglement effects on filtration efficiency and aging of filter media for particulate control in the steel industry, A. C. Coelho Vieira*, L. A. F. Sartori, F. A. Lima, M. L. Aguiar, Federal University of São Carlos; R. Sartim, Federal University of Espírito Santo, Brazil

Enhancement of a multi-layer construction model for describing dust separation throughout the entire filtration process by con-sideration of the interactions of the filtering elements, J. Ciesielski*, Q. Zhang, University of Wuppertal, Germany

A model-based study on the targeted preloading of depth filters for customized filter solutions for dust separatin, Q. Zhang*, University of Wuppertal, Germany

Experimental evaluation of convergent–divergent geometries applied to natural gas treatment in the oil industry, K.R.B. Melo*, L. L. X. Augusto, M.L. Aguiar, G. C. Lopes, V. G. Guerra, Federal University of São Carlos, Brazil

Wednesday, 01 July 2026

14:45-16:45

Filter Media Session | Gas Session | Liquid Session | Membrane Session

G10 Short Oral + Poster Session

room 4

Testing of welding fume separators to ensure compliance with occupational exposure limits, D. Kochale*; R. Heidenreich, S. Herrmann, Institute of Air Handling and Refrigeration (ILK), Germany

Cerallec: Ceramic honeycomb hot gas filtration system for sustainable high temperature industrial processes, R. Torbati*, T. Schedlbauer, A. Wille, NGK Europe GmbH, Germany

Evaluation of conventional models for predicting performance of oil mist filters with full scale tests, E. Matteusson*, Karlstad University, Sweden

Determination of separation efficiency for a spray mist system for dust suppression in tunnel construction, T. Senfter*, D. Hackl, C. Mayerl, M. Berger, T. Kofler, E. Leusmann, M. Pillei, MCI - The Entrepreneurial School; T. Hochsteiner, R. Galler, Montanuniversität Leoben, M. Halwachs, PORR Bau GmbH, Austria; R. Antretter, G. Neumann, BeMo Tunnelling GmbH; J. Kegenhoff, Korfmann Lufttechnik GmbH, Germany; M. Schöll, Brenner Basistunnel BBT SE, Italy

Scaling up the separation of fine dust from diffuse sources using electrically charged water spray mist, M. Weidemann*, M. Kaul, E. Schmidt, University of Wuppertal, Germany

Investigation of structural changes of particle agglomerates within the channels of a wall-flow filter under the influence of condensed water, M. Engelhardt*, E. Schmidt, University of Wuppertal, Germany

Experimental study on NO_2-assisted regeneration in a gas cleaning model filter channel, O. Desens*, F.P. Hagen, J. Meyer, A. Dittler, Karlsruhe Institute of Technology, Germany

Microstructural analysis of multicomponent hetero-agglomerates formed in a turbulent pipe flow, J. Witte*, E. Schmidt, University of Wuppertal; V. Kolck, H. Kruggel-Emden, Technische Universität Berlin, Germany

Combined filtration of contaminants in lithium-ion battery manufacturing, D. Keßlau*; R. Heidenreich, D. Kochale, Institute of Air Handling and Refrigeration (ILK), Germany

Nanofiber-microporous activated carbon lamination: A structurally stable dual-phase filtration architecture, F. Tezcan*, HIFYBER, Turkey

Short Oral + Poster Session — M1

room 5

A revolutionary approach for maximising process water reuse and resource recovery through a smart, circular and integrated solution, Alexey Khakalo*, VTT Technical Research Centre of Finland Ltd, Finland

Critical raw material recovery with tailor-made nanofiltration membranes, M. Abel*, B. Bräsel, A. Limper, I. Rose, naion.tech, Germany

Preparation of bimetallic organic frameworks based on Fe-Ni imobilized in carbon fibers: Filtration of emerging contaminants from water, P. Prediger*, L.d.J. Chulluncuy Julcarima, N. Gabriele Camparotto, T. de Figueiredo Neves, State University of Campinas, Brazil

Membrane applications in agrochemical manufacturing, D. Clarke*, M. Chippendale, S. Genoud, Syngenta, UK

Application of artificial Intelligence for energy consumption optimization in a seawater desalination plant, F. Z. Benali*, H. Bachir Bouiadjra, H. Bouabdesselam, National Polytechnic School of Oran, Algeria

Pressure-based fouling index for evaluating membrane fouling in constant-rate filtration, Q. Zhang*, N. Katagiri, Meijo University, Japan

Overcoming membrane fouling in water purification: A comprehensive approach, Y. Ezaier*, A. Hader, Hassan II University, Morocco

