

20. ETH Conference on Combustion Generated Nanoparticles

Organization: Verein zur Durchführung der ETH-Nanopartikel-Konferenz - CHE-456.865.592
The Swiss Federal Office for the Environment FOEN is Patron of this Conference

Zurich, June 13th – 16th 2016

Conference Venue: Zürich ETH Zentrum, Main Building, HG E7
Welcome-Party June 13th, 7.00 pm - Faculty Restaurant on top of the ETH Main Building
Conference Registration opens Tuesday June 14th, 7.30 am
www.nanoparticles.ethz.ch

Agenda of Presentations

Tuesday June 14th 2016

Welcome	09.00-09.20
Boulouchos Konstantinos / ETH Zürich, Switzerland <i>Welcome</i>	
Barro Christophe / ETH Zürich, Switzerland <i>Housekeeping</i>	
Opening Address	09.20-09.30
Guzzella Lino, President of ETH Zürich	
Key Speech	09.30-09.40
D'Urbano Giovanni / FOEN Switzerland <i>Swiss, European and Joint Efforts to Prevent Ultrafine Particle Emissions</i>	
Key Lecture	09.40-10.10
Czerwinski Jan / AFHB Nidau, Switzerland <i>Targets and Achievements of the ETH Nanoparticle Conferences 1997-2016</i>	
COFFEE BREAK	10.10 – 10.40
Session 1: Fundamentals	10.40 – 12.00
Chair: Rossi Michel	
Arnold Frank / MPI, Germany <i>Modern Diesel Generated Nucleation Particles: Formation, Growth, and Lung Intrusion</i>	
De Falco Gianluigi / Università di Napoli "Federico II", Italy <i>A Thermophoretic Thermocouple Method for Soot Measurement in Combustion</i>	
Haffner-Staton Ephraim / University of Nottingham, UK <i>Uncertainties in the Traditional 2D-TEM Characterization of Carbon Nanoparticles</i>	
Swanson Jacob / Minnesota State University, USA <i>Fuel Sulfur Impacts the Formation of Carbon Nanotube-like Particles in Diesel Engines</i>	
LUNCH	12.00 – 13.00

Session 2: Biomass Combustion (co-organized by task 32 of IEA Bioenergy) **13.00 – 14.40**Chair: **Nussbaumer** Thomas**Nussbaumer** Thomas / VERENUM, Switzerland*Particulate Matter (PM) from Biomass Combustion:**An Overview on Particle Types and Measures to Reduce Biomass Particles***Jokiniemi** Jorma / University of Eastern Finland*Chemical and Physical Properties of Biomass Combustion Aerosols***Hartmann** Hans / TFZ-Technology and Support Centre, Straubing, Germany*User and Fuel Impact on Emissions of Wood Stoves***Schmidl** Christoph / BIOENERGY 2020+, Austria*Real-life Emission of Automatically Stoked Biomass Boilers***Seljeskog** Morten / Department of Thermal Energy, Norway*Variables Affecting Particulate Emissions from Residential Wood Combustion – Simultaneous Sampling on Hot and Ambient Filter***COFFEE BREAK****14.40 – 15.10****Session 3: Instrumentation****15.10 – 16.30**Chair: **Burtscher** Heinz**Hess** Adrian / PSI Switzerland*Size-resolved Element Characterization of Aerosol Particles Emitted from Thermal Wood Treatment***Vojtisek-Lom** Michal / Czech Technical University, Prague*FTIR-PEMS, Mini-PEMS and Micro-PEMS: Extending Portable On-board Monitoring Systems to Nonregulated Pollutants and Small Engines***Anderson** Robert / TSI, USA*A Comparison of Aerosol Instruments to Regulated PM/PN Emissions from GDI and PFI Vehicles***Fierz** Martin / NANEOS Switzerland*Electrical Particle Number Measurement for Automotive Applications***COFFEE BREAK****POSTER SESSION****16.30 – 18.30****APERITIF offered by the EXHIBITORS****from 17.00**

