



8th International MinNO_x Conference for Sustainable Mobility

October 26–27, 2022,
nHow, Stralauer Allee 3, 10245 Berlin



Program committee



Dr. Maximilian Brauer,
IAV



Dr. Frank Bunar,
IAV



Dr. Reza Rezaei,
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Patrick Stracke,
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Dr. Torsten Neubauer,
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Claus-Dieter Vogt,
NGK Europe GmbH



Rui Marques,
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Stefan Paukner,
Volkswagen AG



Prof. Grigoris Koltsakis,
Aristotle University
Thessaloniki



Dr. Volker Schmeißer,
Daimler Truck AG



Dr. Andreas Broda,
MAN Truck & Bus

Foreword

The debate about urban air quality and NO_x emissions from pre-RDE diesel vehicles is known to us all. It has impacted our community in many ways. EU6d proves that NO_x emissions can be reduced significantly under a wide range of RDE conditions. These developments have already brought new vehicles close to “zero impact” in terms of urban air quality.

Zero impact as a basic requirement

Nonetheless, most of us expect upcoming legislative steps to bring about further reductions in the limits. Our community should anticipate these steps, not only because the remaining development time may be short, but also in order to demonstrate the feasibility of a “real zero impact” emission level as a basis for future-proof, competitive ICE powertrains.

Ecological competitiveness

In the long-run, powertrain competitiveness will depend on the environmental impact from cradle to grave and the cost of fulfilling specific mobility requirements. ICE-powered vehicles will be the best way of fulfilling mobility requirements for medium and long distances, at least for the next decade. Continued access to urban areas and acceptance

of ICEs in society depends crucially on achieving further progress towards a real zero-impact emission level and towards the usage of renewable energy carriers instead of fossil fuels.

Let's discuss new ideas together

In the 8th MinNO_x conference we would like to follow this line of thought and discuss with you the latest ideas and developments with regard to “Minimization of pollutant emissions and environmental impacts from combustion engines”. As before we look forward to a good technical dialog between international experts during the lectures and at the accompanying exhibition.

On behalf of IAV and the conference committee, I would like to cordially invite you to join the 8th International MinNO_x Conference for Sustainable Mobility to be held on October 26th and 27th in Berlin. Keep the MinNO_x spirit alive!

Yours,

Dr. Maximilian Brauer, IAV

General Information

Date and venue

October 26 – 27, 2022
Hotel nHow
Stralauer Allee 3, 10245 Berlin

Conference director

Dr. Maximilian Brauer, IAV

Presenter

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

Organization

UNIVERSAL Kongress &
Event Marketing GmbH
Musäusstraße 6, 14195 Berlin

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Lecture languages and duration

Presentations will be held in English and last 20 minutes followed by discussion.

Conference fees

Participant: € 990
University participants: € 550
(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.

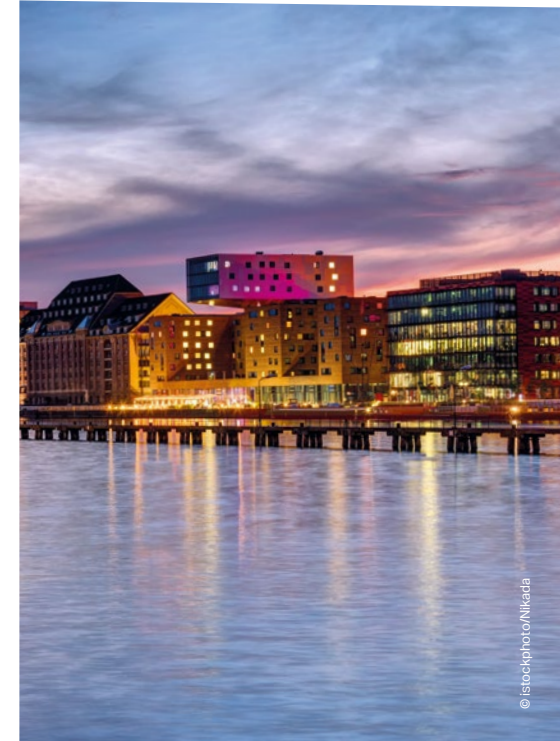
Venues and Hotels

Conference venue and hotels

Hotel nHow
Stralauer Allee 3, 10245 Berlin

Evening event on October 26th, 2022. Start at 19:00

The evening event offers an ideal setting in which to analyze 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! The event will take place at "Kochbox" Dircksenstrasse 96, 10178 Berlin. It is a special cooking Event with an interactive character. The participants have the possibility to be part of the preparation of their own dinner. Enjoy the cooking and dinner!



