

## INTRODUCTORY SESSION

- 08h00**      **Opening of the registration desk**
- 09h00**      **Welcome Address**
- 09h30**      **EU policy to combat health and climate threats from on-road traffic**  
L 1      *G. Hörmandinger*  
European Commission, Environment Directorate-General, Brussels, Belgium
- 10h15**      **Technical achievements and future challenges in automotive pollution control**  
L2      *T. Johnson*  
Corning Incorporated
- 11h00**      **Coffee Break – Poster Session – General Overview**

## Oral sessions

### NO<sub>x</sub> CONTROL

- 11h30**      **New ways in catalysis for the NO<sub>x</sub> reduction in diesel exhaust gas**  
K 1      *M. Weibel, N. Waldbüßer, D. Chatterjee, R. Wunsch, B. Bandl-Konrad, B. Krutzsch*  
Daimler AG, Department Combustion and Emission Control, Stuttgart, Germany.
- 12h00**      **The NO<sub>x</sub> reduction mechanism by H<sub>2</sub> under near isothermal conditions over Pt-K/Al<sub>2</sub>O<sub>3</sub> lean NO<sub>x</sub> trap systems**  
O 1      *L. Castoldi, L. Lietti, P. Forzatti*  
Dipartimento di Energia, Politecnico di Milano, Milano, Italy.
- 12h20**      **Promotional effect of CO<sub>2</sub> on desulfation processes for pre-sulfated Pt-BaO/Al<sub>2</sub>O<sub>3</sub> lean NO<sub>x</sub> trap catalysts**  
O 2      *Do Heui Kim, Ja Hun Kwak, J. Szanyi, X. Wang<sup>a</sup>, M. H. Engelhard, C. H.F. Peden*  
Institute for Interfacial Catalysis, Pacific Northwest National Laboratory, Richland, USA.  
<sup>a</sup>Department of Chemical Engineering, New Jersey Institute of Technology, Newark, USA.
- 12h40**      **Lunch – Poster Session P1 - P39 :Topic "NO<sub>x</sub> Control"**
- 14h00**      **Effect of the proximity of Pt to Ce or Ba in Pt/Ba/CeO<sub>2</sub> catalysts on NO<sub>x</sub> storage-reduction performance**  
K 2      *R. Büchel<sup>a,b</sup>, R. Strobel<sup>a</sup>, A. Baiker<sup>b</sup>, S. E. Pratsinis<sup>a</sup>*  
<sup>a</sup>Particle Technology Laboratory, Department of Mechanical and Process Engineering, ETH Zurich, Zurich, Switzerland.  
<sup>b</sup>Institute for Chemical and Bioengineering, Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland.
- 14h30**      **Pd-integrated perovskites as effective catalysts for the selective catalytic reduction of NO<sub>x</sub> with propene**  
O 3      *G.C. Mondragón Rodríguez, B. Saruhan, O. Petrova<sup>a</sup>, W. Grünert<sup>a</sup>*  
Inst. of Materials Research, German Aerospace Center, Cologne, Germany.  
<sup>a</sup>Laboratory of Industrial Chemistry, Ruhr-University in Bochum, Bochum, Germany.
- 14h50**      **Nature of active sites of Fe-β catalyst for NO<sub>x</sub>-SCR by NH<sub>3</sub>**  
O 4      *D.E. Doronkin, A.Yu. Stakheev, A.V. Kucherov, N.N. Tolkachev, M. Kustova<sup>a</sup>, M. Høj<sup>a</sup>, G.N. Baeva, G.O. Bragina, P. Gabrielsson<sup>a</sup>, I. Gekas<sup>a</sup>, S. Dahl<sup>a</sup>*  
Zelinsky Institute of Organic Chemistry, Moscow, Russia.  
<sup>a</sup>Haldor Topsøe A/S, Lyngby, Denmark.

- 15h10**      **Study of ammonia formation during the purge of a lean NO<sub>x</sub> trap**  
 O 5      *A. Kouakou<sup>a,b</sup>, F. Dhainaut<sup>b</sup>, P. Granger<sup>b</sup>, F. Fresnet<sup>a</sup>, I. Louis-Rose<sup>c</sup>*  
<sup>a</sup> Renault, Technocentre, Guyancourt, France.  
<sup>b</sup> UCCS, Villeneuve d'Ascq, France.  
<sup>c</sup> Renault, CT Lardy, France.
- 15h30**      **Coffee break – Poster Session P1 - P39 – Topic "NO<sub>x</sub> Control"**
- 16h30**      **Decomposition of urea in the SCR process: combination of DFT calculations and experimental results on the catalytic hydrolysis of isocyanic acid (HNCO) on TiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub>**  
 O 6      *I. Czekaj and O. Kröcher*  
 Paul Scherrer Institute, Villigen PSI, Switzerland.
- 16h50**      **Discussion of posters P1 - P39 : "NO<sub>x</sub> Control"**
- 18h00**      **Departure by bus to the reception**
- 19h00**      **Reception**

