

# FILTECH

February 24 – 26, 2015  
Cologne – Germany

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

# Conference Program

International Conference & Exhibition for  
Filtration and Separation Technology







## The Filtration Event

FILTECH is the largest and most important special interest event worldwide devoted entirely to filtration and separation technology. The event is a must for all those concerned with designing, improving, purchasing, selling or researching filtration and separation equipment and services.

# International Conference

"Palas® was even represented with a trade fair stand at the first FILTECH in London.

We are impressed by the concept and the organisation of FILTECH, as we have been able to record a continuous increase in visitor numbers and exhibitors at every event.

The accompanying congress offers us the opportunity to keep up to date on the latest research results, worldwide developments and procedures and present our know-how and portfolio in our own specialist lectures."

Leander Mölter, Managing Director & Martin Schmidt, Head of Sales, Palas® GmbH Stand C9

The **FILTECH 2015** Conference is the globally acknowledged platform for the scientific exchange of the latest research results and the knowledge transfer between theory and practice. It will again provide a representative survey of current research findings and state-of-the-art developments for the solution of filtration and separation targets in a wide range of sectors.

## 180 lectures from 27 countries

An exciting programme with over 180 lectures from 27 countries gives a representative cross-section of the different procedures and appliances of separation technology as well as across the industry about the applications, from the preparation of mineral raw materials, the chemistry, environmental technology and water purification down to the pharmacy and biotechnology. The latest results from basic research, innovative equipment-based solutions and procedures will also be presented.



# Travel & Accomodation

**FILTECH 2015** will be held at the the new venue Koelnmesse in Cologne. Due to Koelnmesse's central location, which is conveniently situated for all transport links, visitors can quickly reach the exhibition centre by car, train and plane. High-speed ICE trains connect the airports in Frankfurt (FRA), Düsseldorf (DUS), Cologne-Bonn (CGN) directly to the exhibition center via Köln Messe/Deutz station.



## Free Cologne Public Transport Ticket for all Participants

Registered FILTECH 2015 participants can receive a free "Public Transport Ticket". This ticket entitles to unlimited free travel on the Cologne public transport bus and regional train services from 24-26 February, 2015. Tickets are available in the VRS-Ticketshop which can be accessed with an individual code.

Codes are sent via e-mail. Conference delegates receive their code together with the registration confirmation. All trade visitors who have registered by January 20 will receive a registration with their code and link to the VRS-Ticketshop prior to the Show.

## Travel discounts

The Star Alliance™ Members Airlines is the Official Airline Network for FILTECH 2015.

FILTECH 2015 Participants can save up to 20% on travel with the Star Alliance™ Network!

## FILTECH 2015 Log-In Convention Code: LH03S15

Registered participants plus one accompanying person travelling to the event are automatically granted a discount of up to 20%, depending on fare and class of travel booked. Discounts are offered on published business and economy class fares, excluding website/internet fares, senior and youth fares, group fares and Round the World fares.

## Booking information and online booking: [www.filtech.de](http://www.filtech.de) → Travel & Hotel

With the offer of FILTECH and Deutsche Bahn you can save money by visiting FILTECH 2015!



**Good for the environment. Convenient for you.**

Get on board and profit from attractive prices and conditions for train travel

Your ticket is valid from 22th to 28th of February 2015.

If travelling by train from outside Germany, you can also take advantage of this reduced fare by booking this special ticket which is valid throughout Germany.

Detailed information is available at [www.filtech.de](http://www.filtech.de) → Travel + Hotel Info.

To book call +49 (0)1806 - 31 11 53\*\* and quote "FILTECH" as reference. Have your credit card ready please.

From 3 month prior to the show you will easily book your ticket online via [www.filtech.de](http://www.filtech.de) → Travel & Hotel.



## Koelnmesse Hotel Service

Find, compare, and book at your hotel with the online portal of the Koelnmesse Travel & Hotel Service. Make your online hotel accommodation reservation easily, securely and profit from favourable prices:

The Koelnmesse Travel & Hotel Service does everything to make your stay at **FILTECH 2015** as pleasant as possible. Use their experience and profit from particularly favourable prices.

For assistance please contact:

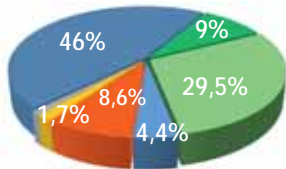
**Ms. Astrid Wegner**  
Koelnmesse Travel & Hotel Service  
Phone: +49 (0)221 821 2479  
Fax: +49 (0)221 821-3739  
E-mail: a.wegner@koelnmesse.de

For online booking visit:  
[www.filtech.de](http://www.filtech.de) → Travel & Hotel





# International Exhibition



International Participation

- Germany 46%
- Eastern Europe 9%
- Western Europe 29,5%
- Asia 8,6%
- Middle East 1,7%
- North-/South America 4,4%
- Africa 0,7%
- Australia 0,2%

(FILTECH 2013)

At the INTERNATIONAL EXHIBITION innovative companies and market leaders from the world-wide filtration and separation industry, manufacturers of particle measurement & analysis systems as well as associated industries will feature the latest innovations and most modern technology available.

## 350 Exhibitors from 24 countries

The exhibition features 350 Exhibitors and is open to registered trade visitors and conference delegates. At FILTECH 2015 delegates and professional visitors from all over the world will be able to discuss and solve their filtration tasks with leading experts face to face in a business like manner.

Exhibitor information is available at the FILTECH website. You can check stand availability at [www.Filtech.de](http://www.Filtech.de) → Become an Exhibitor. Attractive shell scheme Packages with individual smart space options are available.







# New Venue Koelnmesse

FILTECH 2015 will be held at the new venue Koelnmesse in Cologne. Koelnmesse's central location, is conveniently situated for all transport links.

## Visitor Pre-Registration

Visitor pre-registration allows fast track entrance to the exhibition.

Register online at [www.Filtech.de/ticket.jsp](http://www.Filtech.de/ticket.jsp)

Conference delegates and Short Course participants do not have to pre-register. They have free access to the Exhibition with their conference badge.

## Opening Hours Exhibition

February 24 – 26, 2015  
9:00 am - 6:00 pm

**New Venue:**  
Koelnmesse  
Hall 11.1  
East Entrance  
Deutz-Mülheimer-Str. 35  
50679 Cologne  
Germany

"We have been exhibiting at FILTECH already for many years and have continually been impressed with the quality of leads generated. FILTECH is indeed an excellent event. It is well organized and good crowd to meet. We had a steady stream of visitors and I'm pleased with the leads from it. We enjoy the event with generally high levels of visitors who appear interested in finding out what is on offer. FILTECH provides an excellent arena for us to present."

Peter Bolduan  
Managing Director  
atech innovations gmbh

## Registration Fees

	pre-registered	onsite
1-Day Visitor Ticket	€ 20.00	€ 40.00
2-Day Visitor Ticket	€ 25.00	€ 45.00
3-Day Visitor Ticket	€ 30.00	€ 50.00
Fees already incl. 19% German VAT		

The Visitor registration includes:

- Access to the Exhibition
- Exhibition Catalogue

## Plan your Visit

### New tool for Trade Visitors

Make your visit easy and effective by using your new [FILTECH planning tool](#).

You can easily plan your visit online, check the exhibitors and their hall positions, mark them and print it out for your planning.

[www.Filtech.de](http://www.Filtech.de) → my Floor plan



# Scientific Committee

The Scientific Committee is represented by leading experts throughout the world, covering all major aspects of filtration and separation applications.

