

# FILTECH

June 30 – July 02, 2026  
Cologne – Germany

The Filtration Event  
[www.Filtech.de](http://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.

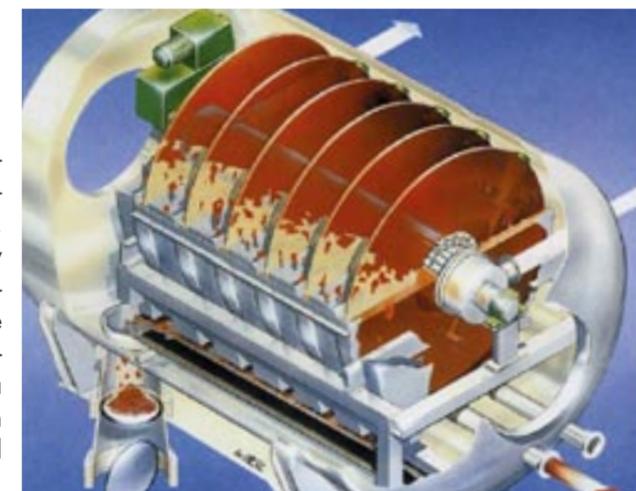
### More than 160 Technical Papers

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.

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

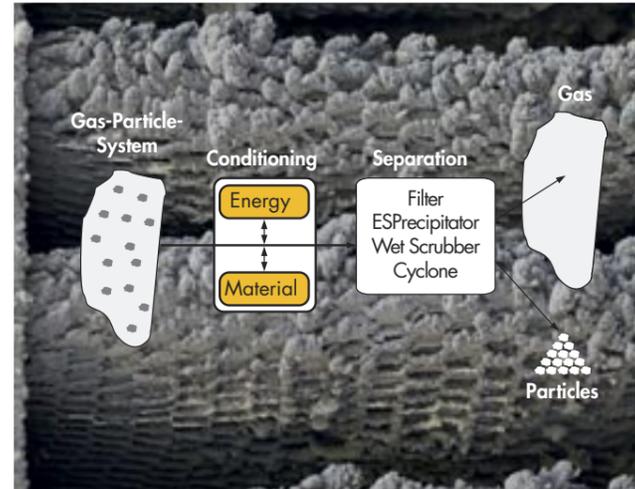
Dr.-Ing. Harald Anlauf was till March 2020 Academic Director at the Karlsruhe Institute of Technology (KIT), Institute of Mechanical Process Engineering and Mechanics and has amassed more than 40 years of experience. in the field of solid liquid separation technology. He earned his academic degrees as 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	13.45 h	<b>Cake Filtration – Formation, Washing, Demoisturing</b> Separation mechanisms, consequences for practical use.
9.00 h	<b>Introduction and Overview</b> Systematic survey of separation processes, apparatus examples and separation strategies	14.45 h	Coffee Break
10.00 h	<b>Particle Characterization</b> Characterization of single particles, particle collectives and particle separation.	15.00 h	<b>Cake Filters</b> Equipment, mode of operation, application
10.45 h	Coffee Break	16.00 h	<b>Filter Media</b> Overview and fields of application, influence of media properties on separation results.
11.00 h	<b>Density Separation – Static Thickeners and Solid Bowl Centrifuges</b> Separation mechanisms, equipment, mode of operation, application.	16.30 h	<b>Suspension Pretreatment to Enhance Separation Properties</b> Additional techniques for enhancing solid-liquid separation processes, physicochemical influences on slurry stability, flocculation
12.00 h	<b>Depth and Cross Flow Filtration</b> Separation mechanisms, equipment, mode of operation, application	17.00 h	<b>Apparatus Combinations, Alternative Solutions and Apparatus Selection Criteria</b> Strategies for process optimization & selection of suitable separation techniques.
12.45 h	Lunch		



