

19th 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 is Patron of this Conference

Zurich, June 28th – July 1st, 2015

Conference Venue: Zürich ETH Zentrum, Main Building, HG E7
Welcome-Party 28th June, 7.00 pm Alumni Pavillon invited by VERT-Association
Conference Registration opens Monday 29th June 7.30 am
www.nanoparticles.ethz.ch

Agenda of Presentations

Monday June 29th 2015

Welcome	09.00-09.20
Burtscher Heinz / FHNW, Switzerland <i>Welcome</i>	
Barro Christophe / ETH ZURICH, Switzerland <i>Housekeeping</i>	
Opening Address	09.20-09.30
Prof. Dr. Sarah Springman / Rector ETH ZURICH, Switzerland	
Key-Lecture	09.30-10.00
Robertson William / ARB California <i>Toward Widespread e-Mobility and the Ultimate Solution for Combustion-Generated Nanoparticles</i>	
COFFEE BREAK	10.00 – 10.30
Session 1: Fundamentals	10.30 – 12.00
Chair: Burtscher Heinz	
Biswas Pratim / Washington University St. Louis, USA <i>Nanoparticle Measurement, Formation and Capture in Coal Combustion Systems</i>	
Dastanpour Ramin / University of British Columbia, Canada <i>The Effect of Primary Particle Polydispersity on the Morphology and Mobility of Agglomerates</i>	
Jurányi Zsafia / FHNW, Switzerland <i>Determination of the Shape of Combustion Aerosol Particles Based on their Angular Light Scattering</i>	
Lee Chun Beom / KATEC , Korea <i>Morphology and Structure of Engine-like Soot Particles formed by a Soot/SOF Generator</i>	
LUNCH	12.00 – 13.00

Session 2: Combustion Engine Emissions from Vehicles	13.00 – 14.40
Chair: Lutz Thomas	
Barro Christophe / ETH ZURICH, Switzerland <i>Particulate Matter from “Soot-Free” Fuels in Diesel Engines</i>	
Thiruvengadam Arvind / West Virginia University, USA <i>Real-World On-Road Particulate Matter Emissions from Latest Technology Heavy-Duty Vehicles Using a Mobile CVS Laboratory</i>	
Fleischman Rafael / Technion, Haifa, Israel <i>Nanoparticle Emissions from an SI Engine Fueled with Gasoline and Methanol Reforming Products</i>	
Northrop William / University of Minnesota, USA <i>Semi-Volatile Nanoparticle Emissions From Diesel Low Temperature Combustion Modes</i>	
Vojtisek-Lom Michal / Technical University Prague, Czech Republic <i>Lowering Laboratory and Real Driving Particle Emissions of Direct Injection SI Engines with n-Butanol and Isobutanol Blends</i>	

Short Break**14.40 – 14.50**

Session 3A: Aftertreatment	14.50 – 16.10
Chair: Czerwinski Jan	
Bailey Brett / IVHCO, USA <i>Global Non-Thermal Active SCR/DPF Emissions Reduction Technology</i>	
Muñoz Maria / EMPA, Switzerland <i>PAH and Nitro-PAH Emissions from GDI Vehicles</i>	
Hohl Yves / LIEBHERR, Switzerland <i>Impact of Different Fuels on Engine-out-Emissions and on the SCR-on-Filter System</i>	
Konstandopoulos Athanasios / CPERI-CERTH, Greece <i>Soot Deposit Evolution and the Mechanism of Particle Emissions During Regeneration in Diesel Particle Filters</i>	

COFFEE BREAK**POSTER SESSION****16.10 – 17.10**

Session 3B: Aftertreatment	17.10 – 18.30
Chair: Schegk Claus-Detlef	
Sappok Alexander / Filter Sensing Technologies Inc., USA <i>Real-Time Particulate Filter Soot and Ash Measurements via Radio Frequency Sensing</i>	
Zinola Stephane / IFP Energies Nouvelle, France <i>Comprehensive Analysis of Phenomena during Catalyzed DPF Active Regeneration.</i>	
Sheng Su / VETC, Xiamen, China <i>Diesel Particle Filter Testing for In-Use Vehicle Retrofit</i>	
Wolff Thomas / DINEX, Germany <i>Using SCR on Filter Technology for Downsizing Future HDD On-Road and Off-Road Systems for Euro VI and Stage V</i>	

