29th ETH Nanoparticles Conference

31.May - 3. June 2026, ETH Zurich

CEST	Sun, May 31, 2026	Mon, June 1, 2026	Tue, June 2, 2026	Wed, June 3, 2026	CEST
09.00h		Opening of the Conference Session 1 Aircraft emissions Part I	Session 5 Ambient air, biomass burning and wildfires, environmental	Session 9 Indoor particles and occupational exposure	09.00h
10.30h		Coffee break	Coffee break	Coffee break	10.30h
11.00h		Session 2 Aircraft emissions Part II	Session 6 Nanoparticles: instrumentation, metrology, fundamentals	Session 10 Nanoparticle toxicity and health effects	11.00h
11.45h				Focus Event «Exposure in Indoor Environments» (Part A)	11.45h
12.30h		Lunch break	Lunch break	Lunch break	12.30h
13.30h		Session 3 Poster Session A	Session 7 Poster Session B	Award Ceremonies	13.30h
14.00h				Focus Event «Exposure in Indoor Environments» (Part B)	14.00h
15.00h		Coffee break	Coffee break		15.00h
15.30h		Session 4 Emissions: aftertreatment / real world operation / alternative	Session 8 Break wear and Tyre wear	End of the conference	15.30h
17.00h		Exhibitor Aperitif			17.00h
18.00h					18.00h
18.30h			Conference Dinner Restaurant «Zunfthaus zur Waag»		18.30h
19.00h	Welcome Reception Alumni Pavillon (MM C 78.1)				19.00h

Program Mon, June 1, 2026

09.00 Welcome, Introduction and Conference Opening
Loretta Müller, University Hospital Bern and Co-Chair of NPC 2026

09.10 Opening Talk, ***Athanasios Nenes***, EPFL Lausanne

09.45 **Session 1: Aircraft emissions Part I,** *Chair: Claudia Mohr, PSI Villigen*

Nobuyuki Takegawa, Tokyo Metropolitan University
«Export of aircraft exhaust ultrafine particles from Tokyo International (Haneda) Airport»

Teemi Lepistö, Tampere University
«Dispersion of ultrafine particles originated from a medium-large international airport»

Armin Hansel, University of Innsbruck
«Ultrafine particle exposure from individual aircrafts approaching Innsbruck airport»

10.30 Coffee Break

11.00 **Session 2: Aircraft emissions Part II,** *Chair: Claudia Mohr, PSI Villigen*

Tobias Schripp, ZHAW
«Impact of Seasonal Variations on Jet Engine Emissions from a Business Jet Running on Fossil and Sustainable Aviation Fuels »

Steffen Schmitt, Aerodyne Research, Inc.
«SOURCE FFR: Recent activities within the UFP exposure study in the Frankfurt Rhine-Main region»

Suneeti Mishra, PSI Center for Energy and Environmental Sciences
«Characterizing Aviation Contributions to Particulate Matter near Zurich Airport using Chemical Composition and Source Apportionment»

David Kittelson, University of Minnesota, retired
«A "2nd" (> 150 nm) Size Mode in Aircraft Gas Turbine Engine Exhaust, New Analysis»

Paula Kurzawska-Pietrowicz, Poznan University of Technology
«Experimental study on the impact of HVO addition to Jet A-1 on non-volatile particulate matter emissions»

12.30 Lunch Break

13.30 **Poster Session A**

15.00 Coffee Break

15.30 **Session 4: Emissions: aftertreatment / real world operation / alternative fuels,** *Chair: Martin Gysel-Beer, PSI/ETH Zurich*

Henri Oikarinen, University of Eastern Finland
«Emissions from fuel operated auxiliary heaters of passenger cars»

Olli Sippula, University of Eastern Finland
«Nanoparticle and secondary aerosol emissions of EURO6d passenger cars fueled with gasoline, diesel and natural gas: The role of exhaust after-treatment byproducts»

Stefanos Melekidis, Hug Engineering
«Influence of Lubricant Ash Content on DPF-Performance in Medium-Speed Diesel Engines»

Negaar Razzaghi, Simon Fraser University
«Effects of Extreme Cold Climate on Particulate Emissions of Light-Duty Gasoline Vehicles »

Henna Lintusaari, Tampere University
«Real-world particle number emission factors of heavy-duty vehicles: Contribution of sub-10 nm particles»

Will Northrop, University of Minnesota: Twin Cities
«Ammonium Nitrate Nanoparticles from Ammonia Combustion in Engines and Burners»

17.00 Aperitif sponsored by exhibitors and End of Day 1

Program Tue, June 2, 2026

09.00 Session 5: Ambient air, biomass burning and wildfires, environmental impacts,
Chair: Christoph Hüglin, Empa

Daniel Schlesinger, SLB-analys, Environment and Health Administration, City of Stockholm
«Dynamics of urban particle number size distributions in Stockholm, Sweden»