## Scientific Committee Chairmen

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

## Scientific Committee

- Prof. Mônica Lopes Aguiar - São Carlos - Brazil
- Dr. Harald Banzhaf - Ludwigsburg - Germany
- Dr. Krishna Gupta - Ithaca - USA
- Prof. Antti Häkkinen - Lappeenranta - Finland
- Prof. Wilhelm Höflinger - Vienna - Austria
- Prof. Kuo-Jen Hwang - Taipei - Taiwan
- Prof. Eiji Iritani - Nagoya - Japan
- Prof. Chikao Kanaoka - Tsubata - Japan
- Prof. Gerhard Kasper - Karlsruhe - Germany
- Dr. Karsten Keller - St. Louis - USA
- Ir. Hermanes Kleizen - Hengelo - Netherlands
- Prof. Gernot Krammer - Graz - Austria
- Dr. Martin Lehmann - Ludwigsburg - Germany
- Prof. Markus Lehner - Leoben - Austria
- Prof. Dietmar Lerche - Berlin - Germany
- Prof. Woon-Fong Wallace Leung - Hong Kong - P.R. China
- Dr. Hisao Makino - Yokosuka - Japan
- Prof. Gerd Mauschitz - Vienna - Austria
- Prof. Arunangshu Mukhopadhyay - Jalandhar - India
- Prof. Marja Oja - Hut - Finland
- Dr. Thomas Peters - Neuss - Germany
- Dr. Christophe Peuchot - Foulayronnes - France
- Prof. Urs Peuker - Freiberg - Germany
- Dr. Jaroslav Pridal - Hradec Krawlve - Czech Republic
- Dr. Graham Rideal - Waverton - UK
- Prof. Siegfried Ripperger - Kaiserslautern - Germany
- Prof. Peter Scales - Parkville - Australia
- Prof. Hans-Joachim Schmid - Paderborn - Germany
- Dr. Anthony Stickland - Melbourne - Australia
- Prof. Hans Theliander - Gothenburg - Sweden
- Prof. Bhaskar N. Thorat - Mumbai - India
- Prof. Paolo Tronville - Torino - Italy
- Prof. Kuo-Lun Tung - Taipei - Taiwan
- Prof. Eugène Vorobiev - Compiègne - France
- Dr. Matthias Waldenmaier - Kaiserslautern - Germany
- Yan-Xi Wang - Shanghai - P.R. China
- Prof. Takeshi Yoneda - Kuwana - Japan

The flyer lists countries and regions.



# Conference Prices

## The Conference registration includes

- Conference Proceedings featuring all papers in an abstract book and full paper versions on USB stick
- Lunch/es
- Refreshments during breaks
- Entrance to the FILTECH 2015 Exhibition (February 24 – 26, 2015)
- FILTECH 2015 Exhibition Catalogue
- Welcome Reception on February 24, 2015
- Cologne Public Transport Ticket (February 24 – 26, 2015)

Fees already include 19% German VAT. Speakers will be registered at the early bird rate.

Conference Prices	Early Bird until 14.11.2014	Normal Price from 15.11.2014
3-Day-Congress Ticket	€ 630,-	€ 780,-
1-Day-Congress Ticket	€ 300,-	€ 375,-

# Short Course Prices

## The Short Course registration includes

- Extensive Short Course Notes
- Lunch
- Refreshments during breaks
- Entrance to the FILTECH 2015 Exhibition (February 24 – 26, 2015)
- FILTECH 2015 Exhibition Catalogue
- Welcome Reception on February 24, 2015
- Cologne Public Transport Ticket (February 23 – 26, 2015)

Fees already include 19% German VAT.

Short Course Prices	Early Bird until 14.11.2014	Normal Price from 15.11.2014
<b>Short Course I</b>		
Solid/Liquid Separation	€ 470,-	€ 560,-
<b>Short Course II</b>		
Fine Dust Separation	€ 470,-	€ 560,-





Short Course I

# Solid/Liquid Separation

Monday, February 23, 2015

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. Topics are:

**Characterisation of Particles and Particle Separation**  
**Density Separation - Static Thickeners and Solid Bowl Centrifuges**

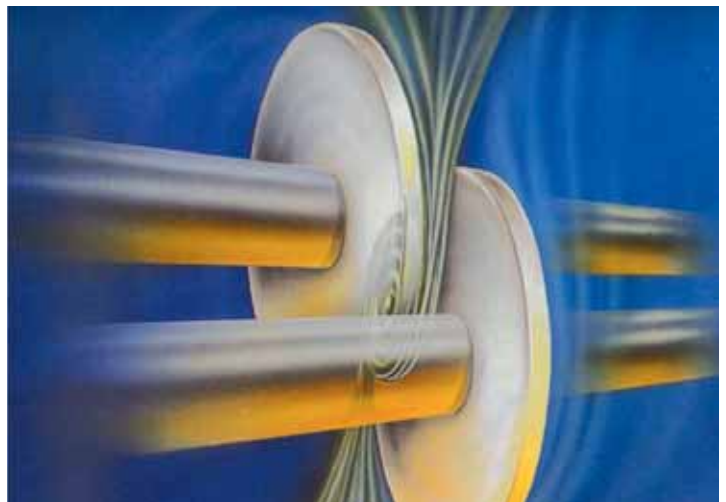
**Depth, Cross Flow and Cake Filters**

**Filter Media**



**Course Presenter**

Dr.-Ing. Harald Anlauf is Academic Director at the Karlsruhe Institute of Technology, Institute of Mechanical Process Engineering and Mechanics. His academic degrees as Chemical Engineer he earned 1980 and 1985 at Karlsruhe University. From 1999 to 2006 he was Chairman of the VDI-GVC working party „Mechanical Liquid Separation“, since 2000 Co-Chairman of the FILTECH Conference and President of the 10th World Filtration Congress 2008 in Leipzig, Germany. He published more than 150 technical papers, books etc., consulted and lectured throughout the world.



**Suspension Pretreatment to Enhance Separation Properties**

**Alternative Separation Solutions and 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

10.30 h **Coffee Break**

10.45 h **Particle Characterization**

Characterization of single particles, particle collectives and particle separation.

11.30 h **Density Separation – Static Thickeners and Solid Bowl Centrifuges**

Separation mechanisms, equipment, mode of operation, application.

12.15 h **Lunch**

13.15 h **Depth and Cross Flow Filtration**

Separation mechanisms, equipment, mode of operation, application.

14.00 h **Cake Filtration – Formation, Washing and Demoisturizing**

Separation mechanisms, consequences for practical use.

14.45 h **Coffee Break**

15.00 h **Cake Filters**

Separation mechanisms, equipment, mode of operation, application.

15.45 h **Filter Media**

Overview and fields of application, influence of media properties on separation results.

16.30 h **Coffee Break**

16.45 h **Suspension Pretreatment to Enhance Separation Properties**

Additional techniques for enhancing solid-liquid separation processes, physiochemical influences on slurry stability, flocculation

17.30 h **Apparatus Combinations, Alternative Solutions and Apparatus Selection Criteria**

Strategies for process optimization & selection of suitable separation techniques.