Wednesday June 15th, 2016

Session 4: Ambient	08.00 – 09.20
Chair: Hüglin Christoph	
Bhattu Deepika / PSI Switzerland <i>Wood Combustion: Emissions and Contribution to Secondary Organic Aerosol Budget</i>	
Leskinen Ari / University of Eastern Finland <i>Daytime and Nighttime Aging of Logwood Combustion Aerosols</i>	
Paulson Suzanne / University of California at Los Angeles, USA <i>Effects of the Built Environment, Micrometeorology and Traffic on Street Level Ultrafine Particle Concentrations at a Block Scale</i>	
Sioutas Constantin / University Southern California, USA <i>Fine and Ultrafine Particulate Organic Carbon in the Los Angeles Basin: Trends in Sources and Composition</i>	

COFFEE BREAK	
POSTER SESSION	09.20 – 10.10

Session 5: Aftertreatment	10.10 – 12.00
Chair: Mayer Andreas	
Hosseini Vahid / Saidi Mohammad / Sharif-University of Technology, Tehran, Iran <i>Analyses of Effects of Fuel Sulfur Content on DPF Particle Removal Efficiency and Particle Deposition in Human Lungs.</i>	
Bugarski Aleksander / NIOSH, USA <i>Assessment of the Effectiveness of Disposable Filter Elements Used in Permissible Underground Coal Applications</i>	
Davies Brian / University of Wollongong, Australia <i>Disposable Diesel Exhaust Filters Used in the Australian Underground Coal Mining Industry</i>	
Konstandopoulos Athanasios / CPERI-CERTH, Greece <i>Effects of Catalyst Particle Structure on Soot Oxidation Kinetics</i>	
Rueda Jaime / District Secretariat of Environment Bogotá, Columbia <i>Field Evaluations of Retrofit DPF in Public Transport Buses Using Number Concentration of Solid Particle Number in Bogotá.</i>	

LUNCH**12.00– 13.00**

Session 6A: Health Session	13.00 – 14.30
Chair: Gehr Peter	
Moussa Fathi / Université Paris-Sud, France <i>Anthropogenic Carbon Nanotubes and Air Pollution</i>	
Kittelson David / University of Minnesota USA <i>Carbon Nanotubes, Nanorods, and Nanoparticles from Engines</i>	
Rothen-Rutishauser Barbara / University of Fribourg, Switzerland <i>Differentiating the Mechanism of Lung Cell Interactions between Diesel Exhaust Particles and Carbonaceous Fibrous Structures</i>	
Bonner James / North Carolina State University, USA <i>Mechanisms of Susceptibility to Carbon Nanotube Lung Disease</i>	

Session 6B: Health Session	14.30 – 16.20
Chair: Künzli Nino	
D'Anna Andrea / Università degli Studi di Napoli Federico II, Italy <i>Exposure to Sub-10nm-particles Emitted from Combustion Sources: In-vitro Toxicity and Inflammatory Potential</i>	
Lonati Giovanni / Politecnico di Milano, Italy <i>In Vitro Assessment of Proinflammatory and Genotoxicological Effects of Wood Combustion-Generated Ultrafine Particles</i>	
Zotter Peter / University of Lucerne, Switzerland <i>A Simple Sampling Method to Analyze Cell Toxicity of Nanoparticles and Condensable Compounds from Biomass Combustion</i>	
Hofmann Heinrich / EPFL Lausanne, Switzerland <i>Alternative Metrics for the Physicochemical Characterization of UFP</i>	
Oberdörster Günter / University of Rochester, USA <i>Dosimetry, Dosemetrics, Biokinetics and Bioprocessing of Inhaled Nanoparticles: A basis for toxicity testing and dosimetric risk extrapolation</i>	

COFFEE BREAK	
POSTER SESSION	16.20 – 17.10

Session 7: Legislation	17.10 – 18.30
Chair: D'Urbano Giovanni	
Wiedensohler Alfred / Leibniz Institute for Tropospheric Research, Leipzig, Germany <i>Assessment of the Effectiveness of the Low Emission Zone Leipzig by Measurements of Soot and the Ultrafine Particle Number Concentration</i>	
Notter Benedikt / INFRAS, Switzerland <i>Non-road Mobile Machinery as a PM/PN Source in Switzerland</i>	
Schmatloch Volker / Spartherm Melle, Germany <i>Emission Testing of Wood Fired Stoves or Fireplaces – Standards and Test Procedures in Australia, New Zealand, Europe and North America</i>	
Pucher Ernst / Technische Universität Wien, Austria <i>Short Test Procedures for Nanoparticles Emission and Gaseous Exhaust Components of Combustion Engines</i>	
Aperitif	18.30
DINNER PARTY invited by Sponsors	19.30
Dinner Speaker: Gehr Peter	

