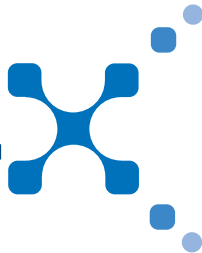


ORGANISED BY  edana™

# FILTRE



A filtration  
conference  
& tabletop  
display

14 – 15 May 2019

Radisson Blu Hotel  
Berlin | Germany

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**Programme**



**edana™**  
THE VOICE OF NONWOVENS



FOR INFORMATION VISIT

[www.edana.org](http://www.edana.org)

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Tuesday 14<sup>th</sup> May, 2019

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08.30 > 17.30 Registration open  
Please wear your badge at all times for easier networking

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08.30 > 09.00  WELCOME COFFEE & OPENING OF THE TABLETOP EXHIBITION

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09.00 > 09.15 OPENING AND WELCOME



**Pierre Wiertz**, General Manager, EDANA (Belgium)

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09.15 > 10.00 **THE FUTURE OF MOBILITY**

- There is a change from “traffic and infrastructure” to “mobility”
- This change is happening now, and it is coming fast due to several (mega-)trends
- This fast development is, however, focusing mainly on urban areas
- The focus is on the change of travel behavior and customer expectations
- Change in mobility strongly correlates with social demographic factors
- Most drivers are it-related, but some are more fundamental, such as environmental protection
- Forecasts are difficult, but corridors of change become visible



**KEYNOTE SPEAKER**

**Dr. Bodo Schwieger**, General Manager, team red Deutschland (Germany)

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10.00 > 10.30  COFFEE BREAK IN THE TABLETOP AREA

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## SESSION 1 FILTRATION IN MOBILITY



MODERATOR

**Andreas Manz**, Sales Manager Technical Specialties Germany-A-CH-GR-LI, Berry Global Inc, Fiberweb Berlin (Germany)

10.30 > 11.00

### IMPROVED CABIN AIR QUALITY THROUGH MULTILAYER FILTER MEDIA DESIGN

- Sustainable Fine dust filtration (PM2.5, PM1, UFP) with multilayer nano fiber coated cabin air filter media concepts
- Introduction of combined media concept for effective concentration reduction of VOC, SO2, NO2, NH3 in the cabin
- Field test results of in cabin concentration of particles and gases demonstrating real time filter performance of the new combined filter element design



**Thomas Heininger**, Manager R&D Cabin Air Filter, MANN+HUMMEL (Germany)

11.00 > 11.30

### MAXIMISING COMFORT AND MINIMISING POLLUTANT EXPOSURE IN THE VEHICLE CABIN USING THE VENTILATION SYSTEM

- Assessing filtration efficiency in passenger cars
- Balancing filtration against CO2 build-up
- Methodology for comparing between vehicles



**Nick Molden**, Chief Executive Officer, Emissions Analytics (United Kingdom)



Let's Tweet!

#FILTREX19  
#EdanaNonwovens

11.30 > 12.00

## PURE AIR FOR MOBILE AND STATIONARY FUEL CELL SYSTEMS. HOW A COMBINED PARTICLE AND CHEMICAL FILTRATION PROVIDES BEST AIR QUALITY FOR HIGHEST FUEL CELL PROTECTION

- Fuel cell function and application
- Critical effects of air contaminants on the fuel cell stack
- Needed cathode intake air conditioning



**Tobias Beisel**, Project Manager, Freudenberg Filtration Technologies (Germany)

12.00 > 13.00

 LUNCH & NETWORKING IN THE TABLETOP AREA

## SESSION 2 INNOVATIVE FILTER MATERIALS



MODERATOR

**Peter Reich**, Associate Sales Director, Sandler (Germany)

13.00 > 13.30

## INDUSTRIAL BREAKTHROUGH OF PLASMA DEPOSITED FUNCTIONAL NANOCOATINGS FOR FILTRATION APPLICATIONS

- Principles of low pressure plasma polymerization
- Industrial type of equipment: cost effectiveness and environmental benefits
- Applications in filtration: industrial case studies



**Filip Legein**, Director, Europlasma (Belgium)

13.30 > 14.00

## METAL FILTERS IN DIFFERENT FILTRATION SOLUTIONS

- Sinter metal, metal screens and compound material for different application
- Application of back-flow filtration, cross flow filtration and cake filtration
- Recommendation of the optimal filter concept