Short Course II

# Fine Dust Separation

Monday, February 23, 2015

This 1-day "Fine Dust Separation" Short Course is of interest to engineers, technicians, scientists, managers, and other personnel involved in gas-solid separation in the process and other industries. They will find the course informative, regardless of whether they design, purchase, research, or use dust separation equipment for product recovery, emission control, air cleaning or process gas cleaning. It is a comprehensive review of the processes involved in the separation of solid or liquid particles from gases, which will emphasise practical aspects and present appropriate theoretical information as necessary. Topics are:

## Evaluation & Selection of Dust Collection Equipment

### Wet Scrubbers

### Centrifugal Collectors / Cyclones

### Electrical Precipitators

### Fibrous Filters / Deep Bed Filters

### Raw Gas Characterisation and Conditioning

### Fabric Filters / Surface Filters



## 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.

8.30 h **Welcome Coffee**

9.00 h **Introduction**

Particulate Matter (PM<sub>x</sub>); 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 **Fabric Filters (Surface Filters)**

Mode of operation, basic designs, application, operating characteristics, design calculations.

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 **Selection of Dust Collection Equipment**

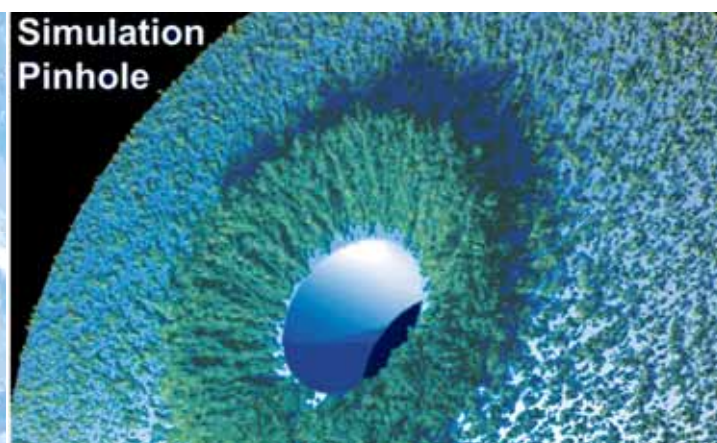
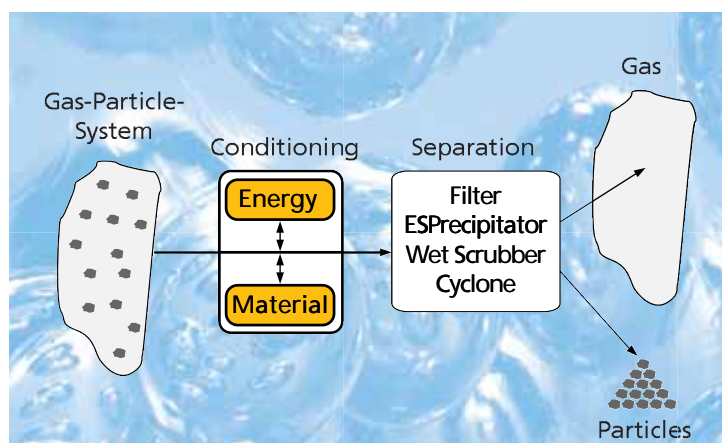
Comparison of the different techniques, strength and weaknesses, fields of application, selection procedure.

16.30 h **Raw Gas Conditioning**

Additional techniques for enhancing dust separation equipment (Electrical and acoustic enhancement, additive dosing, precoating,...).

17.15 h **Discussion**

An open-floor question and answer session.





# Plenary Lecture

## How Could Integrated Science change the Separation Technology in the Future?

**Dr. Karsten Keller**  
DuPont  
USA

**PL** Tuesday, February 24, 2015  
10:45-12:00 h

"The global population is project to grow from 7 billion today to 9 billion by 2050. The increase in population and the accompanying shifting global economic patterns will result in a significant increase in demand for food, energy and protection. Separation technology plays a key role in ensuring new solutions are environmentally sustainable. Indeed, existing separation technology has enabled us today to have clean air and water. Nearly every production process in today's society requires a separation step. As a result, global market in separation technology is growing and is over USD 100 billion annually. Exactly how should separation research develop in the next decade and beyond? Nowadays technical solutions are available for almost every separation task. However for the future the pressing challenge is to find economical solutions. If the ideal separation technology/process would have been invented, our world would face fewer difficulties for food, water, energy and environment..."

# Keynote Lectures

## Sugar Purification from Enzymatic Hydrolysis Products using Membrane Diafiltration

**Prof. Kuo-Jen Hwang**  
Tamkang University, Dept. of Chemical and Materials Engineering, Taiwan

**K1** Tuesday, February 24, 2015  
13:00-14:15 h

## Selective recovery of valuable plant and biomass compounds through biological membranes exposed to pulsed electric field: A new way for "green" filtration and purification technologies

**Prof. Eugène Vorobiev**  
Université de Technologie de Compiègne, France

**K2** Tuesday, February 24, 2015  
14:45-16:00 h

## Precoat Filtration. Insights into a well-established technology that still offers plenty of opportunities

**Dr. Eberhard Gerdes**  
JRS Rettenmaier & Söhne  
Germany

**K3** Tuesday, February 24, 2015  
16:45-18:00 h

## Measuring Filter Cut Points and Pore Size Distributions by Challenge Testing

**Dr. Graham Rideal**  
Whitehouse Scientific  
UK

**K4** Wednesday, February 25, 2015  
09:00-10:15 h

## Filtration – A Multi-Scale and Multi-Physics Challenge for Simulation

**Dr. Martin Lehmann**  
Mann+Hummel  
Germany

**K5** Wednesday, February 25, 2015  
10:45-12:00 h

## On local Cake Properties in Liquid Filtration

**Prof. Hans Theliander**  
Chalmers University of Technology, Forest Products and Chemical Engineering, Sweden

**K6** Wednesday, February 25, 2015  
13:00-14:15 h



# Session Overview

## Monday, 23.02.2015

09:00 – 18:00	Short Course I – Solid/Liquid Separation	Short Course II – Fine Dust Separation
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## Tuesday, 24.02.2015

08:30 – 10:15	Registration					
10:15 – 10:45	Opening Session					
10:45 – 12:00	<b>PL</b> Plenary Lecture – Dr. Karsten Keller, DuPont, USA How could Integrated Science change the Separation Technology in the Future?					
12:00 – 13:00	Lunch – Fair					
13:00 – 14:15	<b>K1</b> Keynote Lecture 1 Prof. Kuo-Jen Hwang	<b>L1</b> Dispersion Separation Analysis	<b>L2</b> Cake Filtration- Analysis	<b>G1</b> Surface Filtration I	<b>G2</b> Filter and Gas Adsorptions	
14:15 – 14:45	Coffee Break – Fair					
14:45 – 16:00	<b>K2</b> Keynote Lecture 2 Prof. Eugene Vorobiev	<b>L3</b> Decanter Centrifuges and Hydrocyclones	<b>L4</b> Cake Filtration- Washing	<b>G3</b> Surface Filtration II	<b>G4</b> Automotive Application	
16:00 – 16:45	Coffee Break – Fair					
16:45 – 18:00	<b>K3</b> Keynote Lecture 3 Dr. Eberhard Gerdes	<b>L5</b> Filtration Analysis, Apparatus, Selection & Design	<b>L6</b> Continuous Vacuum and Pressure Cake Filters	<b>G5</b> Surface Filtration III	<b>M1</b> New Membranes	
18:00	Get Together Reception					

