

TOPIC

High quality particle filters have become a necessity to cope with current and future emission limits, both for diesel- and gasoline-combustion engines. The 20th anniversary of the VERT filter test is an occasion to look back but also address future challenges.

MOTIVATION

About one billion combustion vehicles are in use world-wide and about 90 million new vehicles are currently produced per year. With no doubt these vehicles affect air quality in cities and with it the health of traffic-exposed people. Only with efficient filter- and deNOx-technologies and periodic technical inspection (PTI) can we cope with this unprecedented growth.

The 20th anniversary of the VERT-filter test is a nice occasion to look back to more than 60 particle filters tested following the VERT protocol, now described in the Swiss norm SN 277206. According to these procedures the efficiency of filters for nanoparticles is tested. An evaluation of filter effects on known toxic exhaust constituents and a hazard assessment for secondary pollutants is also included.

VERT test procedures have been a success and are accepted by legal bodies in various countries. The implementation of best available technology (BAT) filters both, in retro-fits and first fits, substantially lowers emissions of soot nanoparticles and adsorbed genotoxic compounds.

High NO_x emissions and the use of defeat devices have hampered the reputation of diesel vehicles also putting pressure on the filter industry. The VERT forum is an excellent occasion to be informed on the latest trends in filter- and deNO_x-technologies. If you want to learn more on alternative tools to assess exhausts toxicity, you should also join the **focus event** on **March 16, 2018** at the same location.

PARTICIPANTS

Cordially invited are representatives of industry, government, academia, current and future members of the VERT association, and those curious to learn more on new trends on filter- and deNO_x-technologies.

GENERAL INFORMATION

The conference will be free of charge.

Please refer to the Empa VERT Forum to obtain reduced accommodation rates in certain local hotels.