APERITIF offered by EXHIBITORS**18.30**

Tuesday June 30th, 2015

Session 4: Instrumentation	08.00 – 09.20
Chair: Bischof Oliver	
Khalek Imad / SWRI, USA <i>Particle Sensors for Onboard Diagnostics</i>	
Pucher Ernst / Vienna University of Technology, Austria <i>Route Related Real-World Particulate Number and NO_x Emissions of Euro 5 and Euro 6 LDV</i>	
Karjalainen Panu / Tampere University, Finland <i>Real-Time Exhaust Particle Measurements with High-Resolution Low-Pressure Cascade Impactor</i>	
Sioutas Constantin / University Southern California, USA <i>New Technique for Online Measurements of Trace Metals in Ambient Particulate Matter (PM)</i>	

COFFEE BREAK

POSTER SESSION	09.20 – 10.30
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Session 5A: Health Effects	10.30 – 12.00
Chair: Rothen-Rutishauser Barbara	
Probst-Hensch Nicole / Swiss Tropical and Public Health Institute, Switzerland <i>Health Consequences of Ultrafine Particles – an Exposome Perspective</i>	
Tsai Ming-Yi / Swiss Tropical and Public Health Inst, Switzerland <i>Insights into the Spatial and Temporal Distribution of UFP from Swiss Health Studies</i>	
Costantini Maria / HEI, USA <i>Advanced Collaborative Emission Study (ACES): Summary of New-Technology Diesel Engine Emissions Characterization and Chronic Rodent Inhalation Study</i>	
Gerlofs-Nijland Miriam / RIVM, The Netherlands <i>Hazard Assessment of Source-Specific Fine Particulate Matter</i>	

LUNCH**12.00 – 13.00**

Session 6: Ambient Particles	13.00 – 14.20
Chair: Heeb Norbert	
Anderson Robert / TSI and CARB, USA <i>Near-Road Monitoring of Ultrafine Particle Number from Heavy Duty Diesel Truck Traffic</i>	
Querol Xaver / IDAEA-CSIC, Spain <i>Outdoor and Indoor Particle Concentrations in Schools of Barcelona during the BREATHE-ERC-AG Study</i>	
Merkisz Jerzy / Poznan University, Poland <i>Selected Problems of the Measurements of Particulate Matter from Vehicles Performed under Actual Operating Conditions</i>	
Trentini Arianna / ARPA, Italy <i>Comparison Nucleation Event in Rural and Urban Sites in Po Valley, Italy</i>	

COFFEE BREAK and

POSTER SESSION	14.20 – 15.20
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Session 7: Combustion Emissions from Non-Vehicle Sources	15.20 – 17.00
Chair: Barro Christophe	
Abegglen Manuel / ETH ZURICH, Switzerland <i>Chemical Characterization of Particulate Matter Aircraft Turbine Engine Exhaust using Single Particle Mass Spectrometry</i>	
Durdina Lukas / EMPA, Switzerland <i>Spatial Variability of PM and Gaseous Emissions at the Exit Plane of an in-Service Commercial Aircraft Turbine Engine</i>	
Anderson Maria / Chalmers University, Sweden <i>Nanoparticle Emissions from LNG and Other Low Sulphur Marine Fuels</i>	
Ei Haddad Imad / PSI, Switzerland <i>Emissions from Heavy Fuel Oil Combustion in a Ship Research Engine and Associated Secondary Organic Aerosol Formation Potential</i>	
Frederiksen Maj / Danish Technological Institute <i>Particle Emissions From Burning of Waste in Wood-Burning Stoves</i>	

Short Break**17.00 – 17.10**

Session 8A: Legislation	17.10 – 18.30
Chair: Cachón Luis	
Mathies Karsten / TÜV Süd, Germany <i>The New Heavy Duty Diesel Environmental Regulation of Iran</i>	
Yamada Hiroyuki / Traffic Safety and Environment Lab. Japan <i>Emissions from HD Truck with Damaged DPF and its Detection at PTI</i>	
Friedrich Axel / Berlin, Germany <i>Road Particle Number measurements from GDI vehicles compared to a Euro 6 Diesel vehicle</i>	
Nowak Andreas / PTB, Germany <i>Optimization of Silver Particle Number Size Distributions from a Nucleation Furnace by Modification of Heat Shields and Injection Nozzles</i>	

