Program

6th International MinNO\textsubscript{X} Conference
June 22–23, 2016, Berlin

Registration and hotel booking under www.iav.com/MinNOx
For the 6th time IAV is inviting leading experts from all over the world to discuss the latest technologies and applications to minimize NO\textsubscript{x} emissions. Since the first meeting in 2007 the demand for emission control strategies remained strong and the efficiency of aftertreatment systems have been continuously improved.

Meeting emission limits under real driving conditions has started with heavy-duty vehicles and now will be required of passenger cars. While details of the legislation still remain open, the next challenge is clear: we must find an effective and functional combination of advanced engines – or even novel powertrain architectures – with refined aftertreatment systems to meet the new requirements. I am convinced that, once again, the talented engineers from vehicle manufacturers, suppliers, engineering partners and universities will find matching solutions. The MinNO\textsubscript{x} conference is the well-established platform for these experts to intensify the technical dialog and show the potential for future minimized NO\textsubscript{x} emissions at the tailpipe.

In this tradition, on behalf of IAV and the conference committee, I would like to cordially invite you to join the 6th International MinNO\textsubscript{x} Conference to be held on June 22 and 23 in Berlin and to keep the MinNO\textsubscript{x} spirit alive!

Yours

Henning Methe

---

**Program Committee**

- Henning Methe
  - IAV
- Hans-Jürgen Brüne
  - BMW
- Takao Fukuma
  - Toyota
- Bernd Hupfeld
  - Volkswagen
- Lutz Krämer
  - IAV
- Torsten Neubauer
  - BASF
- Ulrich Nieken
  - Uni Stuttgart
- Thierry Seguelong
  - Solvay
- Vadim Strots
  - IAV
- Claus-Dieter Voigt
  - NGK
- Michel Weibel
  - Daimler
Basic Information

Date and venue
June 22–23, 2016, Berlin
Harnack-Haus
Ihnestraße 16-20
14195 Berlin

Conference director
Henning Methe, IAV

Presenter
IAV GmbH
Carnotstr. 1
10587 Berlin
www.iav.com

Organization
UNIVERSAL Kongress & Marketing GmbH
Giesebrechtstr. 10
10629 Berlin
Markus Kniehase
Tel. +49 30 31018545
mkniehase@universal-berlin.de

Lecture languages and duration
Presentations will be held in English and last 15-20 minutes followed by discussion.

Conference fees
Participant: € 950
University Participant: € 500 (verification requested)

Stated prices do not include VAT.

Form of payment
Bank transfer upon billing or credit card.

Exhibition
The event also includes an accompanying exhibition. This will give you the opportunity to present your products and services to an engaging expert audience. The event’s organization team will be pleased to provide you with details.

Room Overview

1 Registration/Hospitality Desk – Planck-Lobby
2 Plenary room – Goethe Hall
3 Exhibition – Meitner Hall
Venues and Hotels

Conference venue and hotels:

1. Harnack-Haus
Ihnestraße 16-20
14195 Berlin
www.harnackhaus-berlin.mpg.de
Room rate: Standard single room incl. breakfast € 80,00
The Harnack-Haus is located in the center of the “German Oxford” in Berlin, which is characterized by excellent scientific institutions. Established in 1929 as guest house and conference venue of the Kaiser Wilhelm Society in Berlin-Dahlem, it distinguished itself, particularly in the early years, quickly as an international scientific club. It hosted prominent scientists, artists, politicians and industrialists and was place of important political and public events. After its return to the Max Planck Society through the U.S. armed forces, that used the house as an officer’s mess until 1994, it is since 2000 the conference venue of the Max Planck Society.

2. Seminaris CampusHotel Berlin
Takustraße 39
14195 Berlin
www.seminaris.de
Room rate: Standard single room incl. breakfast € 110,00
To make a hotel reservation, please visit the section “Register” on the conference website (www.iav.com/MinNOx), where you can book online.

