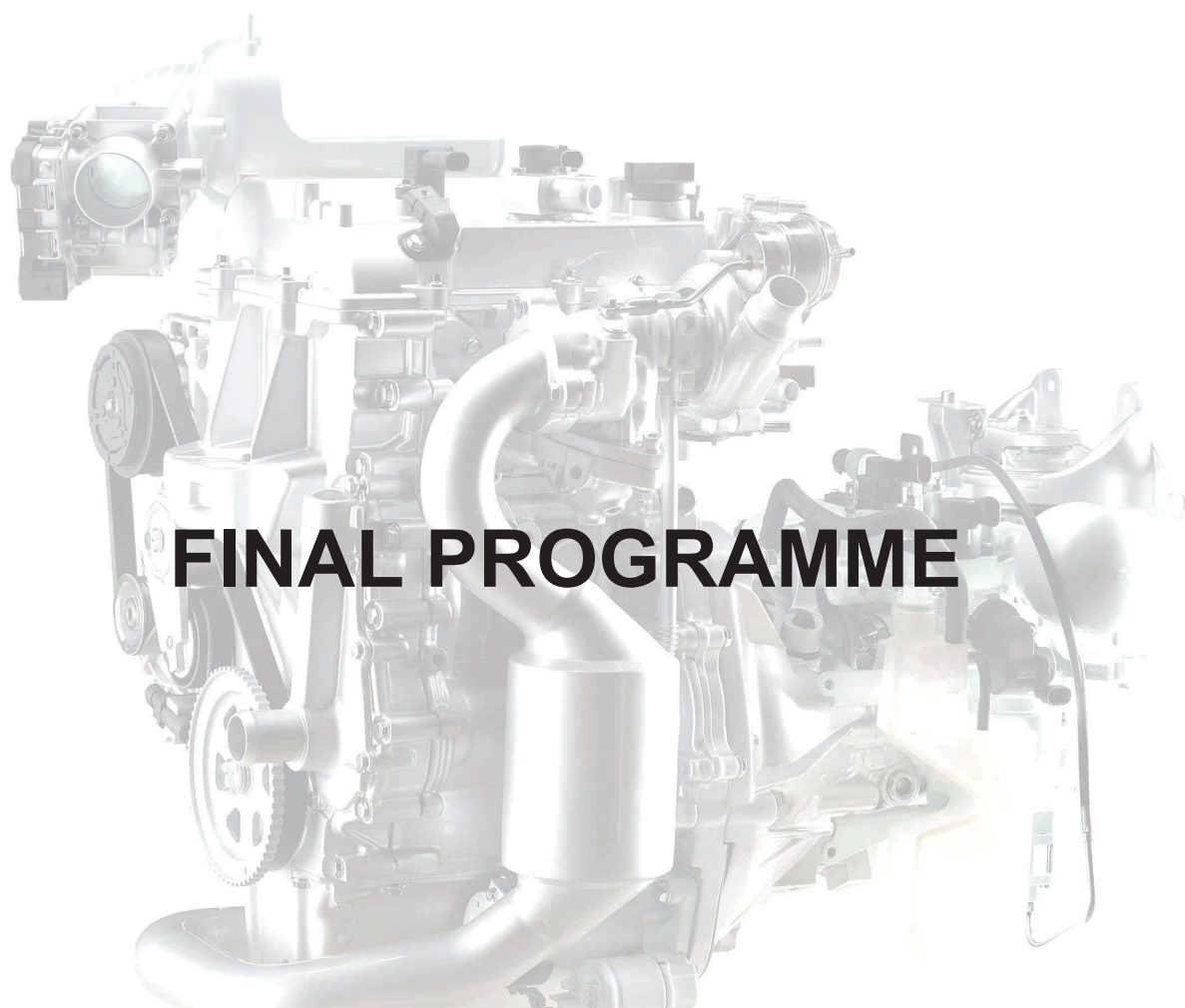


Current and future trends in automotive emissions, fuels, lubricants and test methods