DINNER PARTY invited by Sponsors**19.00****Dinner Speaker: Hosseini** *Vahid*

Wednesday, July 1st 2015

Session 8B: Legislation	08.00 – 09.20
Chair: Leuenberger Christian	
Kittelson David / University of Minnesota, USA <i>Ultrafine Particles: How Should they be Defined and Measured</i>	
Hasset Sipple Beth / US-EPA, <i>US-EPA-Workshop on Ultrafine Particles - Summary and Consideration of Next Steps</i>	
Van Ham Joop / EFCA, The Netherlands and Mohr Claudia / KIT, Germany <i>Policies on Particulate Matter Miss Adequate Tools</i>	
Andersson Jon / Ricardo, England <i>Origins and Development of European Particle Number Legislation</i>	

Poster Award Ceremony	09.20 – 09.40
Bischof Oliver	

COFFEE BREAK **09.40 – 10.10**

Session 5B: Health Effects	10.10 – 12.00
Chair: Gehr Peter	
Gieré Reto / University of Pennsylvania USA <i>BIOCOMBUST- Biomass, Energy, Health</i>	
Topinka Jan / Czech Academy of Sciences <i>Genotoxicity of Diesel Emissions in Real World Driving: Effects of Cold Starts, Congestion, DPF</i>	
Soppa Vanessa / University of Düsseldorf, Germany <i>Controlled Human Exposures to Fine and Ultrafine Particles from Indoor Sources – Changes in Lung Function and Blood Pressure</i>	
Bisig Christoph / University of Fribourg, Switzerland <i>Risk Assessment of Exhaust Aerosols from Ethanol Supplemented and Normal Gasoline on Human Lung Cells in Vitro</i>	
Müller Loretta / University Children's Hospital Basel, Switzerland <i>Effect of Gasoline Exhaust Emission on Bronchial Epithelial Cells and Natural Killer Cells</i>	

Lunch **12.00 – 13.00**

FOCUS-Event

Cleaner Air for Megacities

Focus Event Part 1

13.00 – 14.30

Chair: **Mayer** Andreas

Mayer Andreas / TTM

Introduction on Megacities – Inherent Problems of Growing Urban Structures

Parrish David / University Boulder, Colorado

Lessons Learned from Los Angeles: 5 Decades of Efforts, but Air still not as clean as needed

Acevedo Helmer / SDA Bogotá; **Mayer** Andreas

Air Quality Challenges of a Megacity at 2600 m above Sea Level

COFFEE BREAK

14.30 – 15.00

Focus Event Part 2

15.00 – 16.00

Ma Dong, Wang Yanjun / VECC-MEP PRC, Beijing

China Air Quality Status and Emission Reduction from Mobile Sources

Hosseini Vahid / AQCC, Tehran; **Hensel**, Volker / VERT

Battle against Solid UFP-Emissions from Internal Combustion Engines without Waiting for Euro VI

Künzli Nino / Swiss Tropical and Public Health Institute

Research to optimize monitoring and health effect assessments in the mega city of Teheran

Panel Discussion

16.00 – 16.30

Concluding Remarks: Boulouchos Konstantinos

End of the 19th ETH-NPC

16.45

POSTERS

Poster Session 1: Fundamentals

1.	Ess Michaela, Technische Universität München <i>In situ Raman Microspectroscopy of Soot during Temperature Programmed Oxidation</i>
2.	Goudeli Eirini, ETH ZURICH <i>The Effect of Sampler Design on Nanoparticles Sizing at High Temperatures</i>
3.	Goudeli Eirini, ETH ZURICH <i>Coagulation – Agglomeration of Fractal-like Particles</i>
4.	La Rocca Antonino, University of Nottingham <i>Electron Tomography of Combustion Generated Nanoparticles</i>
5.	Melas Anastasios, Aristotle University of Thessaloniki <i>Oxidative Fragmentation of Soot Aggregates</i>
6.	Seong Heeje, Argonne National Laboratory <i>Morphology and Crystalline structures of Engine-like Soot from KATECH's Soot Generator</i>
7.	Talebzadeh Pouyan, Amirkabir University Iran <i>Investigation of diesel particle deposition in tubes</i>