## Wednesday, 25.02.2015

09:00 – 10:15	<b>K4</b> Keynote Lecture 4 Dr. Graham Rideal	<b>L7</b> Backwash Filters	<b>G6</b> Modelling and Simulation	<b>M2</b> Micro- and Ultrafiltration		
10:15 – 10:45	Coffee Break – Fair					
10:45 – 12:00	<b>K5</b> Keynote Lecture 5 Dr. Martin Lehmann	<b>L8</b> Vibration, Magnetic & Electric Enhanced Filtration	<b>G7</b> Test Systems and Measurements	<b>M3</b> Fouling and Scaling		
12:00 – 13:00	Lunch – Fair					
13:00 – 14:15	<b>K6</b> Keynote Lecture 6 Prof. Hans Theliander	<b>L9</b> Flocculation for Separation Enhancement	<b>G8</b> Mist and Droplet Separation	<b>M4</b> Cross Flow Techniques		
14:15 – 14:45	Coffee Break – Fair					
14:45 – 16:00	<b>L10</b> Poster Session	<b>L11</b> Filter Aids and Precoat Filtration	<b>G9</b> Poster Session I	<b>G10</b> Poster Session II	<b>M5</b> Poster Session	
16:00 – 17:15	Poster Viewing	<b>L12</b> Cake Filtration of Slurries with poor Filterability	Poster Viewing	Poster Viewing	Poster Viewing	
	Coffee Break – Fair					

## Thursday, 26.02.2015

09:00 – 10:15	<b>F1</b> Surface Modification of Filter Media	<b>L13</b> Filter Media	<b>G11</b> Air Filters – HEPA	<b>M6</b> Separation of Bio-Products		
10:15 – 10:45	Coffee Break – Fair					
10:45 – 12:00	<b>F2</b> Production Technology of Filter Media	<b>L14</b> Sorting and Classification	<b>G12</b> Air Filters – HVAC	<b>M7</b> Mechanisms, Models, Simulation		
12:00 – 13:00	Lunch – Fair					
13:00 – 14:15	<b>F3</b> Fine Fiber and Membrane Manufacturing	<b>L15</b> Depth Filtration	<b>G13</b> Industrial Gas Cleaning I	<b>M8</b> Process and Waste Water Treatment		
14:15 – 14:45	Coffee Break – Fair					
14:45 – 16:00	<b>F4</b> Numeric Simulation of Porous Structures	<b>L16</b> Coalescer/Liquid – Liquid Separation	<b>G14</b> Industrial Gas Cleaning II	<b>M9</b> Ceramic Membrane Applications		
	Coffee Break – Fair					



Tuesday, February 24, 2015

Plenary Lecture

10:45 - 12:00 h

PL

How could Integrated science change the separation technology in the future?

Dr. Karsten Keller  
DuPont, USA

Keynote Lecture 1

13:00 - 14:15 h

K1

Sugar purification from enzymatic hydrolysis products using membrane diafiltration

Prof. Kuo-Jen Hwang, Tamkang University, Taiwan

Dispersion Separation Analysis

13:00 - 14:15 h

L1

Introducing LUMiREader® X-ray - A new instrument for the evaluation of separation behaviour of concentrated nontransparent dispersions D. Lerche\*, D. Kavianpour, A. Zierau, T. Sobisch, LUM GmbH, Germany

Characterization of the separation and segregation behaviour of model paper dispersions, D. Kavianpour\*, T. Sobisch, A. Zierau, D.Lerche, LUM GmbH, Germany

Use of photocentrifuge for membrane separation and characterization of solutions filterability, M. Loginov\*, N. Lebovka, E. Vorobiev, University of Technology of Compiègne, France

Cake Filtration Analysis

13:00-14:15 h

L2

Wall effect of solid liquid filter test on filter up-scaling, R. Giner, G. Kramer\*, Andritz AG, Austria

Systematical laboratory tests with a bucket centrifuge and a pressure nutsche – Comparison of the cake permeability and consequences for the scale-up of batch filtering centrifuges, R. Ebert, E. Verdurand\*, M. Schmid, DSM-Nutritional Products, Switzerland; I. Nicolaou, NIKIFOS Ltd., Cyprus

Efficient internal filtration system for solid-liquid separation, M. A. Khodaghali\*, A. K. Forsat, Research Institute of Petroleum Industry; M. R. Hemmati Mahmodi, Sorosh Energy Pouya, Iran

Surface Filtration I

13:00 - 14:15 h

G1

Influence of leaks on the overall emission behaviour of bag house filters, O. Kurtz\*, J. Meyer, G. Kasper, Karlsruhe Institute of Technology, Germany

Airborne nanoparticle filtration by filter cakes on pulse-jet cleaned filter media, H. Förster\*, C. Funk, W. Peukert, University Erlangen-Nuremberg, Germany

Study and characterization of the emitted particles in pulse jet filtration, A. K. Choudhary\*, A. Mukhopadhyay, Jalandhar Institute of Technology, India

Filters and Gas Adsorption

13:00 - 14:15 h

G2

Gas phase adsorption of dimethyl sulfide on activated carbon cloth (GDSEL651), N. Hoda\*, A. Topuz, F. Mert, L. Budama, E. Eroglu, Akdeniz University, Turkey

New developments in molecular air filtration, I. Parker\*, Ahlstrom Filtration LLC, USA; S. Pigeot-Rémy, Ahlstrom Research & Services, France; G. Costa, Ahlstrom Italy s.p.a., Italy; A. Viskari, Ahlstrom Tampere Oy, Finland

New media generation for cabin air filter application, A. Scope\*, D. Keerl, MANN+HUMMEL Innenraumfilter GmbH & Co. KG, Germany

Keynote Lecture 2

14:45 - 16:00 h

K2

Selective recovery of valuable plant and biomass compounds through biological membranes exposed to pulsed electric field: A new way for "green" filtration and purification technologies  
Prof. Eugène Vorobiev, University of Compiègne, France

Decanter Centrifuges and Hydrocyclones

14:45 - 16:00 h

L3

Design of decanter centrifuges – development of laboratory test methods and calculations for separation efficiency prediction, M. Böhlmann, Siebtechnik GmbH, Germany

Hydrocyclone - Design & optimization - A new user friendly and reliable approach, I. Nicolaou\*, NIKIFOS Ltd, Cyprus

A novel three-outlet hydrocyclone, C. C. Wang, R.-M. Wu, Tamkang University, Taiwan

Cake Filtration Washing

14:45 - 16:00 h

L4

The influence of wetting on washing and filtration properties, M. Burisch\*, U.A. Peuker, Technical University Bergakademie Freiberg, Germany

Chemical effects in filtration and washing of blast furnace slag, R. Salmimies\*, A. Häkkinen, Lappeenranta University of Technology, Finland; M. Burisch, U.A. Peuker, Technical University Bergakademie Freiberg, Germany

Cleaning of filter media contaminated with yeast by pulsed jets, B. Bollwein\*, D. Ulmen, J.Tippmann, T. Becker, Technical University Munich, Germany

Surface Filtration II

14:45 - 16:00 h

G3

Filter movement during pressure pulse regeneration – A comparison of flat media and filter bags with regard to cleaning intensity and acceleration, S. Sobich\*, J. Meyer, G. Kasper, Karlsruhe Institute of technology, Germany

Effect of fabric type and dust concentration on filtration performance, A. Mukhopadhyay\*, S. R. Swain, Jalandhar Institute of Technology, India