Eric Twomey, University of Basel
«Spatiotemporal modelling of ambient concentration of ultrafine particles in Switzerland»

Arya Mukherjee, University of Eastern Finland -
«Direct radiative properties of modern European woodstove emissions: effect of photochemical aging and an electrostatic precipitator»

Anni Hartikainen, University of Eastern Finland - «Transient formation of organic gaseous emissions in residential wood combustion with and without an electrostatic precipitator»

Joel Corbin, National Research Counsil Canada - «An equation describing the wavelength-dependence of brown-carbon light absorption at all wavelengths»

Cyprien Jourdain, Stanford University
«How coating pathway controls light absorption by black carbon»

10.30 Coffee Break

11.00 **Session 6: Nanoparticles: instrumentation, metrology, fundamentals**
Chair: Konstantina Vasilatou, METAS

Sana Farhoudian, Tampere University
«NO-Triggered RO-Mediated Propagation in the OH Oxidation of a Saturated Cyclic Alkane»

Tirthankar Mitra, King Abdullah University of Science and Technology (KAUST)
«Dynamic chemical evolution of incipient soot. An FT-IRC MS-based investigation»

Una Trivanovic, METAS
«Characterization of a novel, mid-cost device for ambient monitoring of ultrafine particles»

Sonja Pratzler, Physikalisch-Technische Bundesanstalt
«Laboratory Intercomparison in Germany: Calibration of particle counters for the national periodical technical inspection»

Andrew Brown, National Physical Laboratory (NPL)
«Ensuring the comparability of nanoparticle measurements by the international metrology community»

12.15 Lunch Break

13.30 **Poster Session B**

15.00 Coffee Break

15.30 **Session 8: Break wear and Tyre wear,** *Chair: Danilo Engelmann, BFH/AFHB Biel*

Jon Andersson, Ricardo UK, Automotive and Industrial (A&I)
«DfT Brake & Tyre Programme Phase 2: Impact of Regenerative Braking and Vehicle Mass on Brake Particle Emissions Across ICE, PHEV & EV Platforms»

Alessandro Mancini, Brembo N.V. - «Non-Exhaust Emissions from Brakes: Comparative Assessment of Physico-Chemical Properties in Nanometric and Micrometric Particulates»

Carsten Neukirchen, Universittät der Bundeswehr München - «Nanoparticle generation potential of summer and winter tyres at varying ambient temperatures»

Siriel Saladin, University of Cambridge
«Chemical Origin of Tyre Nanoparticles in a Tube Furnace»

Guillaume Lemasson, MICHELIN Research center - «Michelin's latest results on quantification of airborne Tire Road Wear Particules, from vehicule usage to micro»

18.30 Conference Dinner (only for registered paticipants)

Program Wed, June 3, 2026

09.00 **Session 9: Indoor particles and occupational exposure,** *Chair: Oliver F. Bischof, TSI*

Elizabeth DeFrance, University of California Riverside
«Lithium-ion battery thermal runaway particle emissions»

Oona Norvapalo, University of Eastern Finland
«Occupational diesel exhaust exposure assessment using miniaturized aerosol instruments – intercomparison of aerosol instruments in different workplace environments»

Pia Karbiener, University of Basel
«Airborne pathogen detection via MASC-On - Magnetic Antibody Sorting Coupled with flow Cytometry Online»

Mohammadhadi Sedaghat, University of Cyprus
«Physiologically Realistic Simulation of DEHP Penetration in the Human Airways»

Marloes Eeftens, Swiss Tropical and Public Health Institute
«The MARKOPOLO Indoor/Outdoor project: Real-time assessment of residential ultrafine particle exposure indoors and outdoors»

Ulrich Vogt, University of Stuttgart
«Underground Rail Air Quality: Determination of UFP and BC Concentrations in a Train Station and its Adjacent Tunnel»

10.30 Coffee Break

11.00 **Session 10: Nanoparticle toxicity and health effects**
Chair: Barbara Rothen-Rutishauser, University of Fribourg

Seungju Yoon, California Air Resources Board
«Characteristics of Brake-Wear Particles and Chemical Speciation Profiles and Potential Health Effects of the Particles in California»

Marie Bergmann, Heinrich Heine University Düsseldorf
«Systematic review and meta-analysis on the health effects of long-term exposure to ultrafine particles»

Hajar Hajmohammadi, Queen Mary University of London
«Non-Tailpipe Traffic Emissions and Airway Dysfunction: Evidence from a Real-World Crossover Study (IONA)»

11.45 **Focus Event «Exposure in Indoor Environments» Part A,** *Chair: Marloes Eeftens, Swiss TPH*