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Registration and hotel booking

Please click here on [Registration](#) to go to our registration page. For more information, please visit our website at [IAV.com](#)

We look forward to your participation.



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October 26th

08:00 Registration

09:00 Introduction by Chairman

Session Future Boundary Conditions

Dr. Maximilian Brauer

09:15 How far are best in class Euro 6d vehicles to meet Euro 7?

Victor Valverde, JRC European Commission

09:45 Reliable clean air: Compliance to immission limits with latest technology and synthetic fuel

Tim Steinhaus, TU Darmstadt / VKM
Co-author: Christian Beidl, TU Darmstadt / VKM

10:15 From WHTC to RDE – methodological differences and challenges in type testing for commercial vehicles

Florian Lindner, MAN Truck & Bus SE
Co-authors: Florian Walde, Stephan Schraml, Andreas Broda, MAN Truck & Bus SE

10:45 Coffee Break, Vehicle Demonstration & Poster Discussion

Production forecasts are volatile and trends are shaken: how to prepare an SCR system fit for the future?

Joël Op de Beeck, Plastic Omnium
Co-authors: Clément Durand, Plastic Omnium

Session Catalyst Technology – Chemistry

Dr. Torsten Neubauer / Rui Marques

11:15 Effect of O₂ variation on NH₃-SCR over a Cu-CHA catalyst: transient redox behavior

Nicole Daniela Nasello, Politecnico di Milano / Mercedes-Benz AG
Co-authors: Enrico Tronconi, Federica Gramigni, Isabella Nova, Politecnico di Milano; Simone Dieterich, Frank Hofmann, Michel Weibel, Mercedes-Benz AG

11:45 2021: Catalytic Low-Temperature NO_x Reduction by H₂ in Diesel Exhaust

Enno Eßer, TU Freiberg / TU Braunschweig
Co-authors: Lukas Heckemüller, Institute of Internal Combustion Engines; Sven Kureti, Institute of Energy Process and Chemical Engineering; Peter Eilts, Institute of Internal Combustion Engines

12:15 Comparison and Evaluation of SCR catalysts for hydrogen internal combustion engines

Matthias Geist, Dinex Deutschland GmbH
Co-author: Thomas Wolff, Dinex Deutschland GmbH

12:45 Lunch break

Session Catalyst Technology – Innovative Components

Dr. Volker Schmeißer / Claus-Dieter Vogt

13:45 Electrochemical Urea Decomposition for Low and High Temperature NO_x Reduction

Tobias Morawietz, Uni Stuttgart / DLR
Co-authors: Schwan Hosseiny, Wendelin Waiblinger, German Aerospace Center (DLR), Institute of Engineering Thermodynamics; K. Andreas Friedrich, University of Stuttgart, IGTE

14:15 Electric Heating for Exhaust Converters: System & Performance

Emmanuel Jean, Faurecia Clean Mobility
Co-author: Claudia Herbers, Faurecia Clean Mobility

14:45 Developments in multifunctional catalyst (MFC) technologies in the close-coupled position for future HDD emissions legislations

Jan Martin Becker, BASF Catalyst Germany GmbH
Co-authors: K. Beard, R. Dorner, E. Huennekes, M. Kalwei, T. Paul, W. Tang

15:15 Developing new NO_x and PN catalysts for diesel emissions control, through testing & modelling of challenging conditions, as expected for future emissions legislation.

Abdulwaris Tetlay, Johnson Matthey
Co-authors: Paul Phillips, Wolfgang Strehlau, Abdulwaris Tetlay, James Wylie, Johnson Matthey

15:45 Coffee Break, Vehicle Demonstration

October 27th

Session	Application
	<i>Dr. Andreas Broda / Patrick Stracke</i>
16:15	Zero-impact emissions with advanced emission control systems and sustainable renewable fuels <i>Joachim Demuynck, AECC</i> <i>Co-authors: Pablo Mendoza Villafuerte, Dirk Bosteels, AECC; Andreas Kuhrt, Frank Bunar, Maximilian Brauer, IAV</i>
16:45	Influence of Pre-Turbo EAT systems on NO _x and CO ₂ <i>Ferhat Inci, TU Berlin</i>
17:15	Diesel aftertreatment in the post Euro 6 scenarios: a synergical experimental and virtual approach <i>Chiara Pozzi, PUNCH Torino SpA</i> <i>Co-authors: Valentina Beneduce, Claudio Ciaravino, Paolo Ferreri, Giuseppe Previtero, PUNCH Torino SpA; James Romagnolo, Powertech Engineering Srl</i>
17:45	End of First Conference Day

