

PROJECT PARTNERS



GENERAL INFORMATION

No conference fee will be charged. Please refer to the Empa VERT Forum to obtain reduced accommodation rates in certain local hotels.

Registration

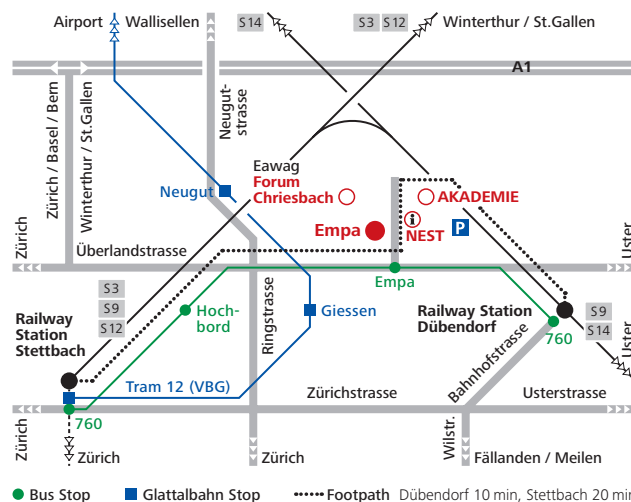
For your convenience, registration for both, the GASOMEPE meeting and the 8th VERT Forum is possible by e-mail via VERT: [ttm.a.mayer@bluewin.ch](mailto:ttm.a.mayer@bluewin.ch) Please specify which events you want to attend.

Further Information

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](mailto:norbert.heeb@empa.ch)

VERT Association

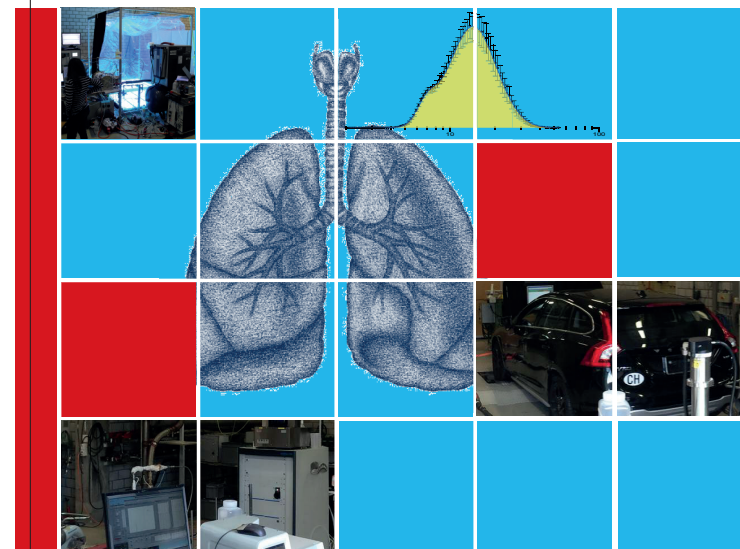
Dr. Andreas Mayer  
Fohrhölzistrasse 14b  
5443 Niederrohrdorf/Switzerland  
Phone: +41 56 496 64 14  
E-mail: [ttm.a.mayer@bluewin.ch](mailto:ttm.a.mayer@bluewin.ch)



FINAL GASOMEPE MEETING

Gasoline-direct injection vehicles

Impact of filters and fuels on emissions of nanoparticles, genotoxic compounds, metals and secondary organic aerosols



Empa, Dübendorf, Überlandstrasse 129  
Thursday, March 16, 2017, from 9:00 to 14:00

Registration by e-mail: [ttm.a.mayer@bluewin.ch](mailto:ttm.a.mayer@bluewin.ch)

## BRIEF

With no doubt, the gasoline direct injection (GDI) technology will affect ambient air quality in Europe in the next two decades to come. At the final GASOMEPE project meeting, we report in detail on the composition of GDI vehicle exhausts and the impact of fuels and prototype particle filters.

## MOTIVATION

In 2020, it is expected that > 50 million GDI vehicles will operate on European roads. The majority of these vehicles will not be equipped with filters and will, therefore, release substantial numbers of inhalable, soot-like nanoparticles smaller than 100 nm of unknown chemical composition and toxicological effects.

In the three year GASOMEPE project, we studied seven GDI vehicles under transient and steady driving conditions. Our focus was on emissions of toxic and environmentally relevant pollutants. Particles were characterized with respect to size, number distribution and metal content. Besides the regulated pollutants, also emissions of genotoxic compounds were studied. In addition, the secondary organic aerosol (SOA) formation potential was investigated in smog chamber and flow reactor experiments. With the support of our industry partner, could we study four prototype gasoline particle filters (GPFs) and their effects on exhaust composition.

In other words, the GASOMEPE meeting is an excellent occasion to learn first-hand from the project partners on the emissions of GDI vehicles, the impact of oxygenated fuels and prototype GPFs. If you also want to be informed on the latest trends on diesel particle filters and deNOx-technologies, you should join the 8<sup>th</sup> VERT Forum held the day after on **March 17, 2017** at the same location.

## PARTICIPANTS

Cordially invited are representatives of industry, government, and academia, members of the VERT association and in general those interested to learn more on the impact of the GDI-technology and gasoline particle filters.

## PROGRAM

9:00 **Welcome**  
D. Bleiner, Empa

### KENOTE ADDRESSES

9:05 **From diesel to gasoline particle filters: recent trends in filter technologies**  
A. Mayer, TTM

9:25 **The CCEM perspective**  
U. Elber, CCEM

### THE GASOMEPE PROJECT

9:45 **Motivation, project design, fleet characteristics, experimental set-up**  
N. Heeb, Empa

10:05 **Particle, regulated & non-regulated emissions, size & number distribution, fuel effects**  
J. Czerwinski, P. Comte, UASB

10:25 **Coffee Break**

10:55 **Genotoxic potential of GDI exhausts without and with GPFs**  
M. Muñoz, Empa

11:15 **Metal emissions, fuel- and filter effects**  
A. Wichser, Empa

11:35 **Secondary organic aerosol formation in the smog chamber**  
A. Prévot, S. Piebers, N. Kumar, PSI

11:55 **Time-resolved SOA formation potential of GDI emissions during standard driving cycles**  
A. Keller, H. Burtscher, UASNWS

### INDUSTRIAL PARTNERS

12:15 **The future for gasoline particle filter technologies**  
N.N., NGK

### THE ENGTOXGAS PROJECT

12:35 **Hazard assessment of GDI exhaust using a 3D human lung cell model**  
C. Bisig, B. Rothen-Rutishauser, AMI Uni Fribourg

12:55 **Closing Remarks**  
N. Heeb, Empa

13:00 **Lunch and Coffee**