Poster Session 2: Combustion Engine Emissions

8.	Czerwinski Jan, AFHB <i>Non-legislated Emissions of a Passenger Car with Ethanol Blend Fuel E85</i>
9.	Fenkl Michael, University of Liberec <i>Measurement of Emissions from Independent Bus Heaters</i>
10.	Køcks Morten, Danish Technological Institute <i>Real-time Characterization of Particle and Gas Emissions from Construction Equipment during Operation</i>
11.	Mühlbauer Wolfgang, LTTT Bayreuth <i>Influence of in-Cylinder Soot Formation and Oxidation on Engine-out Soot Emissions in Operation with 1st and 2nd Generation Biofuels</i>
12.	Pielecha Jacek, Poznan University <i>Measurements of Particle Mass, Number and Size Distribution from Light-Duty Vehicles in Conditions of Variable Terrain Topography</i>
13.	Tsakis Apostolos, CPERI/CERTH <i>Particles Emitted During Braking – A preliminary study</i>
14.	Vojtisek-Lom Michal, Czech Technical University <i>Real Driving Emissions from a Diesel-Hydraulic Rail Vehicle</i>

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Poster Session 3: Aftertreatment

16.	Acevedo Helmer, Universidad de Colombia <i>Particle Number Measurement of Euro III Diesel buses fitted with DPF's in the Public Transport System of Bogotá D.C.</i>
17.	Ehteram Mohammadali, School of Mechanical Eng. Sharif University <i>A study on nano-solid particle count and gaseous emission of regeneration period for different DPF technologies</i>
18.	Fuč Pawel, Poznan University <i>Engine Test Bay Comparison of an Experimental Ti₂O₄-based Particulate Matter Filter Support with the Commercially Available Supports</i>
19.	Heeb Norbert, EMPA <i>PCDD/F Formation in active DPFs: the Inconvenient truth about Biofuels</i>
20.	Jang Jinyoung, Korea Institute of Energy Research <i>Emission Characteristics by DPF Regeneration and Ash Contents in 1.6 L CRDI Diesel Vehicle</i>
21.	Jin Dongyoung, Korea University <i>Analysis of Aged Diesel Particulate Filter and Ash Components with Physicochemical Validation"</i>
22.	Kato Kyohei, NGK <i>GPF Concepts with Integrated Catalyst for Low Backpressure and Low CO₂ Emissions under Real Driving Conditions</i>
23.	Lee Chun Beom, Korea Automotive Techn. Institute <i>Multi-purpose High Temperature Exhaust Gas Simulator</i>
24.	Lehtoranta Kati, VTT <i>Impact of SCR on particle emissions in HFO application</i>
25.	Luttinger Avigdor, PEMRED <i>Particle Agglomeration Inducer application in EURO-II Heavy Duty truck retrofitting</i>
26.	Suarez-Bertoa Ricardo, JRC <i>Ammonia Exhaust Emissions from Euro 5 and Euro 6 light Duty Vehicles</i>
27.	Topp Michael, HUG <i>Exhaust Gas Purification System for Ground Power Units (GPU)</i>
28.	Zöllner Christian, LTTT Bayreuth <i>Comparison of Soot Deposition in Diesel Particulate Filter Segments Operating with Diesel Fuel and Biodiesel</i>

Poster Session 4: Instrumentation

29.	Beránek Vit, University in Prague <i>Augmenting high-volume Atmospheric Samplers to Collect Large Amounts of Particulate Matter from Vehicle Exhaust for Toxicity Assays</i>
30.	Besch Marc, West Virginia University <i>In-line, Real-Time Particulate Matter Sensors for OBD and Exhaust Aftertreatment System Control Applications</i>
31.	Booker David, Sensors <i>The Development and Characterization of a PEMs PMP-Compliant CPC-based Particle Counter for Real World on-Vehicle Measurements</i>
32.	Byeongju Jeong, Korea University of Technology and Education <i>The Effect of a Thermal Denuder on the Measurement of Black Carbon Generated in a Diesel Engine</i>
33.	Cachón Luis, TESTO <i>Second generation of Diffusion Size Classifier for Oncoming Motor Vehicle Regulations</i>
34.	Fierz Martin, Northwestern University, Switzerland <i>Mobile vs. Static Sensor Networks for Urban Air Quality Assessment</i>
35.	Järvinen Anssi, Tampere University <i>Portable Emission Measurement System (PEMS) for Exhaust Aerosols</i>
36.	Khan Yusuf, Cummins <i>Characterization of Repeatability and Reproducibility of BSN-Measurements from AVL Particle Counters</i>
37.	Kiwull Bettina, Institute of Hydrochemistry <i>Evaluation of Volatile Particle Remove Devices for Exhaust Particle Quantification</i>
38.	Kral Karolin, AutoVision <i>Evaluation of Aerosol Particle Characteristics with different Conditioning Units</i>
39.	Mamakos Athanasios, AVL <i>Bringing the PMP Methodology on-Board</i>
40.	Minagawa Tomohiro, Tsukasa Sokken <i>Development of a Next Generation Opacimeter by using the Light Scattering and the Light Absorption Method for Periodic Technical Inspection Use</i>
41.	Mønster Jacob, FORCE EXPLICIT <i>Validation and Application of a novel Optical Particle Counter</i>
42.	Ruzal-Mendelevich Michal, Ben Gurion University Israel <i>Controlling Nanoparticles Emission with Particle-Grouping Exhaust-Pipe</i>
43.	Tochino Shigemi, Horiba <i>Repeatability study of detection efficiency and linearity during CPC calibration using Emery Oil Aerosol</i>
44.	Tonegawa Yoshio, JARI <i>Development of Tire Dust Emission Measurement for Passenger Vehicle</i>
45.	Tritscher Torsten, TSI <i>Laboratory and Field Measurements of Solid Particle Number with the Nanoparticle Emission Tester (NPET)</i>