Test method for small scale pulse-cleaned package type dust collection system, A. Morishita\*, H. Kudou, K. Kitabayashi, S. Katsushima, AMANO Corporation, C. Kanaoka, Kanazawa University, Japan

Automotive Application

14:45 - 16:00 h

G4

Impact of viscous oil impregnation on the performance of engine intake air filters, A. K. Maddineni\*, S. Chakote, Varroc Polymers Pvt. Ltd., India; H. Sauter, Germany

Micro scale simulation as part of fibrous filter media development processes - From real to virtual media, J. Weber\*, A. Kilian, M. Heim, M. J. Lehmann, MANN+HUMMEL GmbH, Germany

Building a refrigerant recovery recycling machine for HFC-134a: From architecture definition to prototype implementation, B. N. Floresca\*, Technological University of the Philippines, Philippines



Keynote Lecture 3

16:45 - 18:00 h

K3

Precoat filtration. Insights into a well-established technology that still offers plenty of opportunities  
Dr. Eberhard Gerdes, JRS Rettenmaier & Söhne, Germany

Filtration Analysis, Apparatus Selection and Design

16:45 - 18:00 h

L5

Cake forming filtration - From the theory based laboratory tests to the reliable selection and optimal design of filter apparatuses, I. Nicolaou\*, NIKIFOS Ltd, Cyprus

The filtration calculator: A novel tool for the "daily needs" of people dealing with cake forming filtration, N. Wagner\*, F. Tomasko, FLSmidth Wiesbaden GmbH, Germany

Assessment of turbidity meter / Sensor filter combination in beer filtration, H. H. Kleizen, J.B.J. Kleizen, Dutchap BV; G. J. Beune APT BV, Netherlands

Continuous Vacuum and Pressure Cake Filters

16:45 - 18:00 h

L6

Bypass dust processing in the cement manufacturing process - BHS belt filter allow primary fuel substitution rates of up to 100 percent, C. Steinbinder, T. Ochel\*, BHS-Sonthofen GmbH, Germany

Combined continuous pressure and press filtration with a HiBar drum filter, E. Ehrfeld\*, R. Bott, T. Langeloh, BOKELA GmbH, Germany

Filtration of hot slurries with HiBar filtration, T. Langeloh\*, E. Ehrfeld, BOKELA GmbH, Germany



## Surface Filtration III

16:45-18:00 h

G5

**Evaluation of the efficiency of filtration processes using precoat materials**, S. Schiller\*, H.-J. Schmid, University of Paderborn; C. Hellmich, Hellmich GmbH & Co. KG, Germany

**Investigating reasons for filter bag failure and developing a method to improve its life span**, A. Patnaik\*, R. D. Anandjiwala, CSIR Materials Science and Manufacturing and Nelson Mandela Metropolitan University, South Africa

**Experimental investigations into the effects of ambient humidity on particle-loaded single filter fibers**, Q. Zhang\*, University of Wuppertal, Germany

## New Membranes

16:45-18:00 h

M1

**Characterization of microporous hydrophobic membranes used in membrane distillation process**, M. Rezaei\*, W. M. Samhaber, University Linz, Austria

**Porous water repellent silica aerogel membranes for membrane distillation applications**, K.-L. Tung, C.-C. Wang, National Taiwan University; Y.-F. Lin, Chung Yuan Christian University, M. S. Huang, Industrial Technology Research Institute, Taiwan

**Revolutionary impact of nanotechnology on advanced membranes: Forward osmosis and solvent stable membranes**, M. Peyravi, M. Jahanshahi\*, Babol University of Technology, Iran

## Wednesday, February 25, 2015

### Keynote Lecture 4

09:00-10:15 h

K4

**Measuring filter cut points and pore size distributions by challenge testing**

Dr. Graham Rideal, Whitehouse Scientific, UK

### Backwash Filters

09:00-10:15 h

L7

**Development of a high gradient magnetic separator for the application in oil filtration**, E. Förster\*, K. Menzel, H. Nirschl, Karlsruhe Institute of Technology, Germany

**Automatic backwash filter for bath purification**, W. Watzinger\*, Lenzing Technik GmbH, Austria

**Iron and manganese treatment of groundwater by means of pre-treatment and an automatic backwash filter**, M. Hochedlinger\*, P. Stimpfl, E. Hawle Armaturenwerke GmbH, J. Kölbl, Blue Networks e.U., Austria; P. Galambos, L. Kuzma, Hawle Szerelevénygyártó és Forgalmazó Kft., Hungary; P. Sommerauer, H. Haring, HAWLE Armaturen GmbH, Germany

### Modelling and Simulation

09:00-10:15 h

G6

**CFD simulation of nanofiber-enhanced air filter media**, P. Tronville, Politecnico di Torino, Italy; L.L.X. Augusto, A.C.C. Bortolassi, G.C. Lopes, J.A.S. Gonçalves, Federal University of São Carlos, Brazil; R. Rivers, EQS Inc., USA

**Simulation of nanoscale particle movement and deposition**, A. Stief\*, C. Feuchter, Aalen University, Germany; K. Langfeld, University of Plymouth, UK

**Numerical simulation of exhaust gas flow and reaction kinetics in the micro porous soot structure of deposited particles in DPFs**, M. Bürger\*, U. Janoske, University of Wuppertal, Germany

### Micro- and Ultrafiltration

09:00-10:15 h

M2

**Sintered metal fibre microfiltration of bio-ethanol fermentation broth**, Q. Kang\*, R. Dewil, Catholic University Leuven, Belgium; J. Baeyens\*, T.W. Tan, Beijing University of Chemical Technology, China

**Cleaning usability and flux recovery of ultrasound during and after ultrafiltration processing**, A. M. Maskooki\*, M. H. Shahraki, M. Mohammadi, RIFST Research Institute of Food Science and Technology, Iran

**Functional polymers coupled to ultrafiltration membranes to remove and separate anions from aqueous solution**, B. L. Rivas\*, J. Sánchez, L. Toledo, University of Concepción, Chile

### Keynote Lecture 5

10:45-12:00 h

K5

**Filtration – A multi-scale and multi-physics challenge for Simulation**

Dr. Martin Lehmann, Mann+Hummel, Germany

### Vibration, Magnetic and Electric Enhanced Filtration

10:45-12:00 h

L8

**Vibration-enhanced compaction of filter cakes and its influence on shrinkage cracking**, S. Strubel\*, H. Anlauf, H. Nirschl, Karlsruhe Institute of Technology, Germany

**Numerical dual-porosity model of solid-liquid expression from electroporated bio-solids**, Mahnič-Kalamiza\*, E. Vorobiev, University of Technology of Compiègne, France

**Optimisation of mineral sludge combined dewatering: Aggregation and constant-current electrofiltration in a filter-press**, M. Loginov\*, M. Citeau, N. Lebovka, E. Vorobiev, University of Technology of Compiègne, France

### Test Systems and Measurements

10:45-12:00 h

G7

**Filter media testing in overpressure up to 4 bar – Isobaric detection of fractional efficiency**, M. Schmidt\*, Palas® GmbH, Germany

**The impact of the aerosol generation on the characterization of complete filter or filter media**, S. Schütz\*, M. Schmidt, Palas® GmbH, Germany

**Instrumental and methodological complex for inhalation intake assessment of radioactive gas-aerosol mixtures**, A. Karev\*, A. Tsovanov, Federal Medical Biophysical Center, Russia