Evening event on June 22, 2016
Let’s enjoy the evening event in the unique atmosphere of the Harnack-Haus. The evening event offers the perfect framework to analyse the presentations, maintain networks and to establish new contacts. As the conference is well known for its Jam Sessions, Networking will be supported on and off-stage!
June 22

09:00  **Welcoming address**
L. Krämer, H. Methe, IAV

09:10  **The Impact of MinNOₓ on Powertrain Development**
H. Methe, IAV
Co-Author: Frank Bunar, IAV

09:40  Euro 6 Vehicles’ RDE-PEMS Data Analysis with EMROAD and CLEAR
J. Demuynck, AECC
Co-Authors: Cécile Favre, Dirk Bosteels (all AECC)

10:10  **Coffee break**

**Session 1  NOₓ Trap Development**
Chairman: H.-J. Brüne, BMW

10:45  Euro6d-temp calibration strategy of diesel engine for small passenger cars
Y. Murata, Honda
Co-Authors: Yui Nishio, Masato Kikuchi, Nobuhiro Komatsu, Ryosaku Takahara, Isao Kaneko (all Honda)

11:15  RDE compliant emission concept based on passive SCR for compact diesel cars
J. Balland, Delphi

11:45  Modelling of the Desulfation process in NOₓ Storage and Reduction Catalysts
F.-A. Lafossas, Toyota Motor Europe
Co-Authors: C. Manetas (Exothermia), L. Sharifian, A. Mohammadi (all Toyota Motor Europe), G. Koltsakis (Laboratory of Applied Thermodynamics/Aristotle University of Thessaloniki), M. Iida, K. Yoshida (all Toyota)

12:15  **Lunch break**

**Session 2  Component Research Speed Session**
Chairman: T. Fukuma, Toyota

13:45  Combinatorial Optimization of Vanadium-Based Catalyst Systems for the Selective Catalytic Reduction of Nitrous Gases with Ammonia (NH₃-SCR)
Klaus Stöwe, Technische Universität Chemnitz
Co-Author: Jure Malenica, Technische Universität Chemnitz

14:05  NO conversion on Pₐ-only, Pₐ-only, and PₐPₐ-alloyed Diesel Oxidation Catalysts
H. Dubbe, University of Stuttgart
Co-Author: Gerhart Eigenberger, Ulrich Nieken (all University of Stuttgart)

14:25  Development of Innovative Ceramics Particulate Filter for Aftertreatment Application
A. Siemiński, Sumika Ceramics Poland
Co-Authors: Kentaro Iwasaki (Sumika Ceramics Poland), Tomoya Kuroda, Kazuo Sadaoka (all Sumitomo Chemical)

14:45  System Integration of the Smart NOₓ-Sensor
Johannes Bentner, Continental Automotive
Co-Author: Daniel Siegberg, NGK Europe

15:05  **Coffee break**

**Session 3  Catalyst Development**
Chairman: B. Hupfeld, Volkswagen

15:30  Advanced catalyst technologies for NOₓ Abatement of lean exhaust from gasoline engines
T. Schmitz, BASF
Co-Authors: Attilio Siani, Stefan Kielbassa, Torsten Neubauer (all BASF Catalysts Germany), Wen-Mei Xue (BASF Corporation)

16:00  Effect of the Substrate on LNT Catalyst Emission and Backpressure Performance
Philip Wood, Jaguar Land Rover
Co-Authors: Tasuku Matsumoto, Claus-Dieter Vogt, Karl Hunn (all NGK), Michael Davies, Chunxing Lin (all Jaguar Land Rover)

16:30  **Coffee break**

**Session 4  SCR Substrate & Catalyst Interactions**
Chairman: T. Seguelong, Solvay

17:00  Parameter Study with High Porosity Substrates for SCR Catalyst Technologies in Combination with Vanadia SCR
Hirotaka Yamamoto, NGK Insulators
Co-Authors: Shiori Nakao, Syogo Hirose, Takahiro Kondo (all NGK Insulators), Yanase Hidetoshi, Andre Wolz, Adolf Schäfer-Sindlinger, Stefan Fischer, Claus-Dieter Vogt, (all NGK)