## Thursday April 16<sup>th</sup>

### CATALYSTS & SORPTION TECHNOLOGIES – MECHANISMS – KINETICS - MODELING

- 08h30**      **Detailed TWC reaction mechanisms for platinum, palladium and rhodium surfaces**  
 O 7      *S. Tischer, L. Maier, O. Deutschmann, D. Chatterjee<sup>a</sup>*  
 Institute for Chemical Technology and Polymer Chemistry, University of Karlsruhe, Karlsruhe, Germany.  
<sup>a</sup> Interdisciplinary Center for Scientific Computing, University of Heidelberg, Heidelberg, Germany.
- 08h50**      **NO<sub>x</sub> adsorption on Al<sub>2</sub>O<sub>3</sub> and Ag/Al<sub>2</sub>O<sub>3</sub> from first principles**  
 O 8      *A. Hellman and H. Grönbeck*  
 Competence Centre for Catalysis, Chalmers University of Technology, Göteborg, Sweden.
- 09h10**      **NH<sub>3</sub>-NO/NO<sub>2</sub> SCR for diesel exhausts aftertreatment: reactivity, mechanism and kinetic modelling of commercial Fe- and Cu-promoted zeolite catalysts**  
 O 9      *A. Grossale, I. Nova, E. Tronconi, D. Chatterjee<sup>a</sup>, M. Weibel<sup>a</sup>*  
 Dipartimento di Energia, Laboratorio di Catalisi e Processi Catalitici, Politecnico di Milano, Milano, Italy.  
<sup>a</sup> Daimler AG, Stuttgart, Germany.
- 09h30**      **Evaluation of performance of diesel particulate filters through integrated multi-scale computer calculations**  
 O 10      *H. Yanagihara, W. Brandstätter<sup>a</sup>, N. Ohashi<sup>b</sup>, B. Gschaider<sup>c</sup>, J. Leixnering<sup>c</sup>, I. Stankovic*  
 Research & Development, Toyota Motor Europe NV/SA, Zaventem, Belgium.  
<sup>a</sup> Montanuniversität Leoben, Leoben, Austria.  
<sup>b</sup> ICE Strömungsforschung GmbH, Leoben, Austria.  
<sup>c</sup> Higashifuji Technical Center, Toyota Motor Corporation, Shizuoka, Japan.
- 09h50**      **NH<sub>3</sub> slip catalysts: experiments versus mechanistic modelling**  
 O 11      *A. Scheuer, A. Schuler, A. Drochner, H. Vogel, M. Votsmeier<sup>a</sup>, J. Gieshoff<sup>a</sup>*  
 Ernst-Berl-Institut für Technische und Makromolekulare Chemie, TU Darmstadt, Darmstadt, Germany.  
<sup>a</sup> Umicore AG & Co. KG, Hanau, Germany.
- 10h10**      **Coffee break – Poster Session P40 - P66 : Topic "Catalysts & Sorption Technologies – Mechanism – Kinetics – Modeling"**

- 11h10**      **Development and application of sintering dynamics simulation for automotive catalyst**  
 O 12      *A. Suzuki<sup>a</sup>, K. Nakamura<sup>b</sup>, R. Sato<sup>b</sup>, K. Okushi<sup>b</sup>, M. Koyama<sup>b</sup>, H. Tsuboi<sup>b</sup>, N. Hatakeyama<sup>b</sup>, A. Endou<sup>b</sup>, H. Takaba<sup>b</sup>, C. A. Del Carpio<sup>b</sup>, M. Kubo<sup>c</sup>, A. Miyamoto<sup>a,b</sup>*  
<sup>a</sup> New Industry Creation Hatchery Center, Tohoku University, Sendai, Japan.  
<sup>b</sup> Department of Applied Chemistry, Graduate School of Engineering, Tohoku University, Sendai, Japan.  
<sup>c</sup> Fracture and Reliability Research Institute, Graduate School of Engineering, Tohoku University, Sendai, Japan.
- 11h30**      **Spatial resolution of reactant species consumption in diesel oxidation catalysts**  
 O 13      *K. Irani, W. S. Epling, R. Blint<sup>a</sup>*  
 Department of Chemical Engineering, University of Waterloo, Waterloo, Canada.  
<sup>a</sup> General Motors R&D Center, Chemical and Environmental Sciences Laboratory, General Motors R&D Center, Warren, USA.
- 11h50**      **Discussion of posters P40 - P66 : "Catalysts & Sorption Technologies – Mechanism – Kinetics – Modeling"**
- 12h50**      **Lunch – Poster Session P67 - P80 : Topic "Fuel Alternatives – Ageing – Poisoning"**

## FUEL ALTERNATIVES – AGEING - POISONING

- 14h15**      **Discussion of posters P67 - P80 : "Fuel Alternatives – Ageing – Poisoning"**
- 15h00**      **Coffee break – Poster Session P81 – P104 : Topic "Particulate Emission Control & Innovative Technologies"**
- 16h00**      **Methane oxidation over supported Pt - mechanistic consequences of periodic operation**  
 K 3      *P.-A. Carlsson, E. Becker, M. Nordström, M. Skoglundh*  
 Competence Centre for Catalysis and Department of Chemical and Biological Engineering, Chalmers University of Technology, Göteborg, Sweden.
- 16h30**      **Enhancement of 3-way CNG catalyst performance at high temperature due to the presence of water in the feed: on the role of steam reforming of methane and on the influence of ageing**  
 O 14      *M. Salaün, S. Capela<sup>a</sup>, S. Da Costa<sup>a</sup>, L. Gagnepain<sup>b</sup>, P. Da Costa*  
 Université Pierre et Marie Curie, Laboratoire de Réactivité de Surface, Paris, France.  
<sup>a</sup> GDF SUEZ, Direction de la recherche et de l'innovation, La Plaine Saint-Denis, France.  
<sup>b</sup> Agence de l'Environnement et de la Maîtrise de l'Energie – Département Transports et Mobilité, Valbonne, France.
- 16h50**      **Suppression of noble metal sintering based on the support anchoring effect and its application in automotive three-way catalyst**  
 K 4      *H. Shinjoh, M. Hatanaka, Y. Nagai, T. Tanabe, N. Takahashia, T. Yoshida<sup>a</sup>, Y. Miake<sup>a</sup>*  
 Toyota Central R&D Labs, Inc, Nagakute, Japan.  
<sup>a</sup> Toyota Motor Corporation, Toyota, Aichi, Japan.
- 19h30**      **SYMPOSIUM DINNER**