## Fouling and Scaling

10:45-12:00 h

M3

**Ultrafiltration of alginate solutions with ceramic hollow fiber membranes: An experimental study of fouling mechanisms**, F. Arndt\*, J. Braun, H. Anlauf, H. Nirschl, Karlsruhe Institute of Technology; I. Unger, S. Schütz, MANN+HUMMEL GmbH, Germany

**Reduction of hollow fiber membrane fouling through electroadsorptive filtration of back wash water**, R. Komplenik\*, Ahlstrom Filtration LLC; J. Brant, University of Wyoming, USA

**The performance of polycarboxylates as inhibitors for CaCO<sub>3</sub>-scaling in reverse osmosis-plants**, W. Hater, K. Urbahn, A. Icart, ICL Water Solutions; J. Jaworski, N. Kruse, G. Braun\*, Cologne University of Applied Sciences, Germany



### Keynote Lecture 6

13:00-14:15 h

K6

**On local cake properties in liquid filtration**

Prof. Hans Theliander, Chalmers University, Sweden

### Flocculation for Separation Enhancement

13:00-14:15 h

L9

**Speeding up process development by an automated flocculation setup**, M.W. Wilson, E. Freydehl\*, G. Ferreira, A.M.C. Janse, E.J.A.X. van de Sandt, DSM Biotechnology Center, Netherlands

**Implementation of floc characteristics to improve deep bed filtration modelling in water treatment**, I. Slavik\*, W. Uhl, Technische Universität Dresden, Germany

**Approach to determine particle density for modelling purposes in water treatment and supply**, I. Slavik\*, A. Korrenz, K. Ripl, W. Uhl, Technische Universität Dresden, Germany

### Mist and Droplet Separation

13:00-14:15 h

G8

**Entrainment of droplets from oil mist filters – Characteristics and relevant parameters**, S. Wurster\*, J. Meyer, G. Kasper, Karlsruhe Institute of Technology, Germany

**Enhanced analysis of droplet separation efficiency of knitted wire meshes by optical particle counter measurements and direct numerical simulation based on tomographies**, K. Schmidt\*, F. Haller, A. Hellmann, S. Ripperger, Technical University of Kaiserslautern; W. Heikamp, Rhodius GmbH, Germany

**Isothermal and isobaric measurements of engine crankcase ventilation filters**, S. Schütz, L. Mölter, M. Schmidt, Palas® GmbH, Germany





**Cross Flow Techniques**

13:00-14:15 h

**M4**

**Separation of catalysts with dynamic precoat filtration on the DYNO filter**, E. Ehrfeld\*, R. Bott, T. Langeloh, BOKELA GmbH, Germany

**Optimization of yield when processing beverages with the dynamic cross flow filter**, G. Grim\*, Andritz KMPT GmbH

**Effect of disk structure on the performance of rotating-disk microfiltration of microalgae**, K.-Y. Hwang, S.-E. Wu, Tamkang University, Taiwan



**Poster Session I**

14:45 - 16:00 h

**L10**

**Strategies and tools available to solid-liquid separations consultants in industry**, S. Wolff\*, E. I. DuPont de Nemours, USA

**Functionalized filter media for continuous vacuum filtration without vacuum and filtrate pumps**, H. Anlauf\*, Karlsruhe Institute of Technology, Germany

**Cake filtration simulation for poly-dispersed spherical particles**, O. Iliev, R. Kirsch, S. Osterroth\*, Fraunhofer Institute for Industrial Mathematics, Germany

**Analysis of stepwise expression of sake fermentation broth**, R. Fukuyama\*, A. N. Ginting, T. Tanaka, M. Iwata, Osaka Prefecture University, N. Yabuta, YABUTA Industries, Co., Ltd, Japan; M. S. Jami, Islamic University Malaysia, Malaysia

**Groundwater filtration through chalcedonite sand**, J. Je -Walkowiak\*, Poznan University of Technology, Poland

**Application of Iranian zeolite (Semnan area) for removal of environmental pollution of sulfide**, S. Karimi, A. Azadmehr\*, Amirkabir University of Technology, Iran

**Kinetics and thermodynamic adsorption studies of the humic acid adsorption from peat water using Fe<sub>3</sub>O<sub>4</sub> nano particles**, M. A. Zulfikar\*, S. A. Purba, H. Setiyanto, Bandung Institute of Technology, Indonesia

**Efficient simulations of poroelastic deformations in pleated filters**, D. Iliev\*, O. Iliev, R. Kirsch, Fraunhofer ITWM, Germany; A. Mikeli, University Lyon 1, France; G. Printsypar, V. Calo, King Abdullah University, Saudi Arabia

**Designing advanced filtration media through metal additive manufacturing**, N. Burns\*, M. Burns, D. Travis, L. Geekie, Croft Additive Manufacturing; A. E. W. Rennie, University of Lancaster, UK

**Patent-Overview: Wet filtration techniques using non-woven textile fabrics**, L. Sinowzik\*, Sächsisches Textilforschungsinstitut e.V. (STFI), Germany

**Reduction of greywater pollutants using modified hydraulic structure case study: Multi – layer cascade weir**, D.W. Abbood\*, E. A.Jasim, Mustansiriya University, Iran

**Woven wire meshes - Their characteristics and selection criteria**, M. Knefel\*, GKD Gebr. Kufferath AG, Germany

**Filter Aids and Precoat Filtration**

14:45 - 16:00 h

**L11**

**Improving filter-aid filtration by means of a new mechanistic process model**, M. Kuhn\*, H. Briesen, Technical University Munich, Germany

**Viscose speciality fibres as filter auxiliaries**, P. Wimmer\*, R. Scholz, D. Bauer, T. Kandler, Kelheim Fibres GmbH, Germany

**Hydraulic Gamma**, A. Willis, Hollingsworth & Vose Co. Ltd., UK

**Poster Session I**

14:45 - 16:00 h

**G9**

**The performance simulation analysis and experimental research on their filter of engineering vehicle in highland environment**, J.-J. Lu\*, Y. Sun, J.-D. Wang, M.-H. Li, J.-X. Li, M.-H. Qiao, North Vehicle Research Institute, China

**Characterization of dustiness – Influence of low pressure**, T. Londershausen\*, E. Schmidt, University of Wuppertal, S. Sander, U. Fritsching, University of Bremen, Germany

**Liquid bridge force between two unequal-sized spheres – Problems with mechanical models using a circular bridge shape approach**, F. Schröter\* E. Schmidt, University of Wuppertal, Germany

**Measurement of the adhesion moment of a particle-wall contact and comparison to simulated values**, A. Haarmann\* E. Schmidt, University of Wuppertal, Germany

**Determination of the adhesive force through centrifugal technique between particles and filters membranes**, A.F.Almeida, M. L. Aguiar\*, Federal University of São Carlos, Brazil

**Effect of the vibration on deposition of particles during gas filtration using fabric filters**, A. M. M. Arouca, F. O. Arouca\*, L. G. M. Vieira, J.J. R. Damasceno, Federal University of Uberlândia, Brazil

**Simulation of particle-particle & particle-fiber adhesion using star CCM+ from CD-Adapco**, L.L.X. Augusto\*, G.H. Justi, M.L. Aguiar, V.G.G. Béttega, J.A.S. Gonçalves, G. C. Lopes, Federal University of São Carlos, Brazil

**Vertical liquid distribution in filter cartridge during gas-liquid filtration**, Z. Liu\*, Y. Z. Dang, Z. L. Ji, M. J. Yu, China University of Petroleum, China