Thursday, June 16th 2016

Session 8: Aircraft and Marine Engine Emissions	08.20 – 10.00
Chair: Heeb Norbert	
Rindlisbacher Theo / BAZL Switzerland <i>Introduction of the First Particulate Matter Standard for Aircraft Engines</i>	
Brem Benjamin / EMPA Switzerland <i>Aircraft Engine Certification Measurement of Non-volatile Particulate Matter Emissions</i>	
Khalek Imad A. / SWRI USA <i>Effect of Jet Fuel Properties on Solid Particle Number and Mass Emission from Aircraft Gas Turbine Engine: Development of a Jet Fuel Particle Index</i>	
Lohmann Ulrike / ETHZ Switzerland <i>Chemical Characterization of Freshly Emitted Particulate Matter from Aircraft Exhaust Using Single Particle Mass Spectrometry</i>	
Corbin Joel C. / PSI Switzerland <i>Dependence of Ship-engine Aerosol Emissions on Fuel Type: Trace Metals, Black Carbon, and Light Absorption</i>	

Poster Award Ceremony	10.00 – 10.20
Bischof Oliver	

COFFEE BREAK **10.20 – 10.50**

Session 9: Combustion of vehicle engines	10.50 – 12.30
Chair: Czerwinski Jan	
Barro Christophe / Vir2sense, Switzerland <i>Diesel Engine Operating Strategies: PM, NOx and CO₂; A Three Dimensional Trade-Off, as Opposed to a Single-pollutant Minimization</i>	
Geiler Jan Niklas / Bosch, Germany <i>Investigation of the Fuel Property Influence on Number of Emitted Particles and their Size Distribution in a Gasoline Engine with Direct Injection</i>	
Karjalainen Panu / Tampere University, Finland <i>Time-resolved Characterization of Secondary Particle Formation from a Gasoline Passenger Car</i>	
Keller Alejandro / University of Applied Sciences Northwestern Switzerland <i>High Time-resolved SOA-formation Potential of Emissions from GDI engines</i>	
Kook Sanghoon / University of New South Wales, Sydney, Australia <i>In-flame and Exhaust Soot Particles Under the Influence of Jet-jet Interactions in a Small-bore Diesel Engine</i>	

Lunch **12.30 – 13.30**

FOCUS-Event

Particle Filter Quality under Real World Conditions

Introduction

13.30 – 13.40

Chair: **Leuenberger** Christian

Section I: Experience of authorities and manufacturers

Ayala Alberto	CARB	<i>Evaluation of DPF in HDV Applications</i>
Hohl Yves	LIEBHERR	<i>DPF Quality in Off-Road Engines</i>
Rienks Rafael	HJS	<i>Quality Control During Filter Manufacturing</i>

COFFEE BREAK

14.40 – 15.10

Section II: Experience of fleet owners and Lessons for Inspection and Maintenance

Eberwein Burkhard	BVG Berlin	<i>Bus Fleet of Berlin with DPF since 2001</i>
Reinoso Aliosha	GEASUR Chile	<i>Bus Fleet of Santiago with DPF since 2008 – Experience with Respect to Maintenance; Study of the Chilean Ministry of Environment</i>
Frölich Albert Gloor Beat	UGZ AWEL	<i>DPF-Quality in Swiss Construction Sites</i>
Lutz Thomas	ETHZ, Switzerland	<i>DPF Inspection & Maintenance, Methodology and Practice</i>

Heeb Norbert	EMPA	<i>Particle-NOx Trade-off: Two Decades of Diesel Converter Technology Have not Settled Both Issues</i>
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Concluding Remarks: Burtscher Heinz