## PARTICULATE EMISSION CONTROL & INNOVATIVE TECHNOLOGIES

- 09h00**      **Simultaneous removal of NO<sub>x</sub> and soot over Pt-Ba/Al<sub>2</sub>O<sub>3</sub> and Pt-K/Al<sub>2</sub>O<sub>3</sub> DPNR catalysts**  
O 15      *R. Matarrese, L. Castoldi, L. Lietti, P. Forzatti*  
Dipartimento di Energia, Politecnico di Milano, Milano, Italy.
- 09h20**      **Simulations of trapping of diesel and gasoline particulate matter in flow-through devices**  
O 16      *H. Ström and B. Andersson*  
Competence Centre for Catalysis / Chemical Reaction Engineering, Chalmers University of Technology, Göteborg, Sweden.
- 9h40**      **The effect of diesel fuel characteristics on soot oxidation behavior**  
O 17      *R. Uitz, H.Jansma<sup>a</sup>, M.Makkee<sup>a</sup>*  
Shell Global Solutions (Germany) GmbH, Hamburg, Germany.  
<sup>a</sup> Delft University of Technology, DCT-CE, Delft, The Netherlands.
- 10h00**      **Discussion of posters P81 – P104 : "Particulate Emission Control & Innovative Technologies"**
- 10h45**      **Coffee break**
- 11h15**      **Direct catalyst monitoring by electrical means - an overview on promising novel principles**  
K 5      *R. Moos, M. Wedemann, M. Spörl, S. Reiß, G. Fischerauer*  
Bayreuth Engine Research Center, Bayreuth, Germany.
- 11h45**      **A membrane-based process for CO<sub>2</sub> capture from internal combustion vehicles**  
O 18      *A. Alshebani, C.-H. Nicolas, M. Pera-Titus, J.-P. Roumegoux<sup>a</sup>, T. Schiestel<sup>b</sup>, S. Miachon, J-A Dalmon*  
Institut de Recherches sur la Catalyse et l'Environnement de Lyon (IRCELYON), Villeurbanne, France.  
<sup>a</sup> Fraunhofer Institut for Interfacial Engineering and Biotechnology (IGB), Stuttgart, Germany.  
<sup>b</sup> Institut National de Recherche sur les Transports et la Sécurité (INRETS), Bron, France.
- 12h05**      **Heat integrated concepts for automotive exhaust purification**  
O 19      *J. Bernnat, M. Rink, U. Tuttlies, T. Danner, U. Nieken, G. Eigenberger*  
Institut für Chemische Verfahrenstechnik, Universität Stuttgart, Stuttgart, Germany.
- 12h25**      **Concluding remarks**
- 13h00**      **Lunch**

# Poster sessions

## NO<sub>x</sub> CONTROL (P1 – P39)

- P1** **Influence of Pt-Ba proximity on NO<sub>x</sub> storage-reduction mechanisms: a space- and time-resolved in situ infrared spectroscopic study**  
*N. Maeda, A. Urakawa, A. Baiker*  
Institute for Chemical and Bioengineering, Department of Chemistry and Applied Biosciences, Zurich, Switzerland.
- P2** **Abatement of NO<sub>x</sub> using rhodium catalysts supported on carbon nanotubes: carbon as a support material and a reducing agent**  
*H. Beyer, K. Chatziapostolou, K. Köhler*  
Department of Chemistry, Technische Universität München, Garching, Germany.
- P3** **Reaction network in the reduction of NO<sub>x</sub> species by CO over Pt-Ba/Al<sub>2</sub>O<sub>3</sub> lean NO<sub>x</sub> trap catalytic systems**  
*I. Nova, L. Lietti, P. Forzatti, F. Frola<sup>a</sup>, F. Prinetto<sup>a</sup>, G. Ghiotti<sup>a</sup>*  
Laboratory of Catalysis and Catalytic Processes, Politecnico di Milano, Milano, Italy.  
<sup>a</sup> Dipartimento di Chimica IFM and NIS, Università di Torino, Torino, Italy.
- P4** **Support modification to improve the sulphur tolerance of Ag/Al<sub>2</sub>O<sub>3</sub> for SCR of NO<sub>x</sub> with propene under lean-burn conditions**  
*N. Jagtap, S. B. Umbarkar, P. Miquel<sup>a</sup>, P. Granger<sup>a</sup>, M. K. Dongare*  
Catalysis Division, National Chemical Laboratory, Pune, India.  
<sup>a</sup> Laboratoire de Catalyse de Lille, Université des Sciences et Technologies de Lille, 59655 Villeneuve D'Ascq Cedex, France.
- P5** **Selective catalytic reduction of NO<sub>x</sub> over nano-sized gold catalyst supported on alumina and titania and over bimetallic gold-silver catalyst supported on alumina**  
*K. Arve, J. Adam<sup>a</sup>, O. Simakova, L. Čapek<sup>a</sup>, K. Eränen, D. Yu. Murzin*  
Laboratory of Industrial Chemistry and Reaction Engineering, Åbo Akademi University, Åbo, Finland.  
<sup>a</sup> Department of Physical Chemistry, University of Pardubice, Czech Republic.
- P6** **Assignment of active sites in Fe-ZSM-5 for the selective catalytic reduction of NO<sub>x</sub> with ammonia by catalytic tests and statistical considerations**  
*S. Brandenberger, O. Kröcher, A. Tissler<sup>a</sup>, R. Althoff<sup>a</sup>*  
Paul Scherrer Institute, Villigen PSI, Switzerland.  
<sup>a</sup> Süd-Chemie AG, Bruckmühl, Germany.
- P7** **Ammonium formate, methanamide and guanidinium formate as alternative ammonia precursor compounds for the selective catalytic reduction of nitrogen oxides in diesel exhaust gas**  
*O. Kröcher, M. Elsener, E. Jacob<sup>a</sup>*  
Paul Scherrer Institute, Villigen, Switzerland.  
<sup>a</sup> Emissionskonzepte, Krailling, Germany.
- P8** **Development of a TG-FTIR system for research in the field of automotive exhaust catalysis**  
*M. Mehring, O. Kröcher, M. Elsener*  
Paul Scherrer Institute, Villigen, Switzerland.
- P9** **An explanation for the strong deactivation of vanadia-based SCR catalysts by alkaline and earth alkali elements**  
*O. Kröcher, I. Czekaj, D. Nicosia*  
Paul Scherrer Institute, Villigen, Switzerland.
- P10** **Screening of doped MnO<sub>x</sub>-CeO<sub>2</sub> catalysts for low-temperature NO-SCR**  
*M. Casapu, O. Kröcher, M. Elsener*  
Paul Scherrer Institute, Villigen, Switzerland.