Short Course 2

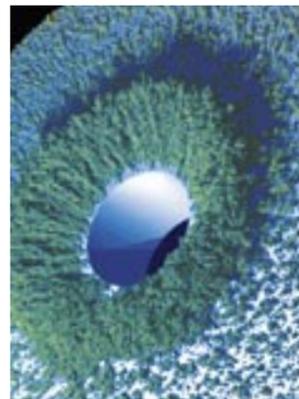
## Air Cleaning & Dust Separation

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

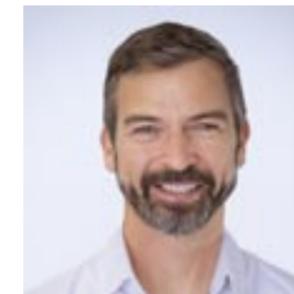
8.30 h	Welcome Coffee
9.00 h	<b>Introduction</b>   Particulate Matter (PM <sub>x</sub> ); Dust Separation; Air Cleaning; Overview of the course
9.15 h	<b>Evaluation of Dust Collection Equipment</b> Particle size characterisation, concentration measurement, overall and fractional collection efficiency
10.00 h	<b>Centrifugal Collectors (Cyclones)</b>   Mode of operation, basic designs, application, collection efficiency, pressure drop
10.45 h	Coffee Break
11.00 h	<b>Fibrous Filters (Deep-Bed Filters)</b> Mode of operation, basic designs, application, collection efficiency, pressure drop
11.45 h	<b>Air and Gas Cleaning</b> Indoor air purification, automotive application, respiratory protection
12.30 h	<b>Questions and answers</b> An open-floor question and answer session

13.00 h	Lunch
14.00 h	<b>Wet Scrubbers</b> Mode of operation, basic designs, design calculations, application, droplet separation
14.45 h	<b>Electrical Precipitators</b> Mode of operation, basic designs, design calculations, application, operating characteristics
15.30 h	Coffee Break
15.45 h	<b>Fabric Filters (Surface Filters)</b> Mode of operation, basic designs, operating characteristics, design calculations
16.30 h	<b>Industrial Dust Separation</b> Selection of dust collection equipment, sustainable process integration, raw gas conditioning
17.15 h	<b>Discussion</b> An open-floor question and answer session.

Short Course 3

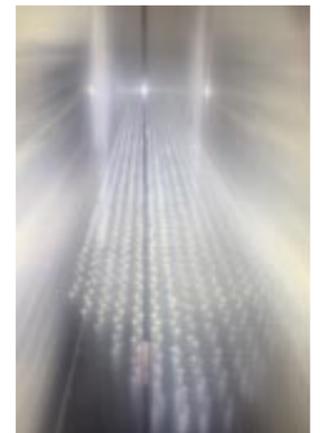
## The World of Nonwovens

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	<b>Introduction</b>   Can I do that with a Nonwoven? – The World of Nonwovens – Nonwoven Products & Markets
9.30 h	<b>Fundamentals of Fibers &amp; Materials</b> Polymers for Melt-Spinning, Fibers for Dry-Laid / Carded N Nonwovens, Fibers for Air-Laid Nonwovens, Fibers for WetLaid Nonwovens, Natural Fibers and Bio-based materials.
10.45 h	Coffee Break
11.00 h	<b>Web Forming Technologies</b> Principles of Spunbond, Meltblown, Dry-Laid, Wet-Laid and Air-Laid Technologies
12.30 h	<b>Questions and answers</b> An open-floor question and answer session
13.00 h	Lunch

14.00 h	<b>Web Bonding Technologies</b> Principles of Needlepunching, Hydroentanglement, Thermal Bonding and Chemical Bonding
15.00 h	<b>Web Finishing Technologies</b> Value-Add finishes and different ways to apply them.
15.30 h	Coffee Break
15.45 h	<b>Nonwoven Characterization &amp; Testing</b> Uniformity Measurement, Standard Tests, and Specialty Tests
16.30 h	<b>Opportunities and Challenges for the Nonwovens Industry</b> Sustainability & Nonwovens
17.00 h	<b>New Technologies</b>
17.30 h	<b>Discussion</b> An open-floor question and answer session.

