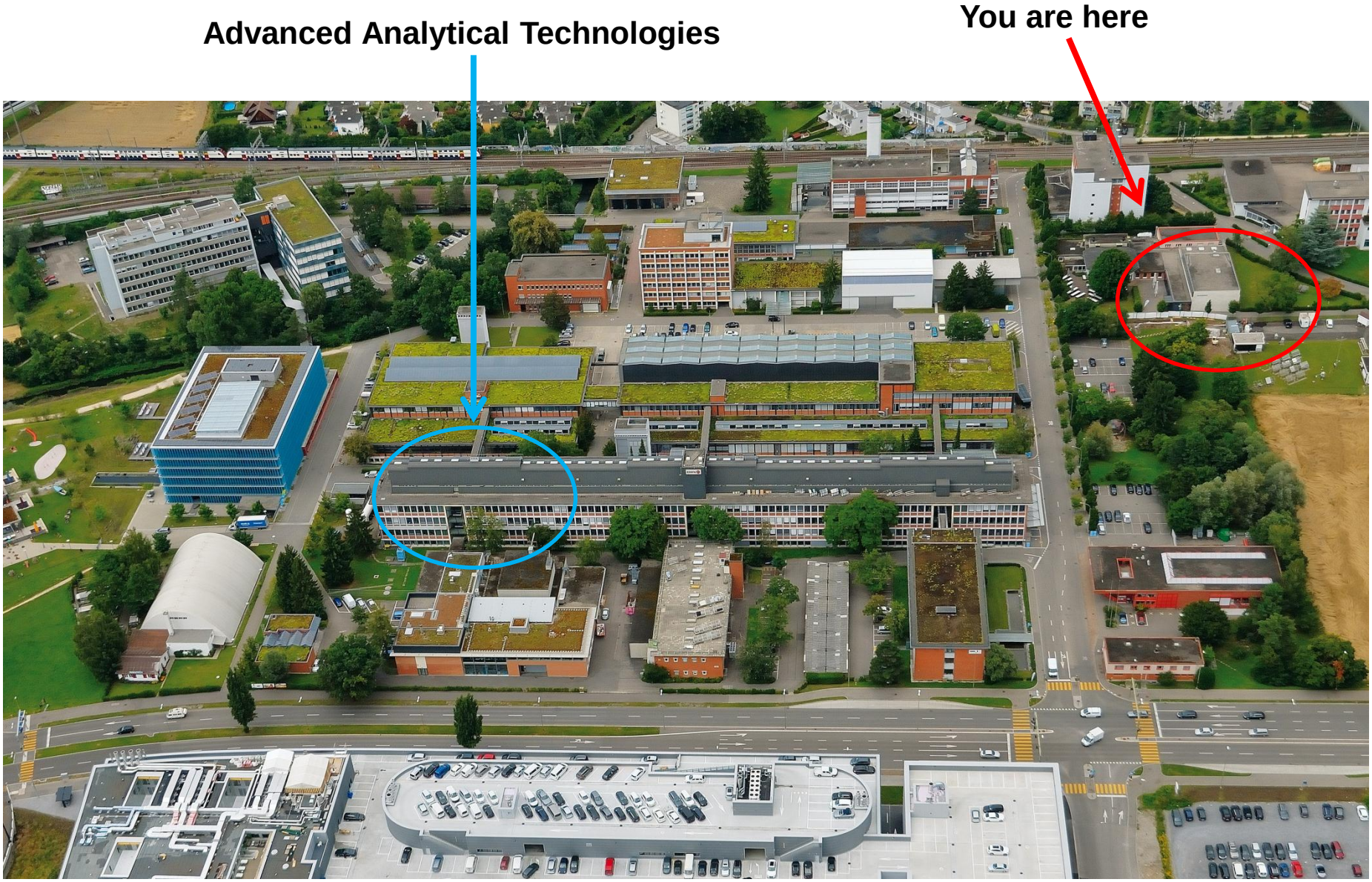
Empa Dübendorf



Empa Mission

Empa – **Bridging Fundamentals and Applications**

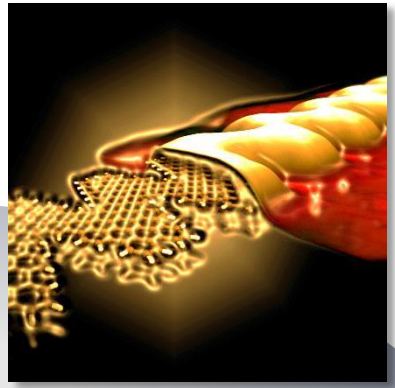
- Materials Science & Technology Development
- Technology Transfer
- Excellence in all our Activities

Ludwig von Tetmajer, first Empa Director (1891)