Aneta Wierzbicka, Lund University
«Indoor particles – characteristics and toxicity»

Dusan Licina, EPFL Lausanne
«Indoor ultrafine particles in occupied spaces: sources, transformations, and exposure-relevant dynamics»

12.30 Lunch Break

13.30 **Trojan Horse Award and Poster Award Ceremony,** *Chair: Oliver F. Bischof, TSI*

14.00 **Focus Event «Exposure in Indoor Environments» Part B,** *Chair: Marloes Eeftens, Swiss TPH*

Gaetano Settimo, Italian Institute of Health
«Indoor Air Quality: the national situation in Italy»

Pawel Wargocki, Technical University of Denmark - «The role of indoor environments for well-being, health, work performance, learning, and sleep»

Michael Riediker, SCOETH
«Indoor air quality is not about policing, it's about enabling»

15.05 Panel Discussion, Chair: Barbara Rothen-Rutishauser, University of Fribourg

15.30 End of the conference

29th ETH Nanoparticles Conference

31.May - 3. June 2026, ETH Zurich

Poster Session A, Mon June 1, 2026

11.00	**Session: Aircraft emissions**
1A	***Sarah Tinorua,*** Paul Scherrer Institute - «Assessing the Impact of Emissions from Zürich Airport on Ultrafine Particles and Volatile Organic Compounds in a nearby Residential Area»
1B	***Henna Lintusaari,*** Tampere University - «Laboratory-scale Jet Engine Emission Measurements using a Micro Turbojet with Conventional and Alternative Jet Fuel»
1C	***Emily Winter,*** Imperial College London - «Characterisation of Emissions from an Inverse Diffusion Burner Relevant to Contrail Formation»
1D	***Jack Macklin,*** University of Leeds - «The transition to sustainable aviation fuels will lead to reduced contrail ice forming particle emissions»
	Session: Ambient air and environmental impacts
2A	***Ricardo Morales,*** Universidad de los Andes «Ultrafine particle characterization in the near-road environment: association with traffic composition using high time-resolution traffic counts»
2B	***Maximilian Dollner,*** Catalytic Instruments «Measuring Urban Aerosol Volatility Fractions with a Catalytic Stripper at an ACTRIS Aerosol Observatory: Characterization and Implementation»
2C	***Hamid Salehi,*** University of Greenwich «Evaluating Traffic-Related Air Pollution Interventions Using State-Space Modelling: Implications for Monitoring and Regulatory Assessment in London»
	Session: Emission control & emissions in real-world operation
3A	***Sara Valentini,*** European Commission, Joint Research Centre (JRC) «A comprehensive characterization of particles emitted by Internal Combustion Engines using different sampling and analytical techniques»
3B	***Jiun-Horng Tsai,*** National Cheng Kung University - «Field Study On The Abatement Effect Of Particles In Engine Exhaust Of Excavator Equipped With DOC And DPF»
3C	***Vahid Hosseini,*** Simon Fraser University - «Roadside Optical Vehicle Emissions Reporter (ROVER) III Project: Evidence of exhaust tampering in Alberta, Canada»
3D	***Ireneusz Pielecha,*** Poznan University of Technology - «Particle number emissions from a Turbulent Jet Ignition engine fueled with hydrogen and ammonia»
3E	***Yuantao Wang,*** Paul Scherrer Institute - «Secondary Organic Aerosol Formation of Vehicle Emissions under Realistic Driving Conditions in a Road Tunnel»
3F	***Georgi Trendafilov,*** RWTH Aachen University «How Urea Dosing in SCR Systems Drives Secondary Particle Formation»
	Session: Biomass burning incl. wildfires
4A	***Kaare Press-Kristensen,*** Green Global Future «Cost-benefit: Electrostatic precipitators for residential stoves»
4B	***Kaare Press-Kristensen,*** Green Global Future «Field investigations of particle pollution from residential heating in Slovakia»
4C	***Joel Corbin,*** National Research Council Canada «Chemical composition of tarballs and “charballs” formed by pyrolysis of wildfire-like organics»

Session: Nanoparticle metrology (and instrumentation)

5A ***Jordan Tompkins,*** National Physical Laboratory
«Reducing the uncertainty of condensation particle counter calibrations at low particle number concentrations by reducing electrical noise in the Faraday cup aerosol electrometer»

5B ***Martin Fierz,*** Naneos particle solutions
«Lowcost ambient UFP monitoring with diffusion chargers»

5C ***Lars Hillemann,*** Topas GmbH
«Uncertainty of the dilution factor of diluters with internal mixing gas preparation»

5D ***Serena Loggia,*** ETH Zurich
«Testing and Calibration of bcMeter, an Open-Source, Low-Cost Black Carbon Monitor»