Registration

By e-mail via VERT Association: ttm.a.mayer@bluewin.ch

Further information

VERT Association

Dr. Andreas Mayer

Fohrhölzstrasse 14b

5443 Niederrohrdorf/Switzerland

Phone: +41 56 496 64 14

E-mail: ttm.a.mayer@bluewin.ch

Contact Empa

Empa, Laboratory for Advanced Analytical Technologies

Dr. Norbert Heeb

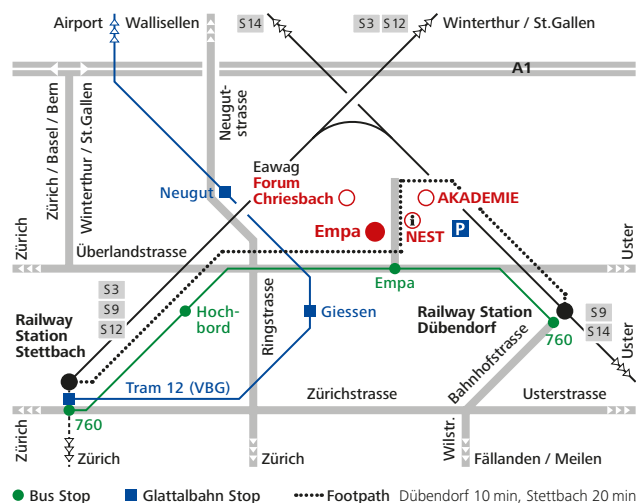
Überlandstrasse 129

8600 Dübendorf/Switzerland

Phone: +41 58 765 42 57

E-mail: norbert.heeb@empa.ch

www.empa-akademie.ch/vert

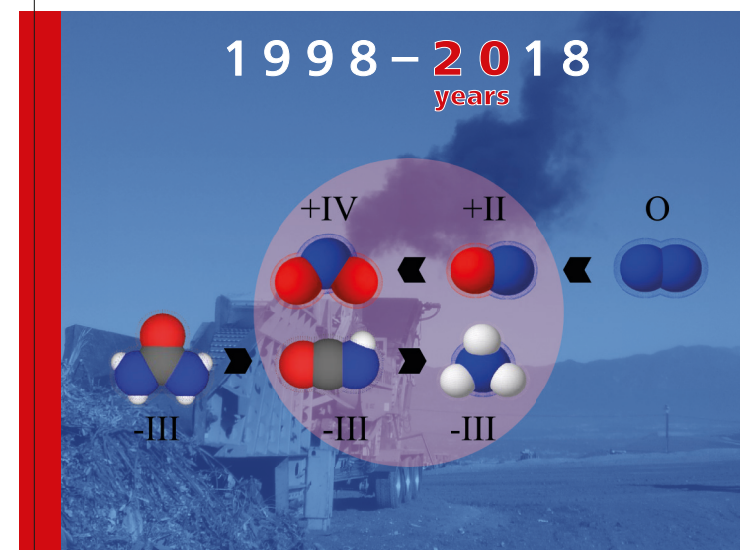


Empa
Akademie

9th VERT FORUM

20 years of VERT emission control certification

Lifelong BAT for emission control of in-use and OE-vehicles and PTI



Empa, Dübendorf, Überlandstrasse 129
Thursday, March 15, 2018, from 9:00 to 17:15

Registration by e-mail: ttm.a.mayer@bluewin.ch

PROGRAM

WELCOME

- 9:00 **Welcome address**
D. Bleiner, Empa
- 9:05 **Greetings**
L. Larsen, VERT president

KEYNOTE LECTURE

- 9:10 **Combustion engines – today and in the future**
U. Wagner, KIT

20 YEARS VERT EMISSION CONTROL CERTIFICATION

- 9:30 **BAT by PN, the quality paradigm from 10 retrofits to 300 million UFP-filters**
A. Mayer, TTM
- 9:50 **VERT: filter testing and further efforts to minimize emissions**
J. Czerwinski, AFHB
- 10:10 **Secondary emissions – the need and the challenge to protect human health**
N. Heeb, Empa

NPTI – REQUIREMENT AND SOLUTIONS

- 10:30 **Investigation about functionality of DPF during PTI in Zürich**
B. Gloor, AWEL
- 10:50 **Coffee break**
- 11:10 **PTI by PN for construction machinery**
S. Krähenbühl, BAFU

- 11:30 **Low idle PN – a breakthrough for low cost instrumentation**
G. Kadijk, TNO

- 11:50 **Validation of PN-instruments for low idle PTI-instruments**
R. Suarez-Bertoa, JRC-EU

RESEARCH

- 12:10 **Exhaust aftertreatment of gasoline engines with coated particle filters**
F. Adam, UMICORE
- 12:30 **Statistic tools for the on-line interpretation of DPF on-board control signals**
L. Fabrykowski, TRIANGULAR; F. Legerer, VERT
- 12:50 **Lunch and coffee**

NEW SCR- AND SDPF-TECHNOLOGY FOR RETROFIT AND FIRST FIT

- 13:40 **Retrofitting to real world Euro VI**
C. Vincente, Eminox
- 14:00 **Solid ammonia technology for near-zero polluting diesel engines**
T. Johannessen, AMMINEX
- 14:20 **NH₃-Generator (B-NO_x) – an upgrade for LDV and buses**
H. Middelmann, TWINTEC-BAUMOT
- 14:40 **Upgrading Euro V city buses towards Euro VI emission under real driving conditions**
K. Schrewe, HJS

NEW VERT RETROFIT PROJECTS IN EMERGING MARKETS

- 15:00 **DPF implementation in IRAN, opportunities and challenges**
M. Doozandegan, VERT-ASA
- 15:20 **Coffee break**
- 15:40 **DPF retrofit in Shenzhen and Chinese national policy**
Y. Wang, VECC
- 16:00 **Steps towards a nationwide Low Emission Zone – the case of Israel**
A. Zalzburg, SVIVA

LEGISLATION AND QUALITY ASPECTS

- 16:20 **NPTI – Legislation leading to a booming aftersales business**
L. Larsen, VERT
- 16:40 **urbanaccessregulation.eu, diesel bans and other things**
L. Sadler, Sadler-Consult
- 17:00 **Closing remarks**
V. Hensel, Chairman VERT