Mechanistic insights into pretreatment-induced water quality changes and swro membrane fouling, D. Jang*, N. Kim, E. Lee, Hanbat National University, South Korea

Biocide-free nanocellulose antifouling coatings: A scalable and renewable solution for water filtration, A. Aguilar-Sánchez*, T. Tammelin-Peltonen, V. Rissanen, VTT Technical Research Centre of Finland, Finland; B. Jalvo, Kemikalieinspektionen; J. Li, A. Mathew, Edouard Pesquet, Stockholm University, Sweden

Wednesday, 01 July 2026

16:45-18:00

Filter Media Session | Gas Session | Liquid Session | Membrane Session

F6 Enhancement of Filter Media Performance II

room 1

Enhancing mechanical filtration performance of thermobonded media through fiber-level design

M. Ahmed*, Beaulieu Fibres International, Belgium

3D–textile based filters for biotechnological wastewater remediation, exhaust air purifitation, and for microplastic filtratio

J. Sarsour*, B. Ewert, T. Stegmaier, N. Krasteva, German Institutes of Textile and Fiber Research (DITF), Germany

Simulation of the filter performance of wire meshes for the filtration of polymer melts

C. Mercier*, R. Kirsch, S. Osterroth, D. Niedziela, D. Neusius, Fraunhofer Institute for Industrial Mathematics (ITWM), Germany

G11 Adsorption

room 2

Validated simulation of toluene sorption in 3D activated carbon for cabin air filtration

A. Stiefelmaier, P. Eichheimer, M. Luczak*, T. Sterbak, A. Wiegmann, Math2Market GmbH; F. Keller, MANN+HUMMEL GmbH, Germany

Effects of koh activation on CO2 adsorption in bamboo biochar

J. Heo*, D. Park, Korea Railroad Research Institute - KRRI, South Korea

Selective noble gas separation using a metal-organic framework filter system

M. Yoon*, Kyungpook National University, South Korea

Press Filters II

L9

room 3

Study of best condition on the filterability of thermally treated (HTC) bio-sludge from a tannery, through a filter press

D. Collini*, D. Pirini, B-PLAS Sbrl; S. Gilioli, Deltacque Srl, Italy

Combining constant pressure and declining rate filtration to model high pressure dewatering rolls

A. D. Stickland*, N. I. K. Ekanayake, S. Hassan, University of Melbourne; D. R. Lester, RMIT University, Australia

Shear-assisted high-solids filtration of red mud using high pressure dewatering rolls

S. Hassan*, R. Cavalida, A. D. Stickland, The University of Melbourne, Australia

Water Treatment

M2

room 4

Coupling microfiltration with micropollutant degradation and adsorption through reactive membrane surface engineering

A. Schulze*, K. Fischer, Z. Niavarani, M. Schmidt, D. Breite; Leibniz Institute of Surface Engineering (IOM), Germany

Modular treatment solutions for the elimination of short- and ultra-short-chain pfas from industrial wastewater and groundwater

F. Mushtaq, E. Morlas*, Oxyle AG, Switzerland

Cornerstone: Integrated technologies and digital solutions for circular water, energy, and solute recovery from industrial wastewater

C. A. Quist-Jensen*, I. Bousrih, H. F. Sulaiman, S. Díaz-Quezada, A. Ali, Aalborg University

Thursday, 02 July 2026

9:00-10:15

Filter Media Session | Gas Session | Liquid Session | Membrane Session

F7 PFAS-Free Filter Media and PFAS Separation

room 1

Will ePTFE membrane be able to withstand PFAS and remain leading air/liquid filtration material for the next 30 years

K.-J. Choi*, Clean & Science Co., USA

No-PFAS-added filtration media developed by Alkegen

C. Desquilles*, Alkegen, France

Advanced filtration systems with micro-adsorbents for micropollutant and pfas removal: Pile cloth media filtration and ceramic membrane filtration

T. Fundneider*, R. Schäfer, A. Hernández, Mecana AG, Switzerland; T. Reid, Aqua Aerobic Systems, Inc., USA

G12 Pleated Filter

room 2

Operating behavior of pleated filter medium geometries in a standardized test-rig with pulse-jet-cleaning

J. P. Knisley*, J. Meyer, A. Dittler, Karlsruhe Institute of Technology (KIT), Germany

Prediction of SO2 breakthrough curves of pleated filters in ansys fluent

A. Widmann*, K. H. Lepper, Hengst SE, Germany

An engineering-based approach for the optimization of pleat number in dust collection filters