End of the 20th ETH-NPC

16.50

POSTERS

Poster Session 1: Fundamentals

1.	D'Anna Andrea	Università degli Studi di Napoli 'Federico II'	<i>Nanoparticle Formation Burning Biofuels</i>
2.	Goudeli Eirini	ETHZ, Switzerland	<i>Agglomeration with Polydisperse Primary Particles in the Free Molecular Regime</i>
3.	Gülder Omer	University of Toronto, Canada	<i>The Effect of Combustion Pressure on Primary Soot Particle Size in Methane-air Diffusion Flames</i>
4.	Kelesidis Georgios A.	ETHZ, Switzerland	<i>Control of Particle Structure & Size Distribution by Humidity</i>
5.	Kelesidis Georgios A.	ETHZ, Switzerland	<i>Nascent Soot Formation by Agglomeration and Surface Growth</i>
6.	Kureti Sven	University of Freiberg Germany	<i>Soot Oxidation on Manganese Oxide Catalysts in Gasoline Exhaust</i>
7.	Langenkamp Peter N.	University of Groningen, Netherland	<i>Silica Formation in Flames with Siloxane Admixture: Effects of Admixture Concentration, Flame Temperature and Equivalence Ratio</i>
8.	Li Zepeng	King Abdullah University, Jeddah	<i>Effect of Dimethyl Ether Mixing on Soot Size Distribution in Premixed Ethylene Flame</i>
9.	Mandal Bijan Kumar	Indian Institute of Engineering Science and Technology, Delhi	<i>Numerical Study on the Combined Effect of Fuel Dilution and Air Preheating on Soot Formation in Diffusion Flame</i>
10.	Sakellarakis Vasileios David	ETHZ, Switzerland	<i>Large Eddy Simulations for Detailed Soot Formation Investigations</i>
11.	Sharma Pooja	Indian Institute of Science	<i>Heteroatomic Nanostructures of Jet Fuel Soluble Macromolecular Oxidatively Reactive Species (SMORS)</i>
12.	Soroudi Bazzaz Amir	Combustion Chamber Group, Tehran	<i>LES of Soot Evolution During Biofuel Spray Combustion and Gasification</i>

Poster Session 2: Biomass Combustion

13.	Berhardt Alexander	IZES, Germany	<i>Electrostatic Precipitation in Small Scaled Biomass Boilers</i>
14.	Fraboulet Isaline	INERIS, France	<i>Validation and Comparison of Methods of Measurement of the Condensable Fraction of Aerosols Emitted by Residential Wood Combustion Appliances and Boilers</i>
15.	Hartmann Ingo	DBFZ, Germany	<i>Micro-scale Biomass Combustion System with Very Low Emission</i>
16.	Keller Alejandro	University of Applied Sciences Northwest, Switzerland	<i>Time-resolved Secondary Organic Aerosol Formation Potential of Wood Burning Emissions</i>
17.	Pagels Joakim	Lund University, Sweden	<i>Characteristics of Major Particle Types in Emissions from Biomass Combustion – Implications for Health and Climate Effects</i>
18.	Paur Hans-Rudolf	Karlsruhe Institut für Technologie, Germany	<i>Field Performance of Carola®- Precipitators for Small Wood-fired Boilers</i>
19.	Press-Kristensen Kaare	Ecological Council Denmark	<i>Residential Wood Burning: Particle Pollution and Solutions</i>
20.	Quinn Cian	University College Dublin, Ireland	<i>Analysis of Particulate Matter Emissions from Combustion of Peat Briquettes in a Domestic-scale Stove</i>
21.	Rubinetti Donato	University of Applied Sciences Northwest, Switzerland	<i>Electrostatic Precipitator – Numerical Modeling and Verification Concept</i>
22.	Sattler Michael	Ökozentrum Langenbruck, Switzerland	<i>Determination of Particulate Matter Emissions from Solid Biomass Fuel Burning Appliances and Boilers – Proposal for a Common European Test Method.</i>
23.	Schmatloch Volker	Spartherm, Germany	<i>Small Wood Fired Appliances – Emission Reduction by Combined Methods</i>
24.	Sippula Olli	University of Eastern Finland	<i>Primary and Secondary Organic Aerosol Emissions from a Gasoline Engine and Small-scale Wood Combustion: First Results with the New Photochemical Emissions Aging Reactor</i>
25.	Volz Florian	Kutzner + Weber, Germany	<i>Deposition of Particulate Matter on the Surface of Foam Bubbles</i>
26.	Zotter Peter	University of Lucerne, Switzerland	<i>Wood Combustion for Energy in Buildings</i>