Poster Session 5: Health Effects

46.	Barosova Hana, University of Fribourg <i>Biological Impact of Brake Wear Particles – Aerosol Exposures onto the Surface of a 3D Human Epithelial Tissue Barrier</i>
47.	Kutlar Joss Meltem, Swiss Tropical and Public Health Institute <i>Ultrafine Particles in the Air – what has been Studied Epidemiologically to date?</i>
48.	Monjezi Mojdeh, Sharif University of Technology, Tehran <i>Modelling the transport of inhaled nanoparticles from human lung to whole body using compartment method</i>
49.	Rinaldo Mickaël, Université de Bordeaux <i>Ultrafine particles in human pleura</i>

Poster Session 6: Ambient Particles

50.	Bharat Lal Sahu, Pt Ravishankar Shukla University <i>Characterization of Mosquito Coil and Incense Aerosols</i>
51.	Hagino Hiroyuki, JARI <i>Brake Wear Particles Emissions using a Dynamometer System under Driving Cycles</i>
52.	Hama Sarkawt M.L., University of Leicester <i>Monitoring of Ultrafine Particle Number Concentration and other Traffic- related Air Pollutants at one Urban Background in Leicester, over the Course of a Year</i>
53.	Hejjari Juha, Neste Oil <i>Sulphuric acid and aerosol particle production in the vicinity of oil refinery</i>
54.	Hueglin Christoph, EMPA <i>Trend and Spatial Variability of Ambient Ultrafine Particle Concentration in Switzerland</i>
55.	Keller Alejandro, FHNW <i>Estimation of the SOA-Formation Potential in Emissions from GDI Engines</i>
56.	Lee Jeonghoon, Korea University of Technology and Education <i>Black Carbon Concentration at an Inland Area in Korea</i>
57.	Leskinen Ari, Finnish Meteorological Institute & University <i>Aerosol Measurements in Nanjing, China</i>
58.	Mazaheri Mandana, Queensland University of Technology (QUT), Australia <i>Environmental Factors Affecting Exposure to Ambient Ultrafine Particles at Urban Schools</i>
59.	Patel Khageshwar Sing, Pt Ravishankar Shukla-University <i>Segregation of Indoor Aerosol</i>

60.	Stolcpartova Jitka, University of Liberec <i>Particle Spatial Distribution in Suburban Area Celakovice: The Effect of Commuter Vehicle Traffic</i>
61.	Zhou Jun, PSI <i>Ambient Air Measurements of Reactive Oxygen Species (ROS) in Beijing and Bern</i>