FINAL PROGRAMME

**2nd International Exhaust Emissions
Symposium and Opening
of new Engine test cells
26-27 May 2011**

**2nd International Exhaust Emissions Symposium
and Opening of new Engine test cells
26-27 May 2011**

Our Sponsors:

Gold sponsor of the symposium:



Silver sponsors of the symposium:

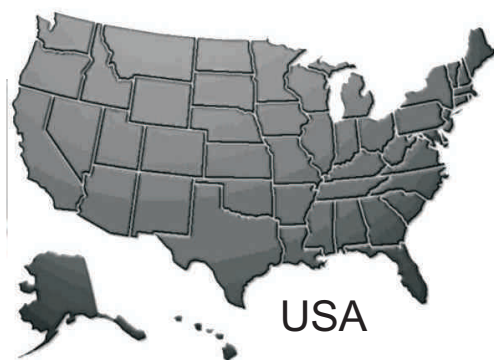


**PETRONAS
LUBRICANTS**



2nd International Exhaust Emissions Symposium and Opening of new Engine test cells 26-27 May 2011

We are hosting guests from the following countries:



USA



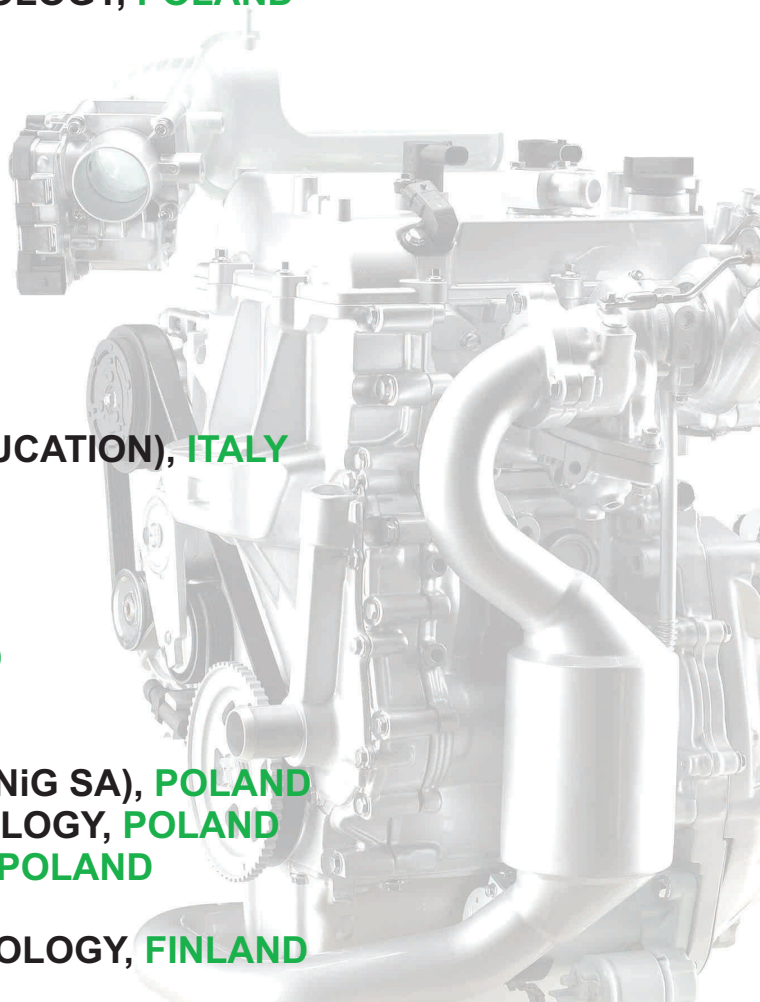
Japan



2nd International Exhaust Emissions Symposium and Opening of new Engine test cells 26-27 May 2011

Our guests:

AECC, **BELGIUM**
AVL, **AUSTRIA**
BASF, **GERMANY**
BIRMINGHAM UNIVERSITY, **ENGLAND**
CRACOW UNIVERSITY OF TECHNOLOGY, **POLAND**
ECO PHYSICS AG, **SWITZERLAND**
ECOCAT, **FINLAND**
ENI, **ITALY**
FEDERALMOGUL, **GERMANY**
FIAT AUTO POLAND, **POLAND**
FIAT POWERTRAIN, **ITALY**
GMPT-E, **USA, ITALY**
HORIBA, **JAPAN, AUSTRIA, UK**
HUBER GROUP, **GERMANY**
IARE (GM-POLITO INSTITUTE FOR
AUTOMOTIVE RESEARCH & EDUCATION), **ITALY**
LANDIRENZO, **ITALY**
LINDE-GAS, **POLAND**
MECAPROM, **ITALY**
NANOSTELLAR, **USA**
OIL AND GAS INSTITUTE, **POLAND**
PETRONAS, **ITALY**
PKN ORLEN SA, **POLAND**
POLISH OIL & GAS COMPANY (PGNiG SA), **POLAND**
POZNAN UNIVERISTY OF TECHNOLOGY, **POLAND**
RADOM TECHNICAL UNIVERSITY, **POLAND**
SHELL, **ENGLAND**
TAMPERE UNIVERSITY OF TECHNOLOGY, **FINLAND**
UMICORE, **ITALY**
UNIVERSITY OF BIELSKO-BIALA, **POLAND**
VITKOVICE MACHINERY GROUP, **CZECH REPUBLIC**
WARSAW UNIVERSITY OF TECHNOLOGY, **POLAND**
WEISS, **GERMANY**



2nd International Exhaust Emissions Symposium and Opening of new Engine test cells 26-27 May 2011

Concerns over the impact of the road transport sector on greenhouse gas emissions and air quality remain high. Road transport emissions are responsible for around 20 per cent of all greenhouse gas emissions in the European Union.

The main drivers that have an influence on current and future personal transportation development are:

- climate change as the biggest environmental challenge - strong action dedicated to the contribution of the transport sector to the reduction of greenhouse gas emissions, global CO₂ legislation targets for new passenger cars (PC) and light commercial vehicles (LCV),
- emissions regulation development at European, US and Asian levels, regulation as an incentive for innovation (examples: Euro 5(+) and Euro 6, planned US Tier 3, LEV III, 2010 Japanese long-term regulations, new hydrogen vehicle regulations, etc.).

At the 2nd International Exhaust Emissions Symposium, experts from automotive and engine manufacturers, their suppliers, and the oil industry, will discuss all these emissions-related issues and will report on recent updates, trends and the near future regarding engine exhaust gas emissions.

Dear Customers, Friends and Colleagues,

Following the highly successful 1st Symposium we hosted last year, we would like to invite you, on behalf of the Bosmal Engineers' Society, the Symposium Organizing Committee and ourselves, to participate in the 2nd International Exhaust Emissions Symposium which will be held at BOSMAL in Bielsko-Biała, Poland.

Attendees will gain knowledge about a variety of subjects being presented on gaseous and particulate matter emissions; emissions legislation trends; emissions testing methods and equipment; the latest development trends in vehicular technology concerning improvements in emissions and fuel consumption; powertrain system development and powertrain test methods; the composition of transport fuels and their influence on emissions. It will be an excellent opportunity to obtain the latest information on the above-mentioned issues and to exchange your opinions with your colleagues.

This year, BOSMAL has completed construction of five new engine test cells designed for the execution of a wide variety of tests. The official opening of these latest additions to our array of test facilities will form part of our meeting.