Monday, 29.06.2026

09:00 18:00	<b>SC</b>	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
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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	<b>PL</b>	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	<b>K1</b>	Keynote Lecture 1	<b>L1</b> Centrifugal Separation	<b>G1</b> Face Masks	<b>G2</b> Dust Separation
Coffee Break					
14:45 16:00	<b>K2</b>	Keynote Lecture 2	<b>F1</b> Sustainable Filter Elements and Media	<b>G3</b> Air Purification	<b>G4</b> Filter Test Systems
Coffee Break					
16:45 18:00	<b>K3</b>	Keynote Lecture 3	<b>F2</b> Advanced Materials for and Establishment of Test Facilities	<b>L2</b> Digital Simulation Techniques for Filtration Processes	<b>L3</b> Sieving - Magnetic Separation - Aeration

Wednesday, 01.07.2026

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

Thursday, 02.07.2026

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

Scientific Committee Chairmen

Dr. Harald Anlauf - Karlsruhe - Germany  
Prof. Eberhard Schmidt - Wuppertal - Germany

Scientific Committee

Prof. Mônica Lopes Aguiar - São Carlos - Brazil  
Prof. Sergiy Antonyuk - Kaiserslautern - Germany  
Dr. Harald Banzhaf - Ludwigsburg - Germany  
Dr. Wu Chen - Freeport - USA  
Prof. Liang-Yin Chu - Sichuan - China  
Prof. Ching-Jung Chuang - Taoyuan - Taiwan  
Prof. Kyung-Ju Choi - Seoul - Korea  
Prof. Achim Dittler - Karlsruhe - Germany  
Prof. Dr. Kunihiko Fukui - Hiroshima - Japan  
Dr. Pascal Ginisty - Foulayronnes - France  
Prof. Antti Häkkinen - Lappeenranta - Finland  
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Prof. Gerhard Kasper - Karlsruhe - Germany  
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Prof. Teemu Kinnarinen - Lappeenranta - Finland  
Dr. Ralf Kirsch - Kaiserslautern - Germany  
Prof. Gernot Krammer - Graz - Austria  
Prof. Andrzej Krasinski - Warsaw - Poland

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Prof. Arunangshu Mukhopadhyay - Jalandhar - India  
Prof. Ioannis Nicolaou - Larnaca - Cyprus  
Prof. Jennifer Niessner - Heilbronn - Germany  
Prof. Hermann Nirschl - Karlsruhe - Germany  
Dr. Thomas Peters - Neuss - Germany  
Prof. Urs Peuker - Freiberg - Germany  
Prof. Pierre-Yves Pontalier - Toulouse - France  
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Prof. Bhaskar N. Thorat - Mumbai - India  
Prof. Paolo Tronville - Torino - Italy  
Prof. Kuo-Lun Tung - Taipei - Chinese Taipei  
Prof. Eugène Vorobiev - Compiègne - France  
Dr. Matthias Waldenmaier - Kaiserslautern - Germany  
The Committee list lists countries and regions

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

## 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 hydrocyclone 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

■ Filter Media Session

■ Gas Session

■ Liquid Session

■ Membrane Session

## Face Masks

### 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

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

A. Ginestet\*, D. Pugno, 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. Baker\*, ALKEGEN, USA

G1

room  
3

G2

room  
4

Tuesday, 30 June 2026  
14:45-16:00

## 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

■ Filter Media Session

■ Gas Session

■ Liquid Session

■ Membrane Session

## Air Purification

### 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

### 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

G3

room  
3

G4

room  
4

Tuesday, 30 June 2026  
16:45-18:00

### 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

■ Filter Media Session

■ Gas Session

■ Liquid Session

■ Membrane Session

### Digital Simulation Techniques for Filtration Processes

L2

**From theory to practice: Leveraging scientific methods in industrial applications**

room  
3

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

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

room  
4

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 Johannesburg, South Africa

Wednesday, 01 July 2026  
09:00-10:15

■ Filter Media Session

■ Gas Session

■ Liquid 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. Masiono\*, 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

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

room  
3

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

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

room  
4

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

## 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 MteqCO<sub>2</sub> 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 MteqCO<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub>.