Poster Session 7: Combustion Emissions from Non-Vehicle Sources

62.	Brem Benjamin, EMPA <i>Sensitivity of Aircraft Gas Turbine non- volatile Particulate Matter Mass and Number Emissions to Fuel Aromatic Content</i>
63.	Hagen Donald, Missouri University <i>Influence of Ambient Temperature on Gas Turbine Emissions</i>
64.	Hess Adrian, PSI <i>Particulate Metal Emissions from Wood Incineration measured Online Using RDD-SMPS-ICPMS</i>
65.	Kilic Dogushan, PSI <i>Characterization of Non-Methane Volatile Organic Compound Emissions from Aircraft Turbine Engines</i>
66.	Kittelson David, University of Minnesota <i>Ultrafine and Nanoparticle Measurements in Jet Aircraft Exhaust</i>
67.	Markowski Jaroslaw, Poznan University <i>Particulate Emissions from Jet Engine</i>
68.	Moon Gunfeel, Korean register of shipping <i>An Experimental Study on Effect of Sulfur Contents in Fuel Oil on Particulate Emission Emitted from Marine Diesel Engine</i>

Poster Session 8: Legislation

69.	Fuchsig Heinz, WMA Uni Wien <i>World Medical Association Calls for Action against Diesel Soot</i>
70.	Mendoza Villafuerte Pablo, European Commission <i>Results of the PM Pre-Pilot Program.</i>
71.	Robertson William, CARB <i>Current Tailpipe PM Issues: A California Update</i>

Organization Committee

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Instrument and Filter Exhibition

Company, contact person, Booth #

- AIRMEEX SA, Hakan Caliskan, (4)
- Baumot AG, Faruk Bajrami (1)
- Catalytic Instruments, Hans-Joachim Schulz (10)
- CPK Automotive GmbH, Anna Rennekamp (3)
- Dekati Ltd., Henna Isherwood (16)
- Dinex GmbH, Denise Schleicher (9)
- Ecomesure, Tiphany Quach (13)
- INNOSPEC Limited, Uenal Karaagac (6)
- JING AG, Lianpeng Jing (2)
- MAHA AIP GmbH, Alexander Trommer (19)
- MS4-Analysentechnik GmbH, Matthias Samel (7)
- naneos particle solutions, Dominik Meier (14)
- Sensors Europe GmbH, Michael Heuser (15)
- Tehag Engineering AG, Bernhard Franken (5)
- Testo AG, Luis Cachón (12)
- TSI GmbH, Susan Joseph (18)
- Zivilingenieurkanzlei Prof. Dr. Ernst Pucher (11)

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- BAUMOT Baumot AG, Fehraltorf, Schweiz
- BAZL Bundesamt für Zivilluffahrt, Bern, Schweiz
- BECO Berner Wirtschaft – Immissionsschutz, Schweiz
- BFE Bundesamt für Energie, Bern, Schweiz
- CARB California Air Resources Board
- CDTi Clean Diesel Technologies
- CORNING Corning GmbH, Wiesbaden, Deutschland
- CPK CPK Automotive , Münster, Deutschland
- DEZA Direktion für Entwicklung und Zusammenarbeit, Schweiz
- DINEX Dinex A/S, Middelfart, Denmark
- EMPA Eidgenössische Materialprüfungs- und Forschungsanstalt
- ESYTEC esytec AG, Schweiz
- ETH Eidgenössische Technische Hochschule, Zürich, Schweiz
- EV Erdöl-Vereinigung Schweiz
- HJS HJS-Fahrzeugteile, Menden, Deutschland
- HORIBA Horiba Ltd, Kyoto, Japan
- HUG Hug Engineering SA, Rätterschen, Schweiz
- INNOSPEC INNOSPEC Limited, Herne, Deutschland
- KREBSLIGA Krebsliga, Bern, Schweiz
- LIEBHERR Liebherr Machines Bulle S.A., Schweiz
- LIQTECH LiqTech A/S, Gentofte, Denmark
- LUNGE ZÜRICH Lunge Zürich, Schweiz
- METAS Bundesamt für Metrologie und Akkreditierung, Bern-Wabern, Schweiz
- NGK NGK Europe GmbH, Kronberg i.T., Germany
- PURITECH PURItech GmbH, Waldshut-Tiengen, Deutschland
- SUVA Schweizerische Unfallversicherungsanstalt, Luzern, Schweiz
- SWRI South West Research Institute, Sant Antonio, USA
- TEHAG TEHAG AG, Schlatt, Schweiz
- TESTO Testo AG, Lenzkirch, Deutschland
- TSI TSI GmbH, Particle Instruments, Aachen, Deutschland
- UGZ Umwelt- und Gesundheitsschutz der Stadt Zürich
- VERT VERT Association for Verification of Emission Reduction Technologies
- ZENTRALSCHWEIZ Kantone Zug, Luzern, Uri, Nidwalden, Obwalden