17:30  Influence of Soot on the Transport Mechanisms inside the Filter Wall of SCR-Coated Diesel Particulate Filters
Marcus Purfürst, IAV
Co-Authors: Sergej Naumov, Kay-Jochen Langeheinecke (all IAV), Roger Gläser, Universität Leipzig

18:00  **End of first conference day**

19:00  Start of evening event at the Harnack-Haus
## Session 5  Commercial Vehicle Applications

*Chairman: V. Strots, IAV*

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| 09:00  | Sustained Low-Temperature NO\textsubscript{X} Reduction for High-Efficiency Diesel Engines  | A. Yezerets, Cummins  
        |                                                                                           | Co-Authors: Yuhui Zha, Michael Cunningham, John Heichelbech, Venkata Lakkireddy, Ashok Kumar, Zhehao Wei, Balaji Sukumar (all Cummins), Howard Hess, Haiying Chen, Janos Szanyi, Yong Wang, Yang Zheng (all Pacific Northwest National Lab) |
| 09:30  | Sensitivity analysis of the impact of NO\textsubscript{X} sensor accuracy in SCR applications with very high NO\textsubscript{X} conversion efficiency | O. P. Bhardwaj, FEV  
        |                                                                                           | Co-Authors: Bastian Holderbaum (FEV), Evangelos Georgiadis, Toshikazu Hirose, Olaf Herrmann, Toru Katafuchi (all Denso Automotive) |
| 10:00  | Coffee break                                                                               |                                                                           |

## Session 6  Advanced SCR Development

*Chairman: M. Weibel, Daimler*

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30</td>
<td>MinNO\textsubscript{X} and MinCO\textsubscript{2}: Direct ammonia SCR for Real Driving Emissions</td>
<td>Tue Johannessen, Amminex</td>
</tr>
<tr>
<td>11:00</td>
<td>Modeling of a DOC SCR-F SCR exhaust line for design optimization</td>
<td>Simon Dosda, IFP energies nouvelles</td>
</tr>
</tbody>
</table>
| 11:30  | Adaptive controls approach combined with a novel reverse flow mixer concept for simplification of future RDE compliant SDPF systems | E. Georgiadis, Denso Automotive  
        |                                                                                           | Co-Authors: Olaf Herrmann, Antoine Jean, Bart Jan Blomberg, Sumitaka Ikeda (all Denso Automotive), Roscoe Sellers, Martin Filipe (all Ricardo) |
| 12:00  | Coffee break                                                                               |                                                                           |
| 13:15  | Urea dosing technology for future emission legislation                                      | Georg Hüthwohl, Albonair                                                                                           |

## Session 8  Model Based Emission Control

*Chairman: C. Vogt, NGK*

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| 15:15  | Advanced Control Technologies and Control System Development Environment for Further Emission Reduction of Clean Diesel Vehicles | Y. Yasui, Honda  
        |                                                                                           | Co-Authors: Jun Iida, Kenichi Tajiri, Atsushi Kato, Miura Aya (all Honda), Hans Hardam, Toshiharu Takahashi, Hirochi Ulke, Jean Balland, Bart Scheuras (all Delphi Diesel Systems) |
| 15:45  | Development and Integration Process of Control-Oriented Catalyst Models to Meet Future Emission Requirements of Diesel Engines | M. Seibel, Daimler  
        |                                                                                           | Co-Authors: F. Hofmann, B. Christner, A. Kaiser, M. Weibel (all Daimler) |
| 16:15  | Model based SCR application                                                               | J. Hilgert, IAV  
        |                                                                                           | Co-Authors: Maria Kalogirou, Jochen Schöffner (all IAV) Johannes Meyer, Andreas Keber (all BMW) |
| 16:45  | Closing remarks                                                                           | H. Methe, IAV                                                                                                      |
| 16:55  | End of the conference                                                                     |                                                                           |