O. Osmanagaoglu*, Tempo Filtre, Turkey

Press Filters II

L10

room 3

Nanofiber for fuel and oil filtration

J. Gao*, NFT Purification Technology Inc., USA

Static vs. cyclic flow testing of hydraulic filter cartridges: A filter media manufacturer's perspective / comparative performance analysis

R. Bharadwaj*, ALKEGEN, USA

New liquid filter test methods at disposal for the fluid process industry

N. Petillon*, IFTS Institut de la Filtration et des Techniques Séparatives, France

Water Treatment

M3

room 4

Integrated continuous downstream processing for enzyme separation using aqueous two-phase flotation (atpf) and ultrafiltration,

K. C. Lohfink*, H. Nirschl, Karlsruhe Institute of Technology (KIT), Germany

Impact of microalgae-derived organic matter on membrane fouling and fouled-membrane characteristics,

Q. Zhang, N. Katagiri*, Meijo University, Japan

PES nanofibers for cost-effective, high efficiency prefiltration in bioprocessing,

K. Higginson*, J. Laastad, F. Rezaei, B. Swortzel, Hollingsworth & Vose, USA

Thursday, 02 July 2026

10:45-12:00

Filter Media Session | Gas Session | Liquid Session | Membrane Session

F8 Filter Media Characterization

room 1

Estimation of separation size of nonwoven metallic filter media based on probability mode

S. Ishikawa*, Y. Yoshida, Kansai Wire Netting Co., Ltd., Japan

Water permeability measurements of porous filter media with poroluxTM revo porometer

M. Ängeslevä*, W. Motyka, D. Dutczak, A. Sobolewska, I. Struzynska-Piron, E. Pattyn, Aptco Technologies GmbH, Germany

From µCT to digital twin: AI-based characterization of nonwoven filtration media

C. Kühnle*, A. Grießer, R. Westerteiger, E. Glatt, M. Luczak, T. Sterbak, A. Wiegmann, Math2Market GmbH, Germany

G13 Mist and Droplets

room 2

Multi-scale experimental approach for investigating the fundamental mechanisms of oil mist filtration under realistic operating conditions

B. Jaumann*, J. Meyer, A. Dittler, Karlsruhe Institute of Technology, Germany

Influence of filtration velocity and drainage material pore size on the spatio-temporal drainage behaviour of oil in oil mist coalescence filters

R. Mandic*, J. Meyer, A. Dittler, Karlsruhe Institute of Technology, Germany

Modeling of filtration process in complex filter structures using a physics-informed neural network coupled with smoothed particle hydrodynamic

A. Zargaran, F. Hartwig, U. Janoske*, University of Wuppertal, Germany

Depth Filtration II

L11

room 3

Clay-based filtration for multi-pollutant stormwater treatment: Time-resolved removal of suspended solids, nutrients, and metals

N. Bolourieh*, LUT School of Engineering Sciences, Finland

Filter media design for mitigation of gel shearing defects in optical polymer film processing

S. Vandendijk*, S. Van Landuyt, J. Ye, NV Bekaert, Belgium

Filtration pressure behavior during constant-rate filtration using string-wound cartridge filter media

S. Oguri*, K. Watanabe, M. Iwata, and H. Yagishita, Sanshin Mfg. Co., Ltd., Japan

Membrane Characterization

M4

room 4

State of the art on methods for analyzing pores and the filtration efficiency of microfiltration membranes

N. Petillon*, IFTS Institut de la Filtration et des Techniques Séparatives, France

New standards available to qualify ultra and nano filtration membranes

N. Petillon*, IFTS Institut de la Filtration et des Techniques Séparatives, France

Tracking microplastic transport in hollow fiber membranes by fluorescence and pore network modeling

R.I. Peinador*, IFTS - Institute of Filtration & Techniques of Separation, France

Thursday, 02 July 2026

13:00-14:15

Filter Media Session | Gas Session | Liquid Session | Membrane Session

F9 Surface Functionalization of Filter Media I

room 1

Functionalised PU Foam as a Platform for Transforming Waste to Fuel

S. Chavan*, P. Mayall, The Vita Group ; M. Lathbury, D. Carlotta-Jones, Wastewater Fuels, UK

Dry impregnation solutions for MOFs

L. Monin*, S. Bouzouita, Fibroline S.A., France

Reducing total polar materials in frying oil using a functionalized filter pad

R. Rock*, Ahlstrom Filtration, USA; C. Läck, Ahlstrom Sweden AB, Sweden; S. Pigeot-Rémy, Ahlstrom Specialties, France

G14 Modelling and Simulation I

room 2

Mathematical modelling of an ionizer-assisted filter system

A. Vora*, T. van der Zwaag, A. Bankodad, S. Haep, Institute of Environment & Energy, Technology & Analytics e.V. (IUTA), Germany