**Combined separation of ultrafine dust particle and gaseous pollutants emitted by biomass combustions**, F. Prill\*, S. Schiller, H.-J. Schmid, University of Paderborn, Germany

**Numerical simulation of geometry influence on electrostatic precipitators**, S. Sander\*, U. Fritsching, University of Bremen, T. Londershausen, E. Schmidt, University of Wuppertal, Germany

**Reduction of fine dust-emissions at inner city areas – opportunities and limitations of electrostatic precipitators**, M. Kaul\*, E. Schmidt, University of Wuppertal, Germany

**Poster Session II**

14:45 - 16:00 h

**G10**

**The influence of the layout of fabric filter in flow mass filtrate**, T.W. C. Pereira, F. B. Marques, F. A. R. Pereira, D. C. Ribeiro, S. M. S. Rocha\*, Federal University of Espírito Santo, Brazil

**Evaluation of the performance in fibrous filter used in industrial chemistry by pulse jet cleaning**, S. S. R. Cirqueira\*, F. M. Oliveira, M. L. Aguiar, Federal University of Sao Carlos; E. H. Tanabe, Federal University of Santa Maria, Brazil

**Study of the electrostatic effect in cement particles in bag filters**, F. M. Oliveira, S. S.R. Cirqueira\*, M. L. Aguiar, Federal University of São Carlos, Brazil

**Quantification of bioaerosols from filtration of real indoor environment**, P. F. Rosa\*, A. Bernado, M. L. Aguiar, Federal University of São Carlos, Brazil

**Evaluate the efficiency of different filter media in removing nanoparticles**, A. C. C. Bortolassi\*, V.G. Guerra, M. L. Aguiar, Federal University of São Carlos, Brazil

**Modern PTFE membrane filters require appropriate testing methods**, R. Bharadwaj\*, H. Daruwala, AAF International, USA

**Cut size control of novel gas cyclone separator with sintered metal cone by clean-air injection**, K. Fukui\*, K. Jikihara, S. Sunada, H. Yoshida, Hiroshima University, Japan

**Characterization and performance of different fibrous filters media for collecting nanoparticle**, A. C. C. Bortolassi\*, V. G. Guerra, M. L. Aguiar, Federal University of São Carlos, Brazil

**Degradation of PPS filter media by NOx at high temperature**, M. Wada\*, H. Wakamatsu, C. Kanaoka, Ishikawa University, Japan

**Performance of cellulose filter media in the filtration of gases at high pressures**, B. A. Lima, G. C. Lopes, M. L. Aguiar\*, Federal University of São Carlos; E. H. Tanabe, Federal University of Santa Maria, Brazil

**Separation of particles out of air by botanical collectors**, G. Reznik, E. Schmidt\*, University of Wuppertal, Germany

**Poster Session I**

14:45 - 16:00 h

**M5**

**Degradation of ion exchange membranes used for pickling acid regeneration**, F. Rögner\*, Cologne University of Applied Sciences, J. Willemsen, T. Reichardt, VDEh, Germany; K. Jacobson, Swerea KIMAB, Sweden



**Performance improvement of countercurrent-flow seawater desalination systems in hollow-fiber direct contact membrane distillation modules**, C.-D. Ho\*, T.-J. Yang, L. Chen, Tamkang University, Taiwan

**Dehumidifying air with ion-exchange membranes**, I. Ladizhensky, E. Korin, E. Korngold, Ben-Gurion University of the Negev, Israel

**Application areas of SARATECH® PBSAC in dialysis techniques**, A. Stephan, J. Raiser\*, Blücher GmbH, Germany

**High flux solvent resistant nanofiltration membranes from interfacial polymerization**, S.-P. Sun, T.-S. Chung, National University of Singapore, Singapore

**Cake Filtration of Slurries with poor Filterability** 16:00-17:15 h **L12**

**HiBar steam pressure filtration of coal ultrafines and iron ore concentrates - New developments and results**, T. Langeloh, BOKELA GmbH, Germany

**Compressible suspension characterisation and plate-and-frame filter prediction**, A. D. Stickland\*, E. H. Irvin, S. J. Skinner, P. J. Scales, University of Melbourne; A. Hawkey, Bilfinger Water Technologies, Australia; F. Kaswalder, Bilfinger Water Technologies, Italy

**Dewatering of slurry with poor filterability in basket centrifuge: Discharge of supernatant using bypass filter medium**, A. N. Ginting\*, R. Fukuyama, T. Tanaka, M. Iwata, Osaka Prefecture University, Japan; M. S. Jami, Islamic University Malaysia, Malaysia

## Thursday, February 26, 2015

**Surface Modification of Filter Media** 09:00-10:15 h **F1**

**PFOA- and PFOS-free super water- and oil-repellent nanocoatings deposited via innovative low pressure plasma processes, for filtration and separation applications**, E. Rogge\*, F. Legein, Europlasma NV, Belgium

**Industrial water and oil repellent nano-coatings for filtration applications**, N. Rimmer\*, P2i Ltd, UK

**Celanese engineered materials for porous filter media**, I. Idiyatullina\*, Celanese, Germany

**Filter Media** 09:00-10:15 h **L13**

**Filter media performance and its influence on filtration results – Experience, expectations and possibilities in vacuum and pressure filtration**, A. Seitz\*, D. Bartholdi, I. Erlenmaier, C. Maurer, Sefar AG, Switzerland

**New developments in high performance woven wire filtration media**, M. Theiß\*, F. Meyer, F. Edelmeier, Haver & Boecker OHG, Germany

**Optimal gradient hydraulic media to maximize dust holding capacity**, M. Silian\*, S. Jaganathan, Hollingsworth & Vose Co., USA

**Air Filters – HEPA** 09:00-10:15 h

**G11**

**In-situ efficiency measurement for HEPA-filter**, C. Schweinheim\*, Caverion Deutschland GmbH, Germany

**Hierarchical HEPA filter with gradient structure based on nanofibers and microfibers**, C. Wang\*, P. Li, Y. Zhang, F. Wei, Tsinghua University, China

**An investigation on the shorter lifetime of pleated filter compared to flat sheet**, L. Cheng\*, J. Becker, A. Wiegmann, Math2Market GmbH; R. Kirsch, Fraunhofer Institute for Industrial Mathematics, Germany

**Separation of Bio-Products** 09:00-10:15 h

**M6**

**Fructose concentration by nanofiltration from low-concentration aqueous solutions**, M.T. Nguyen\*, Hanoi University of Science and Technology, Vietnam; W.M. Samhaber, University Linz, Austria

**Membranes or molecular sieves in preparing fuel-grade bio-ethanol**, J. Baeyens\*, T. Tan, Beijing University of Chemical Technology, China; Q. Kang, R. Dewil, Catholic University Leuven, Belgium

**Long term experiment for the separation of "green" hydrogen from biomass gasification by a polymer membrane**, D. Konlechner\*, M. Harasek, H. Hofbauer, Vienna University of Technology, Austria; M. Hackel, AIR LIQUIDE, Germany; E. Sanders, AIR LIQUIDE, USA; K. Bosch, Energie Burgenland AG, Austria

**Production Technology of Filter Media** 10:45-12:00 h **F2**

**A neat solution – Modern filters cut with laser technology**, tba, eurolaser GmbH, Germany

**Why AOI improves the quality of filter base material and coatings and reduces production costs**, H. Oerley\*, Dr. Schenk GmbH, Germany