- P11** **High resistance of Cu-ferrierite to coke formation during NH<sub>3</sub>-SCR in the presence of n-decane**  
*T. Nanba, A. Saltana, S. Masukawa, M. Haneda, J. Uchisawa, A. Obuchi, H. Hamada*  
 National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan.
- P12** **Influence of Mn and Fe addition on the NO<sub>x</sub> storage-reduction properties and SO<sub>2</sub> poisoning of a Pt/Ba/Al<sub>2</sub>O<sub>3</sub> model catalyst**  
*P.N. Lê, E.C. Corbos, X. Courtois, F. Can, S. Royer, P. Marecot, D. Duprez*  
 Laboratoire de Catalyse en Chimie Organique, Université de Poitiers, Poitiers, France.
- P13** **Direct decomposition of NO on BaO/Ba-Y-O catalyst**  
*K. Goto<sup>a</sup>, H. Matsumoto<sup>a</sup>, T. Ishihara<sup>a,b</sup>*  
<sup>a</sup> Department of Applied Chemistry, Kyushu University, Fukuoka, Japan.  
<sup>b</sup> Center for Future Chemistry, Kyushu University, Fukuoka, Japan.
- P14** **Effect of H<sub>2</sub> addition on CH<sub>4</sub> - deNO<sub>x</sub> activity and cation siting of Co,Ag-ferrierite catalysts**  
*P. Ciambelli, D. Sannino, E. Palo, G. Gargano, E. Balboni<sup>a</sup>, A. Martucci<sup>a</sup>, M.C. Dalconi<sup>a</sup>, A. Alberti<sup>a</sup>*  
 Dipartimento di Ingegneria Chimica e Alimentare, Università di Salerno, Fisciano, Italy.  
<sup>a</sup> Dipartimento di Scienze della Terra, Università di Ferrara, Ferrara, Italy.
- P15** **Thermal stability and structure of the Fe-Ba/  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> mixed-oxide systems as NO<sub>x</sub> storage materials**  
*S. M. Andonova, E. Kayhan, G. S. Sentürk, E. Ozensoy<sup>a</sup>*  
 Bilkent University, Chemistry Department, Bilkent, Ankara, Turkey.  
<sup>a</sup> Institute of Material Science and Nanotechnology, Ankara, Turkey.
- P16** **Effect of the synthesis method on alumina supported silver based catalyst for NO<sub>x</sub> selective reduction by ethanol**  
*M. Boutros, B. de Tymowski, J.-M. Trichard<sup>a</sup>, P. Da Costa<sup>a</sup>*  
 Université Pierre et Marie Curie, Paris 6, Laboratoire Réactivité de Surface, Paris, France.  
<sup>a</sup> Renault SAS, DREAM/DTAA, Guyancourt, France.
- P17** **On the effect of poor metals (Al, Ga, In) for NO<sub>x</sub> conversion by SCR ethanol**  
*M. Boutros, J. Starck, B. de Tymowski, J.-M. Trichard<sup>a</sup>, P. Da Costa*  
 Université Pierre et Marie Curie, Paris VI, Laboratoire Réactivité de Surface, Paris, France.  
<sup>a</sup> Renault SAS, DREAM/DTAA, Technocentre Renault, Guyancourt, France.
- P18** **Catalysts based in hydrotalcites containing transition and alkaline metals as active NO<sub>x</sub> storage/reduction catalysts**  
*A. E. Palomares, A. Uzcátegui, A. Corma*  
 Instituto de Tecnología Química (UPV-CSIC), Universidad Politécnica de Valencia, Valencia, Spain.
- P19** **Thermal ageing induced effects on Pd/LaFeO<sub>3</sub> for the HC-SCR: influence of the preparation method**  
*P. Miquel<sup>a</sup>, Y. Yamin, K. Lombaert<sup>a</sup>, C. Dujardin, P. Granger*  
 Université des sciences et Technologies de Lille, Villeneuve D'Ascq, France.  
<sup>a</sup> Renault SAS, Direction de l'Ingénierie des Matériaux, Lardy, France.
- P20** **Selective catalytic reduction of NO<sub>x</sub> by hydrocarbons enhanced by ozone over Ag/Al<sub>2</sub>O<sub>3</sub>**  
*S. Satokawa, M. Oguro, K. Urasaki, T. Kojima*  
 Department of Materials and Life Science, Seikei University, Tokyo, Japan.
- P21** **Formation and consumption pathways of nitroorganic complexes – intermediates in selective catalytic reduction of nitrogen oxides by propene over zirconia-based catalysts: FTIR in situ study**  
*V. A. Matyshak, V. A. Sadykov<sup>a</sup>, V. F. Tret'yakov<sup>b</sup>, J. Ross<sup>c</sup>*  
 Semenov Institute of Chemical Physics, Moscow, Russia.  
<sup>a</sup> Borekov Institute of Catalysis, Novosibirsk, Russia.  
<sup>b</sup> Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia.  
<sup>c</sup> The Limerick University, Limerick, Ireland.