**Eberhard Roquette**, Managing Director, OilRoq (Germany)

14.00 > 14.30

## PREMIUM REINFORCING PULPS FOR FILTRATION APPLICATIONS

- High tensile strength and low coarseness fiber properties from premium NBSK pulps enable enhanced filter performance
- Fiber morphology and performance benchmarking of global NBSK pulps
- Filtration applications that benefit from NBSK pulp



**Bill Adams**, Sr. Director, Strategy & Innovation, Canfor Pulp (Canada)

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14.30 > 15.00

## NON-HALOGENATED FLAME RETARDANT RESIN SYSTEMS TOWARD TAILOR-MADE FLAME RETARDANT SATURATIONS

- Advantages of halogen free flame retardant saturations
- Effects of asymmetric saturation on DHC and efficiency
- Asymmetric saturated flame retardant filter media



**Fabian Fritze**, Development Engineer, Neenah (Germany)

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15.00 > 15.45

 COFFEE BREAK IN THE TABLETOP AREA

## SESSION 3 MEDIA CONVERTING TECHNOLOGY



MODERATOR

**Marines Lagemaat**, Scientific & Technical Affairs Director, EDANA (Belgium)

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15.45 > 16.15

## SETTING NEW STANDARDS WITH THE SINGLE- & MULTIROW-MELTBLOWN PROCESS

- Singlerow – Meltblown
- Multirow – Meltblown
- Air filter media
- Meltblown Hardware and line equipment



**Dip. Ing. Raphael Hermes**, Research & Development, Reifenhäuser Reicofil (Germany)

The opinions expressed in the papers presented are those of the authors, and not necessarily those of EDANA. EDANA assumes no responsibility for these opinions or for accuracy of the information contained.

16.15 > 16.45 **ADHESIVES IN FILTRATION**

- Definition of filtration market
- Adhesive types in air-filtration
- Adhesives applications in air-filtration



**Dirk Bonke**, Technical Customer Service for Filtration,  
Henkel Adhesive Technologies (Germany)

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16.45 > 17.45 **THE FILTRET<sup>™</sup> INNOVATION AWARD**

4 nominees will each present their innovation in a 10-minute presentation.  
The audience will elect the winner to be announced during the walking dinner party.



18.30 > 22.00

## FILTRET<sup>™</sup> 2019 BOAT CRUISE DINNER & THE FILTRET<sup>™</sup> INNOVATION AWARD CEREMONY

The ideal opportunity for relaxed networking  
Please wear your badge at all times for easier networking

18.30: meet in the entrance hall of the Radisson Blu Hotel

Casual dress

## Wednesday 15<sup>th</sup> May, 2019

08.30 > 16.00 Registration open  
Please wear your badge at all times for easier networking

08.45 > 09.15 ☕ WELCOME COFFEE AND NETWORKING IN THE TABLETOP AREA

### 09.15 > 10.00 WHY THE FUTURE IS BRIGHT

- Megatrends are underpinning industry trends that will drive increased global demand for filtration products for decades to come
- Urbanization, industrialization, a booming middle class, and the proliferation of smart technologies all represent strong “tail winds” for our industry
- Digitalisation, helping to make the invisible visible
- Growing populations, dwindling resources, and smarter infrastructure will drive global demand for high-performance, low-energy products across the board



KEYNOTE SPEAKER

**Dr. Stefan Berbner**, Chief Operating Officer, AAF Europe (Germany)

### SESSION 4 NEW DEVELOPMENTS IN MEDIA DESIGN



MODERATOR

**Dr. Jörg Sievert**, Chief Operating Officer,  
Freudenberg Filtration Technologies (Germany)

### 10.00 > 10.30 FURTHER EXPANDING WETLAID FILTRATION MEDIA PERFORMANCE THROUGH INNOVATION AND ENHANCED PRODUCT TESTING

- Synthetic fibre for high performances
- Innovative chemistry in wetlaid gradient media
- Multilayer combination substrate for high efficiency fuel
- Bench test simulation of real life for air industrial application



**Marco Venturello**, Head of Product Development and TCS EMEA,  
Ahlstrom-Munksjo (Italy)

10.30 > 11.00

## NEXT GENERATION HYBRID SYNTHETIC FILTER MEDIA – A STEP CHANGE IN FILTRATION PERFORMANCE

- Family of compounds that contain both mechanical and electret materials
- High efficiency, low pressure drop, high level of mechanical filtration efficiency for the life of the element
- Diverse end-uses such as cabin air, medical filters, room air/HVAC, respiratory protection and vacuum cleaning