5E ***Filip Kulas,*** Cambustion Ltd.
«Performance characterisation of a continuously variable aerosol diluter»

5F ***Alejandro Keller,*** FHNW
«Towards Stand-Alone Monitoring of Carbonaceous Aerosol: FATCAT Measurements and Thermogram-Based Source Interpretation»

5G ***Nikolaos Kousias,*** Aristotle University of Thessaloniki
«A portable optoacoustic BC sensor for source emission monitoring»

5H ***Muhammad Shoaib Ashraf,*** King Fahad University of Petroleum and Minerals
«Ultra-Simple, Cost-Effective, Single-Precursor Production of Co3O4 Nanoparticles via Thermal Decomposition: Characterization and Scalability-Oriented Techno-Economic Analysis»

5I ***Andreas Nowak,*** Physikalisch-Technische Bundesanstalt (PTB)
«Thermally stable and spherical silver particles as transfer standard for the calibration of particle number counters»

5J ***Arpit Malik***, Physikalisch-Technische Bundesanstalt
«Traceable Calibration of MPSS in Fast-Scan Mode: Recommendations for Particle Number Size Measurement at Urban Traffic Hot Spots»

29th ETH Nanoparticles Conference

31.May - 3. June 2026, ETH Zurich

Poster Session B, Tue June 2, 2026

Session: Legislation, monitoring and enforcement

6A ***Seán Schmitz***, Research Institute for Sustainability (RIFS) at GFZ
«Continuous Monitoring of UFP Across 11 European Cities: First Results from the Net4Cities Project»

Session: Nanoparticle formation and transformation

7A ***Paxton Juuti***, Dekati Ltd.
«Experimental evaluation of nucleation phenomena in an oxidation flow reactor (DOFR™)»

Session: Break wear and Tyre wear

8A ***Jacek Pielecha,*** Poznan University of Technology
«Particle number emissions from brakes of passenger cars»

8B ***Lukasz Rymaniak,*** Poznan University of Technology
«Emission of particulate matter during braking of a rail vehicle on a test stand»

8C ***Elizabeth DeFrance,*** University of California Riverside CE-CERT
«On-road tire-wear particle emissions from a light-duty vehicle»

8D ***Elizabeth DeFrance,*** University of California Riverside CE-CERT
«Brake-wear particle emissions measurement and characterization during on-road vehicle testing»

8F ***Sang-Hee Woo,*** Korea Institute of Machinery and Materials
«Measurement of emission factors for brake and tire wear particles from actual vehicles driving on real roads»

Session: Indoor particles and occupational exposure

9A ***Kristen Yeh,*** EPFL Lausanne
«INDOAIRTOX: Project Overview and Experimental Design for Indoor Ultrafine Particles—Sources, Dynamics, and Toxicity»

9B ***Rikke Bogebo,*** Healthy Indoor Environment
«Particle pollution from ovens in Danish kitchens»

9C ***Paulus Bauer,*** Catalytic Instruments
«Distinguishing Total and Solid Particle Emissions from Household and Office Devices using a Catalytic Stripper»

9D ***Natalia Szymlet,*** Poznan University of Technology
«Comparative analysis of particulate matter emissions from 3D printing and the internal combustion engine»

9E ***Remigusz Jasiński,*** Poznan University of Technology
«Particle Number Concentration and Size Distribution in the Cabin of a Light Aircraft during Real-World Flight Operations»

9G ***Heike Krüger,*** nano-Control, International Foundation
«Healthy Indoor Air - Nanoparticles from Laser Printers»

9H ***Gen-Wen Hsieh,*** National Yang Ming Chiao Tung University
«Nonwoven polyester fabric hybrid with conducting nanowire and photocatalytic nanoparticle for dual-functional indoor air filtration»

9I ***Julian Wehrle,*** FHNW
«Unexpected Ultrafine Particle Emissions from Disengagement of Hook-and-Loop Fasteners»

Session: Nanoparticle toxicity and health effects

10A ***Elisa Chamot,*** University of Basel
«A new instrument to examine the oxidizing properties of polluted air in both the gas and particle phases (GP-OOPAAI)»

10B ***Luisa Path,*** AMI, University of Fribourg
«Comparing effects of freshly generated brake wear particles with particles collected on Teflon filters in an advanced in vitro lung model»

10C ***Ruiwen He,*** AMI, University of Fribourg
«Assessment of aircraft engine exhaust toxicity using an on-site air–liquid interface cell exposure system»

10D ***Utprabh Pama,*** Indian Institute of Technology Bombay
«Nanoparticle-Forming Precursors & Associated Health Risks Across Urban Micro-Environments in eastern Indian urban area»