- P22** **Influence of potassium in flame-derived Pt/K/Al<sub>2</sub>O<sub>3</sub> NO<sub>x</sub> storage-reduction catalysts**  
*R. Büchel<sup>a</sup>, R. Strobel, A. Baiker<sup>a</sup>, S. E. Pratsinis<sup>a</sup>*  
 Particle Technology Laboratory, Department of Mechanical and Process Engineering, ETH Zurich, Zürich Switzerland.  
<sup>a</sup> Institute for Chemical and Bioengineering, Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland.
- P23** **Practical evaluation of the catalytic performance of Ir/SiO<sub>2</sub>-based catalysts for selective reduction of NO with Co**  
*M. Sasaki, S. Asima, M. Haneda, H. Hamada*  
 Research Center for New Fuels & Vehicle Technology, National Institute of Advanced Industrial Science and Technology (AIST), Ibaraki, Japan.
- P24** **The effect of Ce-Zr mixed oxide support on NSR storage and reduction activities**  
*B. Çağlar and D. Üner*  
 Department of Chemical Engineering, Middle East Technical University, Ankara, Turkey.
- P25** **Structural properties derived from precursors incorporation order of NSR Pt/Ba/Al<sub>2</sub>O<sub>3</sub> catalysts**  
*U. Elizundia, R. López-Fonseca, M.A. Gutiérrez-Ortiz, J.R. González-Velasco*  
 Chemical Technologies for Environmental Sustainability Group, UPV/EHU, Bilbao, Spain.
- P26** **Effect of synthesis conditions on the activity and stability of Cu-ZSM-5 for lean NO<sub>x</sub> reduction**  
*M. Berggrund, H. H. Ingelsten, M. Skoglundh, A. E. C. Palmqvist*  
 Competence Centre for Catalysis, Chalmers University of Technology, Göteborg, Sweden.
- P27** **Differences between Al<sub>2</sub>O<sub>3</sub> and Ag/Al<sub>2</sub>O<sub>3</sub> for lean reduction of NO<sub>x</sub> with dimethyl ether**  
*S. Tamm<sup>a,b</sup>, H. H. Ingelsten<sup>a,b</sup>, M. Skoglundh<sup>a</sup>, A. E.C. Palmqvist<sup>a,b</sup>*  
<sup>a</sup> Competence Centre for Catalysis, Chalmers University of Technology, Göteborg, Sweden.  
<sup>b</sup> Applied Surface Chemistry, Chalmers University of Technology, Göteborg, Sweden.
- P28** **Aspects of the role of hydrogen in H<sub>2</sub> - assisted HC-SCR over Ag-Al<sub>2</sub>O<sub>3</sub>**  
*H. Kannisto, H. H. Ingelsten, M. Skoglundh*  
 Competence Centre for Catalysis, Chalmers University of Technology, Göteborg, Sweden.
- P29** **Two reaction pathways in selective catalytic reduction of NO<sub>x</sub> by C<sub>6</sub>H<sub>14</sub> over Ag-Al<sub>2</sub>O<sub>3</sub> with H<sub>2</sub> co-feeding**  
*A. Yu. Stakheev, P. V. Pributkov, S. Dahl<sup>a</sup>, I. Gekas<sup>a</sup>, G. N. Baeva, G. O. Bragina, N. S. Telegina*  
 Zelinsky Institute of Organic Chemistry, Moscow, Russia.  
<sup>a</sup> Haldor Topsoe A/S, Lyngby, Denmark.
- P30** **ZSM5-based monolith for the catalytic removal of NO<sub>x</sub>**  
*L. Lisi, R. Pirone, G. Russo<sup>a</sup>, V. Stanzione*  
 Istituto di Ricerche sulla Combustione (CNR) P.le Tecchio, Napoli, Italy.  
<sup>a</sup> Dipartimento di Ingegneria Chimica, Università Federico II di Napoli, Napoli, Italy.
- P31** **NO SCR by NH<sub>3</sub> on copper offretite and LTL zeolites**  
*W. Arous, H. Tounsi, S. Djemel, A. Ghorbel, G. Delahay<sup>a</sup>*  
 Laboratoire de Chimie des Matériaux et Catalyse, Département de Chimie, Tunis, Tunisie.  
<sup>a</sup> Laboratoire de Matériaux Catalytiques et Catalyse en Chimie Organique, Institut Fédératif Charles Gerhardt, Montpellier, France.
- P32** **Alumina and alumina-baria supported cobalt catalysts for lean deNO<sub>x</sub>: influence of the support and cobalt content on the catalytic performance**  
*G. Di Carlo, L. F. Liotta<sup>a</sup>, G. Pantaleo<sup>a</sup>, A.M. Venezia<sup>a</sup>, G. Deganello<sup>a</sup>*  
 Dipartimento di Chimica Inorganica ed Analitica "Stanislao Cannizzaro", Università di Palermo, Palermo, Italy.  
<sup>a</sup> Istituto per lo Studio dei Materiali Nanostrutturati (ISMN)-CNR, Palermo, Italy.

- P33 NO reduction by CO on ruthenia containing zeolites**  
*D. Vallecha, H. Minamino<sup>a</sup>, G. Vishwanathan<sup>b</sup>, P. Chankapure, G.S. Kanade, S. Sivanesan<sup>b</sup>, T. Mitsuhashi<sup>a</sup>, H. Haneda<sup>a</sup>, S. Rayalu, N. Labhsetwar*  
 National Environmental Engineering Research Institute, Nagpur, India.  
<sup>a</sup> National Institute for Materials Science, Ibaraki, Japan.  
<sup>b</sup> Anna University, Gundi, Chennai, India.
- P34 Rh-Sr/Al<sub>2</sub>O<sub>3</sub> catalyst for N<sub>2</sub>O decomposition in the presence of O<sub>2</sub>**  
*S. Parres-Esclapez, F.E. López-Suárez, A. Bueno-López, M.J. Illán-Gómez, B. Ura<sup>a</sup>, J. Trawczynski<sup>a</sup>*  
 Inorganic Chemistry Department, University of Alicante, Alicante, Spain.  
<sup>a</sup> Division of Chemistry of Technology Fuels, Wroclaw University of Technology, Wroclaw, Poland.
- P35 In situ FT-IR investigation on Pd/SA for the selective catalytic reduction of NO with CH<sub>4</sub>**  
*H. Zhang, A. Wang, L. Li, X. Wang, T. Zhang*  
 State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, P.R. China.
- P36 In situ DRIFTS study of the selective reduction of NO with propene over Au/CeO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> catalyst**  
*X. Wang<sup>a</sup>, A. Wang, X. Wang, T. Zhang*  
 State key laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, P.R. China.  
<sup>a</sup> Laboratory of Plasma Physical Chemistry, Dalian University of Technology, Dalian, P.R. China.
- P37 Selective catalytic reduction of NO by acetylene over HZSM-5 promoted by yttrium**  
*X. Wang, Q. Yu, N. Xing, Z. Zhao<sup>a</sup>, H. He<sup>b</sup>*  
 State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian, P.R. China.  
<sup>a</sup> State Key Laboratory of Heavy Oil Processing, China University of Petroleum, Beijing, P.R. China.  
<sup>b</sup> Energy Engineering, Beijing University of Technology, Beijing, P.R. China.
- P38 A new Pr-promoted NO<sub>x</sub> - trap catalyst presenting increased performances and low temperature regeneration from sulphur poisoning**  
*A. Lahougue, P. Bazin, O. Marie, M. Daturi, A. Demourgues<sup>a</sup>, J. Majimel<sup>a</sup>, Y. Kihn<sup>b</sup>, V. Bellière-Baca<sup>c</sup>, V. Harlé<sup>c</sup>, E. Rohart<sup>c</sup>*  
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<sup>b</sup> CEMES-CNRS, Toulouse, France.  
<sup>c</sup> Rhodia Recherches, Aubervilliers, France.
- P39 Influence of preparation methods on catalytic performances of LaCoO<sub>3</sub> perovskite in the catalytic decomposition of N<sub>2</sub>O**  
*J.P. Dacquin, C. Lancelot, C. Dujardin, P. Da Costa<sup>a</sup>, G. Djega-Mariadassou<sup>a</sup>, P. Beaunier<sup>a</sup>, S. Kaliaguine<sup>b</sup>, S. Vaudreuil<sup>b</sup>, S. Royer<sup>c</sup>, P. Granger*  
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## CATALYSTS & SORPTION TECHNOLOGIES – MECHANISMS – KINETICS – MODELING (P40 – P66)