Poster Session 3: Instrumentation

27.	Arndt Michael	AVL List, Graz, Austria	<i>Optimizing a Photoacoustic Soot Sensor for the Measurement of Ultra-low Soot Concentrations in Real-world Exhaust</i>
28.	Beck Harald	MAN Truck & Bus, Nürnberg, Germany	<i>Particle Number Measurement According to PMP Protocol and Direct Measurement</i>
29.	Borovinskaya Olga	TOFWERK AG, Switzerland	<i>Online Determination of Element Composition and Mass of Single Airborne Particles by ICP-MS</i>
30.	Cachón Luis	TESTO Mönchaltorf, Switzerland	<i>Next Generation of Particle Number Instruments for Vehicle Type Approval and Quality Control of DPF Kerbside</i>
31.	Foppiano Debora	PSI, Switzerland	<i>Behaviour of ZnO Nanoparticles During High Temperature Treatment: On-line, Size Resolved Elemental Analysis</i>
32.	Gruenzweig Christian	PSI, Switzerland	<i>Three-dimensional Visualization of Soot, Ash, Urea and Coating Distributions in Canned Exhaust After-treatment Components by Neutron Tomography</i>
33.	Hildebrandt Margit	PTB Braunschweig, Germany	<i>Analysis of a New Diesel Soot Generator with Regard to Particle Size and Number Concentration</i>
34.	Horn Hans-Georg	Consultant for TSI Aachen, Germany	<i>Calibration of Engine Exhaust CPCs: Measurement Uncertainty Following ISO 27891 Procedures</i>
35.	Kumazawa Shinji	NGK Spark Plug, Japan	<i>PM/PN Measurement Repeatability of Compact Multi Gas Measurement System</i>
36.	Lindner Gert	PTB Braunschweig, Germany	<i>An Accompanying CFD-study on Partial Flow Sampling from a Soot Aerosol Dilution Setup</i>
37.	Lüönd Felix	METAS	<i>A new, traceable METAS calibration service for particle counters</i>
38.	Moisio Mikko	Dekati, Finland	<i>47 mm PM-Filter Holder with Real Time Particle Detection</i>
39.	Olzem Katharina	Volkswagen Wolfsburg, Germany	<i>Counting Particles with the Principles of Condensation vs. Diffusion</i>
40.	Padhi Annada	Indian Institute of Technology Delhi, India	<i>Laboratory Based Assessment of a Portable Multi-arm Smoke Collector System Developed for In-situ Aerosol Emission Measurement from Residential Biomass Burning Sources in the Northern Part of India</i>
41.	Saukko Erkka	Pagasor-Oy, Finland	<i>Dynamic Cutpoint Switching of Nanoparticle Detector for Improved Aerosol Characterization</i>

42.	Schindler Wolfgang	AVL List, Graz, Austria	<i>Black Carbon: Shades of Gray</i>
43.	Shaygani Afshin	Sharif University Tehran, Iran	<i>Electrode Interface Design for High-accuracy Size Distribution Measurement of Aerosol Nanoparticles Using Electrical Mobility Spectrometer Integrated with Triplet Charger</i>
44.	Shaygani Afshin	Sharif University Tehran, Iran	<i>Outfitted Electrical Mobility Spectrometer with Spatial Coded Aperture Mask for Accurate Size Distribution Measurement of Aerosol Nanoparticles</i>
45.	Sjögren Staffan	University of Applied Sciences Northwest, Switzerland	<i>Development of a Photochemical Interferometer for Aerosol Absorption Measurements</i>
46.	Vanhanen Joonas	Airmodus Helsinki, Finland	<i>Spark Discharge as a Calibration Source for Particle Detectors in the Sub 5 nm Size Range</i>

Poster Session 4: Ambient

47.	Besch Marc Cyrill	West Virginia University, USA	<i>Characterization of Atmospheric Dispersing Exhaust Plume during On-Road Operation of Latest Technology Heavy-Duty Trucks</i>
48.	Bonilla Lorena Catalina	District Secretariat of environment – Bogotá, Colombia	<i>Study of Personal Exposure to Nanoparticles Considering Meteorological Variables in 4 Roads with Different Types of Vehicles in Bogotá</i>
49.	Hama Sarkawt M.L.	University of Leicester, UK	<i>Temporal Variations of Lung Deposited Surface Area (LDSA) Concentrations in Leicester</i>
50.	Jasiński Remigiusz	Poznan University of Technology, Poland	<i>Danger of Nanoparticle Emissions in the Vicinity of Airports</i>
51.	Jung Heejung	University of California, USA	<i>Alternative Metrics for Spatially and Temporally Resolved Ambient Particle Monitoring</i>
52.	Kireeva Elena	University Moscow, Russia	<i>Size-segregated Organic/Inorganic Composition of Particulate Emissions in Periods of Extensive Biomass Burning.</i>
53.	Poluzzi Vanes	Agency for Prevention Bologna, Italy	<i>Particle Number Concentrations and Size Distributions in Po Valley (Northern Italy) During PoAIR Experiment</i>
54.	Singh Gaurav	Indian Institute of Technology, Delhi	<i>Health Risk Assessment for Carcinogenic and non Carcinogenic Trace Elements in Ambient Fine Aerosol over New Delhi, India</i>