## 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

■ Filter Media Session

■ Gas Session

■ Liquid Session

■ Membrane Session

## Press Filters I

### 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

L6

room  
3

## Filtration and Adsorption II

### 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

L7

room  
4

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, Filtrix Technologies Pvt Ltd, India

**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

**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 Malaysia (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. Imura, S. Taguchi, T. Yamamoto, University of Hyogo, Japan

## Short Oral + Poster Session

G9

**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

**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 consideration 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 separation**, Q. Zhang\*, University of Wuppertal, Germany

room  
2

room  
3

Wednesday, 01 July 2026

14:45-16:45

## 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

**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<sub>2</sub>-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

■ Filter Media Session

■ Gas Session

■ Liquid Session

■ Membrane Session

## Short Oral + Poster Session

M1

room  
5

**Towards an effective model for counter-current flow in hollow fiber modules**, L. Resyli\*, R. Kirsch, S. Osterroth, Fraunhofer Institute for Industrial Mathematics (ITWM); A. Klar, University of Kaiserslautern-Landau (RPTU), Germany

**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

**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 purification, and for microplastic filtration**

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  $\mu$ CT 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

**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

room  
3

## Membrane Characterization

M4

**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

room  
4

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

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

room  
3

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

Mapping the performance of charged nanocellulose-enabled ultrafiltration membranes

room  
4

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. Ciuzas, 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

## Modelling and Simulation II

G15 **3D simulation of aerosol deposition at a composite nonwoven of electrostatically charged wool and polypropylene fibers**

room  
2

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 recycle**

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

# FILTECH 2026 | Register online at [www.filtech.de](http://www.filtech.de)

<b>FILTECH Conference</b>	Date	Early Bird until 31.05.2026	Normal Price from 01.06.2026
3-Day-Conference Ticket	30.06.-02.07.2026	€ 680,-	€ 880,-
1-Day-Conference Ticket	30.06.2026	€ 340,-	€ 440,-
1-Day-Conference Ticket	01.07.2026	€ 340,-	€ 440,-
1-Day-Conference Ticket	02.07.2026	€ 340,-	€ 440,-

The Conference registration includes

- Proceedings featuring all papers in an abstract book & personalized download-link
- Cologne Public Transport Ticket (29.06. – 02.07. 2026)

- Lunch/es and Refreshments during breaks
- Entrance to the FILTECH 2026 Exhibition
- FILTECH 2026 Exhibition Catalogue
- Welcome Reception on June 30, 2026

<b>FILTECH Short Courses</b>	Date 29.06.2026	Early Bird until 31.05.2026	Normal Price from 01.06.2026
Short Course I – Solid/Liquid Separation		€ 560,-	€ 680,-
Short Course II – Air Cleaning and Dust Separation		€ 560,-	€ 680,-
Short Course III – The World of Nonwovens		€ 560,-	€ 680,-

The Short Course registration includes

- Extensive Short Course Notes
- Cologne Public Transport Ticket (29.06. – 02.07. 2026)
- Lunch and Refreshments during breaks

- Entrance to the FILTECH 2026 Exhibition
- FILTECH 2026 Exhibition Catalogue
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<b>FILTECH Trade Visitors</b>	Registration until 31.05.2026	Registration from 01.06.2026
1-Day Visitor Ticket	€ 20,-	€ 40,-
2-Day Visitor Ticket	€ 25,-	€ 45,-
3-Day Visitor Ticket	€ 30,-	€ 50,-

<b>Opening Hours Exhibition</b>	
June 30 – July 01, 2026	9am - 6pm
July 02, 2026	9am - 5pm
Venue: Koelnmesse Halls 7 + 8, Entrance North Messeplatz 1 – 50679 Cologne, Germany	

Your **FILTECH 2026** Visitor Registration includes: Free copy of the exhibition catalogue & hall plan as well as a free public transport ticket.

## Plan your visit

### Company Locator – The tool for Trade Visitors

Make your visit easy and effective by using your FILTECH planning tool.

You can also contact exhibitors of your interest prior to the Show via their company profiles on the FILTECH 2026 Website to arrange meetings at the show or ask for additional product information.



All Fees already include 19% German VAT.