- P40 One-dimensional molecular sieves for hydrocarbon cold start emission control**  
*A. Iliyas, Z. Sarshar<sup>a</sup>, M. H. Zahedi-Niaki<sup>a</sup>, M. Eić, S. Kaliaguine*  
 Department of Chemical Engineering, University of New Brunswick, Fredericton, N.B., Canada.  
<sup>a</sup> Department of Chemical Engineering, Université Laval, Québec, Canada.
- P41 Catalytic performance of aged Rh/CeO<sub>2</sub>-ZrO<sub>2</sub> for NO-C<sub>3</sub>H<sub>6</sub>-O<sub>2</sub> reaction under a stoichiometric condition**  
*M. Haneda, O. Houshito<sup>a</sup>, H. Takagi<sup>a</sup>, K. Shinoda<sup>a</sup>, Y. Nakahara<sup>a</sup>, K. Hiroe<sup>a</sup>, T. Fujitani, H. Hamada*  
 National Institute of Advanced Industrial Science and Technology, Japan.  
<sup>a</sup> Mitsui Mining and Smelting co., Ltd, Saitama, Japan.

- P42** **Effect of  $Ce_xZr_yLa_z$  mixed oxides on the structural and catalytic behavior of Pt-only catalytic converters under simulated exhaust conditions**  
*V. Matsouka, M. Konsolakis, I.V. Yentekakis, A. Papavasiliou<sup>a</sup>, A. Tsetsekou<sup>a</sup>*  
 Laboratory of Physical Chemistry and Chemical Processes, Technical University of Crete, Chania, Crete, Greece.  
<sup>a</sup> School of Mining Engineering and Metallurgy, National Technical University of Athens, Iroon Polytechniou, Athens, Greece.
- P43**  **$N_2O$  abatement over  $\gamma-Al_2O_3$  supported catalysts: effect of reducing agent and active phase nature**  
*G. Pekridis<sup>a</sup>, C. Athanasiou<sup>a</sup>, M. Konsolakis<sup>b</sup>, I.V. Yentekakis<sup>b</sup>, G.E. Marnellos<sup>a,c</sup>*  
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<sup>b</sup> Laboratory of Physical Chemistry and Chemical Processes, Department of Sciences, Technical University of Crete, Chania, Greece.  
<sup>c</sup> Chemical Process Engineering Research Institute, Centre for Research & Technology Hellas, Thessaloniki, Greece.
- P44** **Chemical removal of  $CeO_2$  segregated on the surface of  $CeO_2-ZrO_2$  binary oxides for improvement of OSC**  
*N. Kakuta, Y. Sugino, H. Rachi, H. Ohkita, T. Mizushima*  
 Department of Materials Science, Toyohashi University of Technology, Toyohashi, Japan.
- P45** **Storage and release phenomena of SOx on platinum-based diesel oxidation catalysts**  
*M. Widmer, M. Elsener, O. Kröcher, D. Rothe<sup>a</sup>*  
 Paul Scherrer Institute, Villigen, Switzerland.  
<sup>a</sup> MAN Nutzfahrzeuge AG, Nürnberg, Germany.
- P46** **Investigation of hydrocarbons conversion over a Pt-based automotive diesel oxidation catalyst : application to exhaust port fuel injection**  
*O. Mathieu, J. Lavy<sup>a</sup>, E. Jeudy<sup>a</sup>*  
 Saudi Aramco, Research and Development Division, Dhahran, Saudi Arabia.  
<sup>a</sup> Institut Français du Pétrole-Lyon, Département Moteurs, Vernaison, France.
- P47** **Interaction of acidity and reducibility with  $WO_3$  addition on to Pt/ $CeO_2-ZrO_2$  catalysts on NO+CO reaction**  
*Jeong-Rang Kim, Hai-ou Zhu, Son-Ki Ihm*  
 Department of Chemical and Biomolecular Engineering, Daejeon, Republic of Korea.
- P48** **Electrical in-situ characterization of three-way catalyst coatings**  
*S. Reiß, M. Wedemann, R. Moos, M. Rösch<sup>a</sup>*  
 Bayreuth Engine Research Center, University of Bayreuth, Bayreuth, Germany.  
<sup>a</sup> Umicore AG & Co. KG, Hanau, Germany.
- P49** **Low temperature activity of Euro4 diesel oxidation catalysts : comprehensive material analyses and experimental evaluation of a representative panel**  
*S. Raux, A. Frobert, E. Jeudy*  
 Energy Applications Techniques Division, IFP, Solaize, France.
- P50** **Effects of Ce-Zr modified alumina on low Pt-Rh catalysts**  
*L. Zhang<sup>a</sup>, A. Wang<sup>a</sup>, X. Zhang, T. Zhang<sup>a</sup>, M. Gong, Y. Chen*  
 Key Laboratory for Green Chemical Technology of State Education Ministry, College of Chemistry, Sichuan University, Sichuan, China.  
<sup>a</sup> State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Dalian, P.R. China.
- P51**  **$La_{3.5}Ru_{4.0}O_{13}$  perovskite type catalyst for carbon monoxide oxidation**  
*N. K. Labhsetwar<sup>a</sup>, P. Doggli<sup>a</sup>, P. Chankapure<sup>a</sup>, D. Vallecha<sup>a</sup>, S. Lokhande<sup>a</sup>, A. Watanabe, S. Rayalu<sup>a</sup>, H. Haneda, T. Mitsuhashi*  
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<sup>a</sup> National Environmental Engineering Research Institute, Nagpur, India.