55.	Tanda Stefan	University of Graz, Austria	<i>Size-resolved Element Distribution in Airborne Nanoparticles</i>
56.	Toro Huertas Eliana	District Secretariat of environment – Bogotá, Colombia	<i>Personal Exposure to Nanoparticles Inside Transmilenio Buses on Caracas Avenue in Bogotá– Colombia</i>
57.	Wang Fenjuan	Politecnico di Milano, Italy	<i>Black Carbon and Aerosol Optical Property Measurement at a Midsize City in Po Valley, Italy</i>
58.	Zauli Sajani Stefano	ARPAE, Italy	<i>Indoor/Outdoor Seasonal Variability of Different Particle Metrics</i>
59.	Zauli Sajani Stefano	ARPAE, Italy	<i>3D Variability of Different Particle Metrics in Urban Areas: Findings from the “Supersito” Project in Bologna, Italy</i>

Poster Session 5: Aftertreatment

60.	Bailey Brett	Illinois Valley Holding Comp., USA	<i>Global Non-Thermal Active SCR/DPF Emissions Reductions Technology Volkswagen Jetta Demonstration</i>
61.	Cho Jaeho	Korea University	<i>Size-resolved Nano-particle Filtration Characteristics with Metal Foam Gasoline Particulate Filter (GPF) for a Modern GDI Vehicle</i>
62.	Czerwinski Jan	AFHB Biel, Switzerland	<i>Quick-check of DOC and SCR for Inspection of Emission Control Devices</i>
63.	Fleischman Rafael	Technion Haifa, Israel	<i>Buses Retrofitted with Diesel Particulate Filters: Effects on Nanoparticle Emissions and Vehicle Performance</i>
64.	Haralampous Onoufrios	TEI of Thessaly, Greece	<i>Measurement and Modelling of PM Loading in Bare and Catalytic Flow-Through Monoliths</i>
65.	Iwasaki Kentaro	Sumika Ceramics, Poland	<i>DPF Design Concept and Catalyst Coat-ability Investigation</i>
66.	Kato Kyohei	NGK Europe Kronberg, Germany	<i>Gasoline Particulate Filter Technology – Readiness for Real Driving Emissions</i>
67.	Køcks Morten	Danish Technological Institute, Denmark	<i>DPF+SCR retrofit of Construction Machines: Real-time Characterization of Emission Reduction and Optimization During Realistic Operating Conditions</i>
68.	Ruzal-Mendelevich Michal	Ben Gurion University, Israel	<i>Grouping Manipulation of Nanoparticles Emitted from ICEs</i>
69.	Sanui Ryoko	Tokyo Institute of Technology, Japan	<i>Electron Microscopic Visualization of Soot Bridge Formation and Configuration Analysis of Diesel Particulate Filter</i>

70.	Zöllner Christian	University of Bayreuth, Germany	<i>Influence of Engine Operating Conditions on Soot Loading and Regeneration Behavior of Diesel Particulate Filters</i>
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Poster Session 6: Health