**Reel to reel UV lithography for Filter and Screen applications**, M. Lehmann\*, micrometal GmbH, Germany



**Sorting and Classification** 10:45-12:00 h

**L14**

**Electromagnetic separation (EMS) of high-temperature superconductor**. E. Broide\*, Hebrew University, Israel

**Optimization of semi-continuous centrifugal classification processes for colloidal products**, M. Konrath\*, H. Nirschl, Karlsruhe Institute of Technology, Germany

**Physical separation and disposal of secondary waste from the decommissioning of nuclear facilities**, M. Brandauer\*, S. Gentes, S. Stiefel, M. Haist, Karlsruhe Institute of Technology; J. Starflinger, Institute of Nuclear Technology and Energy Systems, Germany

**Air Filters – HVAC** 10:45-12:00 h

**G12**

**Reducing energy consumption through advances in mechanical Ashrae air filtration media**, C. Desquilles\*, P. Blanckaert, Lydall Performance Materials SAS, France; D. Sullivan, G. Crosby, Lydall Performance Materials, USA

**Saving cost with novel filter media solutions for indoor air quality**, I. Parker\*, Ahlstrom Filtration LLC, USA

**How regulatory changes drive innovation in synthetic filter media for pocket filters**, A. Boni, B. Keil\*, Hollingsworth & Vose, Germany,

**Mechanisms, Models, Simulation** 10:45-12:00 h

**M7**

**Filtration of finest nanoparticles < 15 nm from liquids - A quantitative study**, D. Segets\*, W. Peukert, University Erlangen-Nuremberg, Germany; S.-C. Chen, T. Y. Ling, D. Y. H. Pui, University of Minnesota, USA

**Use of computational fluid dynamics (CFD) for the design of apparatuses for cross flow filtration**, J. Barth\*, S. Ripperger, University of Kaiserslautern, Germany

**Simulation of osmotic and reactive effects in membranes with resolved microstructure**, O. Iliev, K. Leonard, Fraunhofer Institute for Industrial Mathematics, Z. Lakdawala, DHI-WASY GmbH, Germany; G. Printsypar\*, King Abdullah University, Saudi Arabia

**Fine Fiber and Membrane Manufacturing** 13:00-14:15 h **F3**

**Novel ways to obtain next generation fine fibers for filtration**, S. L. Shenoy\*, T. Weik, Donaldson Company, USA

**Molecular orientation in highly stretched ePTFE filtermedia**, K. J. Choi, Clean & Science Co., Ltd., USA

**Cost-effective production of track-etched UF membranes**, S. Makkonen-Craig\*, M. Paronen, Arcada University of Applied Sciences, Finland

**Depth Filtration** 13:00-14:15 h

**L15**

**MNMs: a model for the simulation of depth filtration of non-Newtonian suspensions in granular media**, R. Sethi\*, T. Tosco, C. Bianco, Politecnico di Torino, Italy

**Experimental study and numerical simulation of the flow-induced deformation of filtering media in automotive transmission filters**, M. Kabel, R. Kirsch\*, S. Staub, Fraunhofer Institute for Industrial Mathematics, Germany; D. Bernards, M. Dederich, IBS FILTRAN GmbH, Germany

**Investigation of depth filtration of aqueous suspensions with particles greater than 1 micron**, L. Petersen\*, S. Ripperger, Technical University of Kaiserslautern, Germany





**Industrial Gas Cleaning I**

13:00-14:15 h

**G13**

**Separating dust out of process air flow using drum filters**, H. Sauter\*, F. Engel, LTG Aktiengesellschaft; U. Schneider, Gebr. Röders AG, Germany

**Design of vacuum cleaned dust filter**, T. Laminger\*, J. Wolfslehner, W. Höflinger, Vienna University of Technology, Austria

**Gas phase advanced oxidation cleans industrial pollution and smell**, C. Meusinger\*, S. Johnson, University of Copenhagen; L. Nannerup, INFUSER A/S, Denmark; F. Hartung, INFUSER Deutschland GmbH, Germany

**Process and Waste Water Treatment**

13:00-14:15 h

**M8**

**Advanced wastewater treatment with ultrafiltration**, L. Causemann; S. Krause\*, University of Applied Science Darmstadt, Germany

**Small scale plants for resource efficiency training in the Indian metal industry**, F. Rögner\*, Cologne University of Applied Sciences; M. Sartor, VDEH; M. Enders, Simatech GmbH, Germany; M. Balakrishnan, TERI University, India; T. Schneiker, Scanacon AB, Sweden

**A 3,000m3/day tubular membrane Filter (TMF™) system installed in Korea for wafer backgrinding water reclamation**, D. Frick\*, POREX, USA

**Numeric Simulation of Porous Structures**

14:45-16:00 h

**F4**

**Methods of filter media pore space analysis based on geometrical characteristics**, G. Bälz\*, R. Handel, B. Renz, A. Enderich, Mahle Filtersysteme GmbH; C. Feuchter, Aalen University, Germany

**Simulation of cake filtration for polydisperse particles**, J. Becker\*, L. Cheng, A. Wiegmann, Math2Market GmbH, Germany

**Automatic fiber thickness measurement in SEM images validated using synthetic data**, P. Easwaran\*, O. Wirjadi, T. Prill, Fraunhofer Institute for Industrial Mathematics, M. Lehmann, 2MANN+HUMMEL GmbH, S. Didas, University of Applied Science Trier; C. Redenbach, Technical University of Kaiserslautern, Germany

**Coalescer/Liquid-Liquid Separation**

14:45-16:00 h

**L16**

**Oily and wastewater separation by electroflotation**, I. L. Nascimento, E. Mattedi, M. F. Cometi, W. V. Paiva, S. M. S. Rocha\*, Federal University of Espirito Santo; E. R. Nucci, Federal University of São João Del Rei, Brazil

**Preliminary studies of new water removal element in purification applications of diesel fuels and lube oils**, R. Chen\*, Kaydon Filtration Corp., USA

**Challenges of testing fuel water separation efficiency**, G. Venkateswaran, A. Goodby\*, Ahlstrom Transportation Filtration, USA

**Industrial Gas Cleaning II**

14:45-16:00 h

**G14**

**Bag Filters: DURAtes microfiber felt for high-efficiency filtration**, D. De Angelis\*, E. Galletta, L. Cattaneo, L. Balzaretto, Testori S.p.A., Italy

**Pressure resistance parameters and dedusting performance of differently sized needle felt bags in a pilot scale test facility**, F. Seffrin\*, D. Hess, Balcke-Dürr GmbH, Germany

**Intelligent filter solutions with focus on low weight/foot print and premanufactured design**, L. Gamborg\*, M. Staben, L. Korkholm, K. Poulsen, FLSmidth A/S, Denmark

**Ceramic Membrane Applications**

14:45-16:00 h

**M9**

**Ceramic hollow fiber membranes as new filter media and their application in oil/water separation processes**, S. Schütz\*, F. Ehlen, I. Unger, MANN+HUMMEL GmbH; M. Ebrahimi, S. Kerker, P. Czermak, University of Applied Sciences Mittelhessen, Germany

**Investigation the performance of cross-flow micro-filtration of titanium dioxide suspension**, T. H. T. Trinh, W. Samhaber, University Linz, Austria

**Hybrid flotation-filtration process for oil water separation based on ceramic membranes**, M. Beery\*, J. Ludwig, L. León, akvolution GmbH, Germany

Please note that the Programme is subject to amendments.

23.09.2014



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