- P52** **Monolithic catalysts with low noble metal content for diesel vehicle emission control**  
*S.A.Yashnik, Z.R.Ismagilov, A.V.Porsin<sup>a</sup>, S.P.Denisov<sup>a</sup>, N. M.Danchenko<sup>a</sup>*  
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<sup>a</sup> Ural Electrochemical Integrated Plant, Novoural'sk, Russia.
- P53** **Comparison between the levels of soot combusted using a conventional DPNR catalyst and rare earth oxides doped Ce/Zr materials.**  
*P.Dulgheru and J.A. Sullivan*  
 UCD School of Chemistry and Chemical Biology, Belfield, Dublin 4, Ireland.
- P54** **Modeling of catalytic exhaust aftertreatment systems – From laboratory reactor data to successful prediction of emissions from vehicles**  
*F. Ekström, F. Wallin, A. Fathali, D. Geyer<sup>a</sup>, G. Russ<sup>b</sup>*  
 General Motors Powertrain Sweden AB, Trollhättan, Sweden.  
<sup>a</sup> General Motors Powertrain Germany GmbH, Rüsselsheim, Germany.  
<sup>b</sup> Hochschule Darmstadt, Darmstadt, Germany.
- P55** **Acetylene oxidation in the presence of CO on gold catalyst : a model reaction for cold start engine oxidation**  
*Y. Azizi, C. Petit, V. Pitchon*  
 Laboratoire des Matériaux Surfaces et Procédés pour la Catalyse, UMR 7515 du CNRS, Strasbourg, France.
- P56** **Mechanistic considerations of the NO<sub>x</sub> source and the reducing agent for lean NO<sub>x</sub> reduction over H-ZSM-5**  
*H. H. Ingelsten, R. Matarrese<sup>a</sup>, M. Skoglundh*  
 Competence Centre for Catalysis, Department of Chemical and Biological Engineering, Chalmers University of Technology, Göteborg, Sweden.  
<sup>a</sup> Laboratorio di Catalisi e Processi Catalitici, Dipartimento di Energia, Politecnico di Milano, Milano, Italy.
- P57** **New 2D-model for simulations of wall-flow-monoliths with an implemented catalytic functionality**  
*S. J. Ungermann, H. Vogel, M. Votsmeier<sup>a</sup>, J. Gieshoff<sup>a</sup>*  
 Technical University of Darmstadt, Department of Technical Chemistry and Macromolecular Science, 64287 Darmstadt, Germany.  
<sup>a</sup> Umicore AG & Co. KG, 63403 Hanau, Germany.
- P58** **A fast approach to predictive models - NO-oxidation in exhaust gas aftertreatment systems**  
*W. Hauptmann<sup>a,b</sup>, M. Votsmeier<sup>a</sup>, J. Gieshoff<sup>a</sup>, D. G. Vlachos<sup>c</sup>, A. Drochner<sup>b</sup>, H. Vogel<sup>b</sup>*  
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<sup>c</sup> Department of Chemical Engineering and Center for Catalytic Science and Technology, University of Delaware, Newark, USA.
- P59** **Global kinetic model and parameter optimization for a diesel oxidation catalyst**  
*A. Pandya, J. Mmbaga, R.E. Hayes, W. Hauptmann<sup>a</sup>, M. Votsmeier<sup>a</sup>*  
 Department of Chemical, University of Alberta, Alberta, Canada.  
<sup>a</sup> Umicore, Automotive Catalysis Division, Research and Development, Hanau, Germany.
- P60** **Simulation of NH<sub>3</sub>-slip catalysts based on mapped elementary rate information**  
*A. Scheuer, M. Votsmeier<sup>a</sup>*  
 Technical University of Darmstadt, Department of Technical Chemistry and Macromolecular Science, Darmstadt, Germany.  
<sup>a</sup> Umicore AG & Co. KG, Hanau, Germany.
- P61** **An improved model for NO<sub>x</sub> - storage catalysts**  
*V. Schmeißer, G. Eigenberger, U. Nieken*  
 Institut für Chemische Verfahrenstechnik, Universität Stuttgart, Stuttgart, Germany.
- P62** **Experimental investigation and modelling of SCR-deNO<sub>x</sub> reaction dynamics**  
*U. Tuttlies, J. Bernnat, O. Jovalekic, U. Nieken*  
 Institut für Chemische Verfahrenstechnik, Universität Stuttgart, Stuttgart, Germany.