08:30	Welcoming Coffee
Session	Modelling / Controls / OBM <i>Prof. Grigoris Koltsakis / Dr. Frank Bunar</i>
09:00	Simulation Tools for Near Zero Emissions Engineering <i>Syed Wahiduzzaman, Gamma Technologies</i> <i>Co-author: Chandan Paul, Gamma Technologies</i>
09:30	Model-based Emission Capability Assessment via Integrated Engine & Aftertreatment System Model <i>Cetin Gurel, Ford Otosan / Koc University</i> <i>Co-authors: Yusuf Togay, Deniz Şanlı, Ford Otosan R&D Center; Selmi E. Bozbağ, Department of Chemical & Biological Engineering, Koc University; H. Barkın Özener, Ford Otosan R&D Center; Can Erkey, Department of Chemical & Biological Engineering, Koc University; Gökhan Hisar, Ford Otosan R&D Center</i>
10:00	Approaches of Periodical Technical Inspection of Vehicles with SCR Systems <i>Danilo Engelmann, AFHB/VERT</i> <i>Co-authors: Pierre Comte, Jan Czerwinski, AFHB / University of Applied Sciences; Andreas Mayer, Volker Hensel, VERT</i>
10:30	Coffeebreak & Poster Discussion Danish Road Traffic authorities effort toward manipulation with the SCR system on HDV <i>Signe Shim, M.Sc.Eng, Ph.D., Motor Vehicle Advisor, Climate and new mobility, Færdselsstyrelsen</i> <i>Danish Road Traffic Authority</i>
11:00	Raw-Emission Modelling in the Context of EU7 OBD/OBM <i>Patrick Stracke, IAV</i> <i>Co-authors: Marco Moser, Philipp Brinkmann, Max Brauer, IAV</i>
11:30	Networking, Vehicle Demonstration & Exhibition time
12:00	Lunch Break, Vehicle Demonstration & Exhibition Time <i>AECC Gasoline & Diesel Vehicle, MAN H₂ Truck, IAV Zero Air Quality Impact Research MHEV Diesel Vehicle</i>

19:00 Start of the evening event

Bustransfer to the venue from nHow hotel at 6.45 pm.
Back to the hotel at 10.30 pm.



Session Future Fuels – Performance & Emission Effects

Dr. Thaddäus Delebinski / Dr. Reza Rezaei

13:00 Influence of fleet compatible Climate Fuels on Emissions and Consumption of modern passenger cars
Thomas Garbe, VW

13:30 Experimental investigation of the influence of OME/diesel blends on the exhaust gas aftertreatment system
Philipp Demel, TU Darmstadt / VKM
Co-authors: Friedemar Knost, Alexander Mokros, Christian Beidl, TU Darmstadt / VKM

14:00 Simulation Study on Real Driving Passive Soot Regeneration in a Dual-Stage SCR System for EUVII
Reza Torbati, NGK Europe GmbH
Co-authors: Dr. Ansgar Wille, Claus-Dieter Vogt, NGK Europe GmbH; Dr. Reza Rezaei, Martin Weber, IAV

14:30 Coffeebreak

15:00 Advanced Exhaust After-treatment System Development for Future Emission Regulation for Heavy-Duty Hydrogen Engines
Martin Weber, IAV
Co-authors: Dávid Kovacs, Reza Rezaei, IAV

15:30 The advanced H₂-ICE engine for LCV's – Clean, efficient and robust
Thomas Körfer, FEV Group GmbH

Session Future Fuels – Emission Control Technology

Dr. Volker Schmeißer / Claus-Dieter Vogt

16:00 Emission Control and Exhaust Gas Aftertreatment of Hydrogen Engines
Sebastian Roiser, TU Graz Institute for Thermodynamics and Sustainable Propulsion Systems
Co-authors: Eberhard Schutting, Helmut Eichelseder, Institute for Thermodynamics and Sustainable Propulsion Systems; Sascha Kleiber, Susanne Luchs, Institute of Chemical Engineering and Environmental Technology

16:30 Design and evaluation of a Pt-based H₂-deNO_x catalyst for lean hydrogen combustion engines
Enno Eber, TU Freiberg / Keyou GmbH
Co-authors: Daniel Koch, Keyou GmbH; Sven Kureti, Institute of Energy Process and Chemical Engineering, TU Freiberg

17:00 Closing Remarks and End of Conference



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