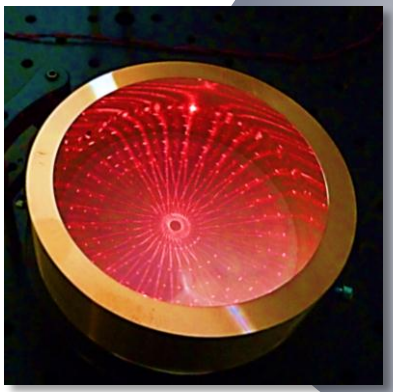
Empa's Research Focus Areas

EMPA
Materials Science & Technology

Health & Performance

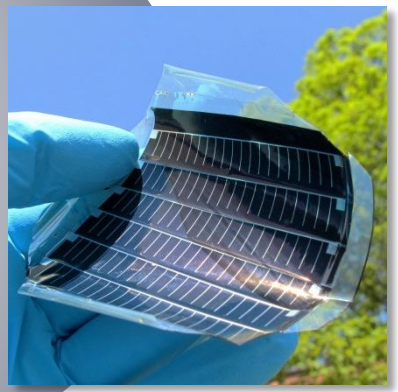


Nanostructured Materials



Natural Resources & Pollutants

Sustainable Built Environment



Energy

Welcome to the 5th VERT Forum 22.3.2014 at Empa Materials Science & Technology

Heinz Vonmont
Laboratory for «Analytical Chemistry»

BRIEF

Catalysts are key components of particle filters and deNO$_x$ technologies affecting the overall toxicity of exhaust gases of current and future vehicles and machinery. The VERT forum is a good opportunity to learn more on the latest developments of filter and deNO$_x$ systems and their worldwide applications.

MOTIVATION

In 2012, the World Health Organization (WHO) has classified diesel exhaust as a class 1 carcinogen. Sufficient evidence has accumulated to prove that exposure to diesel exhaust can cause lung cancer in humans.

The genotoxicity of untreated diesel exhaust is evident from such exposure studies. With the ongoing success of diesel particle filters, which are increasingly combined with deNO$_x$-technologies, the chemical composition of diesel exhaust gases and hence its genotoxicity is bound to change.

VERT-tested filters and deNO$_x$ systems are considered a high quality technology fulfilling highest standards and reaching filtration efficiencies of >98%.

But is efficient filtration sufficient to detoxify diesel exhaust? Are those compounds inducing genotoxic effects removed as well? These aspects should be addressed in the course of risk assessments and should direct the future evolution of filter and deNO$_x$ technologies.

Our society relies on diesel engines and will do so in the decades to come. But we must be able to lower the adverse health effects and environmental impact of diesel exhaust gases with the help of efficient catalysts.

The VERT forum is an excellent occasion to learn more on the evolution of diesel converter technologies and their performance in the field.

PARTICIPANTS

Cordially invited are representatives of the involved industry, government authorities, regulators, members of the VERT association and those interested to join, and those curious to learn more on the latest developments in converter technologies.

GENERAL INFORMATION

The conference is free of charge, but registration is needed.
Please refer to the Empa-VERT-Forum to obtain
reduced accommodation rates in certain local hotels.
(see http://www.empa.ch/hotels)

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

Further Information
VERT Association
Dr. Andreas Mayer
Fohrhölzlistrasse 14b
5443 Niederrohrdorf/Switzerland
Phone: +41 56 496 64 14
Fax: +41 56 496 64 15
E-mail: ttm.a.mayer@bluewin.ch

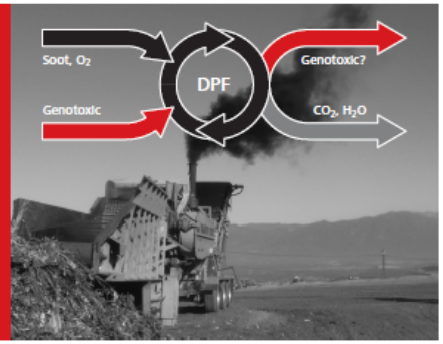
Contact on Site 5218007567
Empa, Laboratory
Dr. Heinz Vonmo
Überlandstrasse
8600 Dübendorf
Phone: +41 58 7
Fax: +41 58 7
E-mail: heinz.vo

EMPA AKADEMIE
Zentrum für Wissenstransfer

5th VERT FORUM

Evolution of Diesel Particle Filter and deNO$_x$ Technologies

Catalysts at Work



Empa, Dübendorf, Überlandstrasse 129
Friday, March 21, 2014, 09.00–17.00

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

Welcome to the 6th VERT Forum 20.3.2015 at Empa Materials Science & Technology

Davide Bleiner
Laboratory for «Advanced Analytical Technologies»

Welcome to the 6th VERT Forum 20.3.2015 at Empa Materials Science & Technology

Davide Bleiner
Laboratory for «Advanced Analytical Technologies»

- Catalyzed particle filters are standard in Euro-6 diesel
- Widely used to retrofit older engines, for on/off-road
- Not yet for particle-emitting GDI

Welcome to the 6th VERT Forum 20.3.2015 at Empa Materials Science & Technology

Davide Bleiner
Laboratory for «Advanced Analytical Technologies»

- Catalyzed particle filters are standard in Euro-6 diesel
- Widely used to retrofit older engines, for on/off-road
- Not yet for particle-emitting GDI

- Untreated diesel exhaust causes lung cancer
- Efficient converter technology has become necessity

Welcome to the 6th VERT Forum 20.3.2015 at Empa Materials Science & Technology

Davide Bleiner
Laboratory for «Advanced Analytical Technologies»

- Catalyzed particle filters are standard in Euro-6 diesel
- Widely used to retrofit older engines, for on/off-road
- Not yet for particle-emitting GDI

- Untreated diesel exhaust causes lung cancer
- Efficient converter technology has become necessity

- Filters lower particle emission
- Particle removal not sufficient to eliminate genotoxic compounds
- **Catalytic combustion is needed to lower genotoxicity**

EMPA

Materials Science & Technology

Have a stimulating 6th-VERT-Day