**Jeremy Collingwood**, Plant Manager & Business Development Manager, Hollingsworth & Vose (United Kingdom)

11.00 > 11.30

 COFFEE BREAK IN THE TABLETOP AREA

11.30 > 12.00

## FILTRATION MATERIALS IN HIGH HUMIDITY AND HIGH POLLUTION CONDITIONS

- Practical examples of depth filtration and surface filtration applications



**Kari Luukkonen**, Business Development Director, Filtration and New Business Areas, Fibertex Nonwovens A/S (Denmark)

12.00 > 12.30

## ENERGY REDUCING POLYMERIC FILTRATION MESH

- New polymeric mesh design(s) generated via CAD, CFD and 3D printing
- Design qualified through benchtop cross-flow cell
- Commercialized into RO elements and exploring next potential applications in filtration applications



**Jeffrey Kirk**, Product Development Manager, SWM International (USA)



12.30 > 13.00 **SUBMICRON FIBRES FOR LIQUID FILTRATION**

- Arium™ proprietary technology produces submicron fibers, predominately in the range of 500 – 600 microns, at through puts comparable to traditional meltblown processes
- Filtration applications, the high surface area of Arium™ containing materials yields superior particulate liquid filtration versus calendered meltblown
- While Arium™ and support materials are typically 100% Polypropylene, research has demonstrated a right to succeed in delivering materials such as PLA in the future
- Other benefits of Arium™ based substrates include lower resistance, higher flux and dirt holding capacity with similar efficiency compared to meltblown media



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**Miriam Malocho**, Senior Application & Development Manager – Specialities  
Berry Global (The Netherlands)

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13.00 > 14.00  LUNCH & NETWORKING IN THE TABLETOP AREA

**SESSION 5 MODELLING/TESTING**



**MODERATOR**

**André Boni**, Global Marketing Director HEPA/ULPA Filtration,  
Hollingsworth & Vose (Belgium)

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14.00 > 14.30 **FILTER MEDIA TESTING IN ACCORDANCE WITH ISO 16890**

- Modular filter media test rig
- ISO 16890, ISO 11155; ISO 5011 or ISO/TS 19713
- Aerosol spectrometer



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**Martin Klaus Schmidt**, Division Manager Aerosol Technology and Filter Testing,  
and Vice Sales Director, Palas® (Germany)

14.30 > 15.00

## **OPTICAL QUALITY CONTROL OF FILTER MEDIA – HOW MIDA X HANDLES ROUGH AND STRUCTURED MATERIALS**

- Modern inspection solutions are the basis of smart factories
- Defect detection with MIDA ensures all local defects are caught
- Visual intelligence: MIDA X ensures optimum classification of detected defects
- With simultaneous properties monitoring complete quality control with insight into production performance is achieved



**Hans Oerley**, Senior Business Development Manager, Dr. Schenk (Germany)

15.00 > 15.30

## **MODELING OF FIBROUS FILTER MEDIA AND ARTIFICIAL-INTELLIGENCE - BASED IDENTIFICATION OF FIBER CHARACTERISTICS WITH GEODICT**

- CT-scan images of a real media are processed to prepare a detailed 3D micro-structure model of the filter media
- A neural network is trained to label binder on artificial 3-D scans of nonwoven micro-structures modelled with GeoDict. After the training, the neural network recognizes the binder in 3-D scans of real nonwoven
- Individual fibers and their characteristics in complex micro-structures are identified applying the same method
- The filtration simulations provide deposition location, fractional filtration efficiencies, and pressure drop over time. These results help filter media makers and filter element manufacturers to design and develop novel, optimized products while saving in experimental costs and time



**Mehdi Azimian**, Business Manager Filtration, Math2Market (Germany)

15.30 > 16.00

## ONLINE MEASURING OF DUST CAKE THICKNESS ON FILTER BAGS

- Possible methods to online measure dust cake thickness
- Measurement is done by laser triangulation
- Algorithms for evaluation of results



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**Matthias Haenecke**, PhD Student (Research Associate),  
Hochschule Nordhausen – University of Applied Sciences (Germany)

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16.00 > 16.10

## CLOSING WORDS

### THANKS

EDANA would like to thank the members of the FILTREX™ 2019 Programme Advisors for their help in setting up this programme:

**Joerg Sievert**, Freudenberg Filtration Technologies

**André Boni**, Hollingsworth & Vose

**Christian Hassmann**, Johns Manville