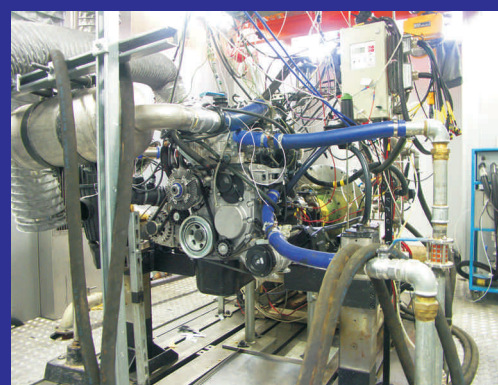
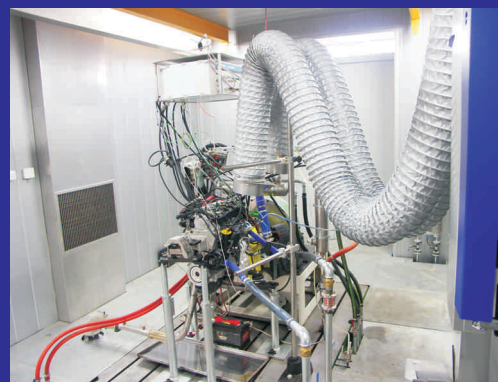
It is our great pleasure to invite you all to the second event of this type here at BOSMAL, so that the success of last year's event may be repeated.

Piotr Bielaczyc, Ph.D.,

Organizing Committee

Antoni Świątek, D.Eng., D.Sc.,

President & CEO



Main topics of the Symposium

- Emissions legislation
- Fuel economy
- New methods of PM testing
- Compounds which are potential candidates for emissions regulation
- Emissions test equipment
- Emissions reduction technology
- Aftertreatment system and catalyst technology
- Emissions simulation
- Powertrain development and electrification
- IC Engine test method development
- Vehicular fuel development
- Alternative fuels
- Gaseous fuels: CNG & LPG
- Engine oil development

Hotel:

PAPUGA PARK HOTEL

ul. Zapora 3, 43-382 Bielsko-Biała

Phone: +48 33 818 58 50

hotel@papuga.pl

http://www.papuga.pl

Organising Committee:

- Piotr Bielaczyc, Ph.D.- Chairman
- Arkadiusz Stojekki
- Agnieszka Kaźmierczak - Coordinator
- Andrzej Suchecki Ph.D.
- Andrzej Szczotka, Ph.D.
- Piotr Pajdowski, Ph.D.
- Joseph Woodburn
- Klaudiusz Waniółka
- Marzena Grygierek

Venue:

BOSMAL Automotive Research & Development Institute

Ul. Sarni Stok 93

43-300 Bielsko-Biała
Poland

Symposium language:

English

Symposium Dinner:

KOCIERZ

ul. Beskidzka 206, Targanice

34-120 Andrychów

tel: +48 33 875 06 00

www.kocierz.pl

Please address any organisational questions to:

Dr. Piotr Bielaczyc, piotr.bielaczyc@bosmal.com.pl, phone: +48 33 8 130 598

Mr. Arkadiusz Stojekki, arkadiusz.stojekki@bosmal.com.pl, phone: +48 33 8 130 500

Ms. Agnieszka Kaźmierczak, agnieszka.kazmierczak@bosmal.com.pl, phone: +48 33 8 130 546

Mr. Joseph Woodburn, joseph.woodburn@bosmal.com.pl, phone: +48 33 8 130 497

2nd International Exhaust Emissions Symposium

26/27 May 2011

BOSMAL, Bielsko-Biała, Poland

The Symposium Programme

Thursday, 26th May 2011

09:00 - 09:15 **Symposium opening**

- Dr Antoni Swiatek, CEO, BOSMAL Automotive R&D Institute

09:15 - 09:45 **Keynote lecture**

- Prof. Giovanni Cipolla, Director of IARE (GM/PoliTo Institute for Automotive Research & Education), Politecnico di Torino, Italy - **Driving of Low CO₂ Future**

Session 1 - Emissions legislation and test method development

Chair: Dr Piotr Bielaczyc

09:45 - 10:15 - Kurt Engeljehringer, AVL, Austria - **Automotive Emission Testing and Certification - Past, Present and Future**

10:15 - 10:45 - Les Hill, HORIBA, UK- **Implications of Future Emissions Legislation on Emissions and Fuel Economy Testing Procedures and Equipment**