71.	Avdesh Bhardawaj	Indian Institute of Technology, Delhi	<i>A Study of Ultrafine Particle Related Health Effects Due to Biomass Burning for Cooking in North Indian Regions</i>
72.	Bisig Christoph	University of Fribourg, Switzerland	<i>Hazard Assessment of Gasoline Direct Injection Engine Exhaust Directly Exposed onto the Surface of a 3D Human Lung Model</i>
73.	Durantie Estelle	University of Fribourg, Switzerland	<i>Comparing the Bio-kinetic Behavior of Single Ultrafine Particles to Agglomerates at the Human Respiratory Epithelial Tissue Barrier in Vitro</i>
74.	Muñoz Maria	EMPA, Switzerland	<i>Comparison of PAH Levels and Mutagenicity of GDI- and a Diesel Vehicle Exhaust and Impact of (Bio)ethanol</i>
75.	Rossi Michel J.	PSI, Switzerland	<i>Surface Composition and Reactive Oxygen Species (ROS) Generation: Evaluation of Health Risks of Soot Nanoparticles</i>
76.	Rossner Jr. Pavel	Academy of Sciences Prague, Czech. Rep.	<i>Emissions from Standard and Alternative Diesel and Gasoline Fuels: Chemical Characterization and Genotoxicity</i>
77.	Rossnerova Andrea	Institute of Experimental Medicine, Czech.Rep.	<i>Frequency of Micronuclei in Human Bronchial Epithelium Cells Induced by Major Diesel Exhaust Components and Organic Extracts from Diesel Emissions</i>
78.	Zhou Jun	PSI, Switzerland	<i>Toxicity Assessment of Wood Combustion Emissions from Different Burning and Aged Conditions by Using a Reactive Oxygen Species (ROS) Instrument</i>

Poster Session 7: Legislation

79.	Burton Kerrie	University of Wollongong, Australia	<i>Are Respiratory Protection Standards Protecting Worker Health Against Ultrafine Diesel Particulate Matter Emissions? An Australian Perspective.</i>
80.	Kuntze Arne	Physikalisch-Technische Bundesanstalt, Germany	<i>Metrology for Portable Emissions Measurement Systems (PEMS)</i>
81.	Pedersen Peter Bøgh	Danish Technological Institute	<i>Illegal "Fuel" in Private Wood-Burning Stoves</i>

82.	Pielecha Jacek	Poznan University of Technology, Poland	<i>Evaluation of Exhaust Emissions of Vehicles with Emission Euro 6 Class According to RDE Tests Proposed by the European Union</i>
83.	Spielvogel Jürgen	TSI Aachen, Germany	<i>CEN/TS 16976 – Harmonizing Number Concentration Measurements of Ultrafine Particles in Atmospheric Aerosol</i>
84.	Thiruvengadam Pragalath	West Virginia University, USA	<i>Determination of a Preconditioning Protocol to Stabilize NOx and PN Emissions for Euro 6 Engine Certification</i>

Poster Session 8: Combustion of Aircraft and Ship Engines

85.	Durdina Lukas	EMPA, Switzerland	<i>Implications of the New PM Emission Standard for Aircraft Engines</i>
86.	Hagen D.	Missouri University, USA	<i>Updates to System Loss Correction Model for Jet Engine Exhaust</i>
87.	Im DongGuk	Korean Register of Shipping	<i>Particulate Emission Characteristics of Two Stroke Marine Diesel Engine</i>
88.	Markowski Jaroslaw	Poznan University of Technology, Poland	<i>Effect of Biofuel Additive on Particle Size Distribution</i>
89.	Netkueakul Woranan	EMPA/ETHZ, Switzerland	<i>Development of Soot Sensor for Candle Emission Measurement</i>
90.	Pedersen Peter Bøgh	Danish Technological Institute	<i>Particle Emissions from Various Candle Types</i>
91.	Setyan Ari	EMPA, Switzerland	<i>Emission Measurement of Airborne Pollutants in two Municipal Solid Waste Incineration Plants in Switzerland</i>