Numerical investigation on the influence of fiber bundles on the flow resistance and filtration efficiency of nonwovens

A. Charvet*, N. Bardin-Monnier, D. Thomas, Lorraine University; S. Bourrous, Autorité de Sûreté Nucléaire et de Radioprotection, France; R. Kirsch, Fraunhofer Institute for Industrial Mathematics (ITWM), Germany

Thermo-fluid-dynamic characterization of pulse jet cleaning of fabric filter bag units through computational fluid dynamic simulations

G. V. Messa, Politecnico di Milano; C. Maggi*, L. Montanelli, Clean Air Europe S.r.l., Italy

Filtration Fundamentals and Lab Scale Tests L12

room 3

Including pore channel tortuosity in ergun´s equation using spheres packing of different sizes, R. Pereira Dias*, Instituto Politécnico de Bragança, Portugal

Experimental benchmark tests for the validation of cfd-dem simulation of cake filtration, N. Benz*, S. Antonyuk, RPTU University Kaiserslautern-Landau, Germany

The impact of mineralogical composition on tailings dewatering by pressure filtration: Emphasis on clay type and case study presentation, L. Bonanni*, A. Grosso, F. Kaswalder, Diemme Filtration Srl; M. Carpenito, University of Ferrara, Italy

Ultrafiltration M5

room 4

Mapping the performance of charged nanocellulose-enabled ultrafiltration membranes

T. Levä*, H. Ghimire, M. Mäkelä, T. Tammelin, A. Khakalo, VTT Technical Research Centre of Finland; J. Nieminen, LUT School of Engineering Sciences, Finland; C. Pflieger, Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Germany

Preventing biofilm and avoiding biofilm removal and maintenance in ultrafiltration in water treatment

J. Ronquillo*, Lam-X, Czech Republic

Fabrication of biobased electrospun and electrosprayed polymer membranes for water ultrafiltration

D. Martuzevicius*, G. Masione, D. Ciužas, M. Tichonovas, T. Prasauskas, I. Urniezaite, Kaunas University of Technology, Lithuania

Thursday, 02 July 2026

14:45-16:00

Filter Media Session | Gas Session | Liquid Session | Membrane Session

F10 Surface Functionalization of Filter Media II

room 1

Plasma nanocoating strategies to replace halogens in advanced filtration media

F. Legein*, Plasmalex SAS, France

Reduction and functionalization of composite graphene oxide/PVA/PEG freestanding paper via atmospheric pressure plasma for use in filtration membranes

F. Zelenák*, S. Sihelník, M. Stupavská, D. Kovácik, R. Krumpolec, Masaryk University, Czech Republic

Impact of a charged plasma polymer deposit on heavy metal rejection and clogging of a polyamide nanofiltration membrane

D. Taleb*, S. Déon, P. Fievet, Université Marie et Louis Pasteur; A. Airoudj, V. Roucoules, F. Bally-Le Gall, Université de Haute-Alsace, France

G15 Modelling and Simulation II

room 2

3D simulation of aerosol deposition at a composite nonwoven of electrostatically charged wool and polypropylene fibers

V. Puderbach, K. Schmidt*, IT for Engineering (it4e) GmbH, Germany; V. Chan, Lanaco, New Zealand

A highly efficient flow-based surrogate for modeling particle deposition in filter structures

N. Jüngling*, J. Niessner, Heilbronn University of Applied Sciences, Germany

Effect of fine particle fraction on overall particle dynamics after their initial deposition on fibrous filter structures: Towards enhancing the computational efficiency of a comprehensive CFD-DEM modeling approach

J. Wieremiejczuk, J. Macak*, C. Mehring, University of Stuttgart; C. Schulz, F. Hahn, MANN+HUMMEL GmbH, Germany

Filtration Fundamentals and Lab Scale Tests L13

room 3

Direct mechanical recycling: Influence of cross-flow filtration on the characteristics of lithium-ion battery recyclate

P. Wiechers*, M. Gleiß, H. Nirschl, Karlsruhe Institute of Technology, Germany

Separation of ultrafine particles from tailings thickener overflow

E. Strand*, R. Salmimies, Sofi Filtration, Finland

Improved mineral tailings dewatering by pelleting flocculation

Y. Luo*, A. Stickland, The University of Melbourne, Australia

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