10:45 - 11:15 - Dr Piotr Bielaczyc, BOSMAL Automotive R&D Institute, Poland - **IC Engine Test Method Development Regarding Emissions, Alternative Fuels, Lubricants and Future Trends**

11:15 - 12:00 **Opening Ceremony of BOSMAL's new Engine Testing Cells**

Session 2 - PM and NOx emissions test method development

Chair: Prof. Jorma Keskinen

12:00 - 12:30 - Douglas Trombley, Dr Andrea De Filippo, GM Powertrain, USA/Italy - **GM activities on Particle Number and Size Emissions from Diesel Engines & Vehicles**

12:30 - 13:00 - Prof. Jorma Keskinen, Dr Topi Rönkkö, Tampere University of Technology, Finland - **The effect of technology on diesel exhaust particle properties**

13:00 - 13:30 - Dr Mattias Kutter, Dr Werner Moser, Eco Physics, Switzerland - **Challenges in NOx and NH₃ Emission Measurement**

13:30 - 15:00 **Lunch**

2nd International Exhaust Emissions Symposium

26/27 May 2011

BOSMAL, Bielsko-Biała, Poland

Session 3 - Catalyst Technology Development for CI and SI engines

Chair: Prof. Giovanni Cipolla

- 15:00 - 15:30 - Dirk Bosteels, John May, AECC, Belgium - **Emissions Control Technologies to meet Current and Future European Vehicle Emissions Legislation**
- 15:30 - 16:00 - Pankaj Dhingra, CEO, Nanostellar, USA - **Rational Design - a Powerful Set of Tools for Developing Innovative New Materials for Emissions Control Systems**
- 16:00 - 16:30 - Dr Gerardo Carelli, I. Lappas, C. Reith, Umicore, Italy/Germany - **Heavy Duty Engines Catalyst Technology for On Road and Off Road Applications**
- 16:30 - 17:00 - Dr Toni Kinnunen, Dr Kauko Kallinen, Dr Teuvo Maunula, Ecocat, Finland - **Alternative fuels –optimization of catalysts**
- 17:00 - 17:30 - Juergen Pils, Huber Group, Germany - **NOx- Determination in Diesel SCR-Systems by Neural Networks**
- 20:00 - ... **Symposium Dinner in Kocierz in Beskids Mountain (www.kocierz.pl)**

Friday, 27th May 2011

09:30 - 10:00 Keynote lecture

- Dr Gotthard Rainer, Vice President, Advanced Simulation Technologies, AVL, Austria - **Unified Tool Platform for Powertrain Development**

Session 4 - Fuel and engine oil development

Chair: Prof. Jerzy Merkisz

- 10:00 - 10:30 - Gianni Cecconello, Petronas, Italy - **Lubricant Development Process for CO₂ reduction**
- 10:30 - 11:00 - Salvatore Florio, Leonardo Pellegrini, Elena Rebesco, Eni, Italy - **Influence of Chemical Composition of Surrogate Diesel Fuels on Regulated Emissions**
- 11:00 - 11:30 - Catherine Maillard, Shell, UK - **Next Generation Fuels in the Transport Sector**
- 11:30 - 12:00 - Prof. Miroslaw Wyszynski, Birmingham University, UK - **Properties and engine testing of new biofuels and the low temperature AVL transient test facilities at Birmingham**
- 12:00 - 12:30 - Dr Andrzej Szczotka, BOSMAL Automotive R&D Institute, Poland - **The evolution of automotive fuels and fuel test methods in response to emissions and GHG legislation**
- 12:30 - 12:45 - **Symposium summary & closing ceremony**
- Prof. Jerzy Merkisz, Chairman of the Advisory & Scientific Boards, BOSMAL Automotive R&D Institute
- 12:45 - 13:30 **Lunch**
- 13:30 - 14:30 **Visit to BOSMAL's Testing Laboratories**

Bielsko - Biała