Poster Session 9: Combustion of vehicle engines

92.	Ajtai Tibor	MTA-SZTE, Hungary	<i>Volatile Classification of Diesel Emitted Particulates Measured by SMPS and Multi-wavelength PhotoAcoustic Spectrometer (4λ-PAS)</i>
93.	Barro Christophe	ETHZ, Switzerland	<i>Analysis of PM and PN in Dual Fuel Engine, Fuelled with Natural Gas and OME</i>
94.	Beránek Vit	Czech Technical University Prague, Czech Republic	<i>Effects of High-speed Driving on Particle Number Emissions of Gasoline Cars</i>
95.	Czerwinski Jan	AFHB Biel, Switzerland	<i>Particle Number Reduction of GDI-Cars with GPF's</i>
96.	Czerwinski Jan	AFHB Biel, Switzerland	<i>Experiences of Testing NO₂ for Diesel and NH₃ for Gasoline Cars</i>
97.	Czerwinski Jan	AFHB Biel, Switzerland	<i>PN-PEMS: Testing Emissions of Diesel Passenger Cars in Laboratory and On-Road</i>
98.	Jaliliantabar Farzad	Tarbiat Modares University, Tehran	<i>Investigation of Waste Cooking Oil Bio-diesels Effects on Performance and Emissions in a CI Engine</i>
99.	Jang Jinyoung	Korea Institute of Energy Research	<i>Nanoparticle from Light Duty Vehicles Using Various Fuels for FTP-75 and WLTC</i>
100.	Järvinen Anssi	Tampere University, Finland	<i>Particle Emission from Loaders Using Normal and Bio Based Diesel Fuels</i>
101.	Karjalainen Panu	Tampere University, Finland	<i>Non-combustion Exhaust Particles Observed During Decelerations of Heavy Duty Diesel Vehicles</i>
102.	Kittelson David	University of Minnesota, USA	<i>Semi-volatile Particle Emissions from Engines Operating in Low Temperature Combustion Modes</i>
103.	Lee Seokhwan	Korea Institute of Machinery and Materials	<i>Particulate Emissions Emitted from DI Diesel Engine Operated with Wood Pyrolysis Oil</i>
104.	Lehtoranta Kati	VTT, Finland	<i>Particle Emissions from a Natural Gas Engine with and without a Catalyst</i>
105.	Pagels Joakim	Lund University, Sweden	<i>Probing the Evolution of Soot Characteristics During Soot Formation, Soot Oxidation and in the Exhaust of a Modern CI Engine Equipped with EGR</i>
106.	Pechout Martin	Czech Technical University Prague, Czech Republic	<i>Experimental Investigation of Particles Produced by Combusting Blends of "High-quality" and "Cost-competitive" Biofuels in a Tractor Engine</i>

107.	Sjöblom Jonas	Chalmers University, Sweden	<i>Particulate Emissions from Aromatic Containing Fuels</i>
108.	Wahl Claus	German Aerospace Center, Stuttgart, Germany	<i>Comparing Particle Emissions of a EURO 6 Plug-In Hybrid Passenger Car and a EURO6 Diesel Car</i>
109.	Yamada Hiroyuki	National Traffic Safety & Environment Laboratory, Tokyo	<i>Correlations of Particle Mass and Particle Number with PMP Method</i>

Organization Committee

Name	Mail	Telefon
Anselmi A.	anita.anselmi@lunge-zürich.ch	+41 44 268 20 71
Baltensperger U. Prof. Dr.	urs.baltensperger@psi.ch	+41 56 310 24 08
Barro Ch. Dr.	barro@lav.mavt.ethz.ch	+41 44 632 66 32
Bischof O.	oliver.bischof@tsi.com	+49 241 523 03 23
Boulouchos K. Prof. Dr.	boulouchos@lav.mavt.ethz.ch	+41 44 632 56 48
Burtscher H. Prof. Dr.	heinz.burtscher@fhnw.ch	+41 56 462 42 40
Cachon L. Dr.	LCachon@testo.de	+41 76 368 66 39
Czerwinski J. Prof. Dr..	jan.czerwinski@bfh.ch	+41 32 321 66 80
D'Urbano G.	giovanni.durbano@bafu.admin.ch	+41 31 322 93 40
Gehr P. Prof. em. Dr..	gehr@ana.unibe.ch	+41 31 631 84 32f
Heeb N. Dr.	norbert.heeb@empa.ch	+41 58 765 42 57
Hess A. Dr.	adrian.hess@psi.ch	+41 56 310 28 96
Hügli Ch. Dr.	christoph.hueglin@empa.ch	+41 58 765 46 54
Kasper M. Dr.	markus.m.kasper@me.com	+41 79 456 00 81
Künzli N. Prof. Dr.	nino.kuenzli@unibas.ch	+41 79 535 85 25
Leuenberger Chr. Dr.	christian.leuenberger@leupro.ch	+41 43 205 24 01
Lutz Th.	thomas.lutz@alumni.ethz.ch	+41 44 632 24 82
Mayer A. Dr. h.c.	tmm.a.mayer@bluewin.ch	+41 56 496 64 14
Rothen-Rutishauser B. Prof. Dr.	barbara.rothen@unifr.ch	+41 26 300 92 54
Schegk C.-D. Dr.	c-d.schegk@veran.ch	+41 56 245 58 50
Zimmerli Y.	yan.zimmerli@bfh.ch	+41 31 321 66 80

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