- P63**      **A mechanistic investigation of Pt and Au supported bifunctional catalysts for hydrogen production**  
*O. Thimon, Y. Schuurman, F. Diehl<sup>a</sup>, P. Avenier<sup>a</sup>*  
 Institut de Recherche sur la Catalyse et l'Environnement de Lyon, Université de Lyon Villeurbanne, France.  
<sup>a</sup> Institut Français du Pétrole-Lyon, Solaize, France.
- P64**      **Experimental and theoretical study of CO oxidation on PdAu catalysts with NO pulse effects**  
*X. Hao, B. Shan, J. Hyun, N. Kapur, K. Furdala, T. Truex, K. Cho<sup>a</sup>*  
 Nanostellar Inc, Redwood City, USA.  
<sup>a</sup> Department of Materials Science and Engineering and Department of Physics, University of Texas at Dallas, Richardson, USA.
- P65**      **Kinetic modelling of octane selective catalytic reduction of NO<sub>x</sub> over Ag-Al<sub>2</sub>O<sub>3</sub>**  
*D. Creaser, H. Kannisto<sup>a</sup>, J. Sjöblom, H. H. Ingelsten<sup>a</sup>*  
 Chemical Reaction Engineering, Department of Chemical and Biological Engineering, Chalmers University of Technology, Göteborg, Sweden.  
<sup>a</sup> Competence Centre for Catalysis, Department of Chemical and Biological Engineering, Chalmers University of Technology, Göteborg, Sweden.
- P66**      **The role of active sites in the non-catalytic oxidation of carbon particulate matter: a theoretical approach**  
*C. J. Kamp, B. Andersson*  
 Department of Chemical Reaction Engineering and Competence Centre for Catalysis, Chalmers University of Technology, Göteborg, Sweden.

## FUEL ALTERNATIVES – AGEING – POISONING (P67 – P80)

- P67**      **Palladium-based catalysts for diesel-engine exhaust systems**  
*J. L. Aluha, G. Patrick, E. van der Lingen*  
 Advanced Materials Division, Mintek, Randburg, South Africa.
- P68**      **Dominant reaction pathways in catalytic partial oxidation of CH on Rh**  
*M. Maestri<sup>a</sup>, D. G. Vlachos<sup>a,b</sup>, A. Beretta<sup>b</sup>, P. Forzatti<sup>b</sup>, G. Groppi<sup>b</sup>, E. Tronconi<sup>b</sup>*  
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<sup>b</sup> Laboratory of Catalysis and Catalytic Processes, Dipartimento di Energia, Politecnico di Milano, Milano, Italy.
- P69**      **Study of sulfur poisoning on Pd/Al<sub>2</sub>O<sub>3</sub> and Pd/CeO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> methane combustion catalysts**  
*S. Colussi, F. Arosio<sup>a</sup>, T. Montanari<sup>b</sup>, G. Busca<sup>b</sup>, G. Groppi<sup>a</sup>, A. Trovarelli*  
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<sup>b</sup> Dipartimento di Ingegneria Chimica e di Processo, Università di Genova, Genova, Italy.
- P70**      **Insights into SO<sub>2</sub> interaction with Pd/Co<sub>3</sub>O<sub>4</sub>-CeO<sub>2</sub> catalysts for methane oxidation**  
*L.F. Liotta, G. Di Carlo<sup>a</sup>, G. Pantaleo, G. Deganello<sup>a</sup>, A. M. Venezia*  
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<sup>a</sup> Dipartimento di Chimica Inorganica e Analitica "Stanislao Cannizzaro", Università di Palermo, Palermo, Italy.
- P71**      **Reforming of diesel fuel for hydrogen production over catalysts derived from LaCo<sub>1-x</sub>M<sub>x</sub>O<sub>3</sub> (M = Ru, Fe)**  
*N. Mota, M.C. Álvarez-Galván, F. Rosa<sup>a</sup>, J.L.G. Fierro, R.M. Navarro*  
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<sup>a</sup> Centro de Experimentación "El Arenosillo" (INTA), Mazagón-Moguer, Huelva, Spain.
- P72**      **Pd-perovskite catalysts for methane emissions abatement: study of Pd substitution effects**  
*N. Russo, P. Palmisano, D. Fino, G. Saracco, V. Specchia*  
 Materials Science and Chemical Engineering Department, Politecnico di Torino, Torino, Italy.

- P73**      **The indirect use of alcohols as diesel fuels**  
*P. Gabrielsson, P.-E. Højlund Nielsen, C. Christensen, S.-E. Mikkelsen*  
 Haldor Topsøe A/S, Lyngby, Denmark.
- P74**      **Catalytic post-treatment of automotive exhaust gas from natural gas combustion engines: potential interest of perovskite materials**  
*Y. Renème, F. Dhainaut, P. Granger*  
 Université des Sciences et Technologies de Lille, Laboratoire de Catalyse de Lille, Villeneuve d'Ascq, France.
- P75**      **Effect of thermal aging on the transient kinetics of oxygen storage and release of commercial  $\text{Ce}_x\text{Zr}_{1-x}\text{O}_2$  solids**  
*S. Y. Christou, H. Bradshaw<sup>a</sup>, C. Butler<sup>a</sup>, A. M. Efstathiou*  
 Chemistry Department, University of Cyprus, Nicosia, Cyprus.  
<sup>a</sup> MEL Chemicals, Lumns Lane Swinton, Manchester, United Kingdom.
- P76**      **Influence of ageing conditions on the structure of commercial three-way catalysts**  
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<sup>a</sup> General Motors Powertrain - Germany GmbH, Ruesselsheim, Germany.
- P77**      **Performance deterioration of catalytic exhaust gas aftertreatment components**  
*P. Lanzerath, A. Güthenke, A. Massner, U. Gaertner*  
 Daimler AG, Dept. TP/PMA, Stuttgart, Germany.
- P78**      **The effect of  $\text{SO}_2$  and  $\text{H}_2\text{O}$  on the activity of Pd/CeO<sub>2</sub> and Pd/Zr-CeO<sub>2</sub> diesel oxidation catalysts**  
*T. Kollu, T. Kanerva<sup>a</sup>, P. Lappalainen<sup>b</sup>, M. Huuhtanen, M. Vippola<sup>a</sup>, T. Kinnunen<sup>c</sup>, K. Kallinen<sup>c</sup>, T. Lepistö<sup>a</sup>, J. Lahtinen<sup>b</sup>, R. L. Keiski*  
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<sup>b</sup> Helsinki University of Technology, Department of Applied Physics, Hut, Finland.  
<sup>c</sup> Ecocat Oy, Typpitie 1, Oulu, Finland.
- P79**      **Regeneration of an aged commercial three-way catalytic converter**  
*S. Y. Christou, J. Gässte<sup>a</sup>, H. L. Karlsson<sup>a</sup>, A. M. Efstathiou*  
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<sup>a</sup> AVL MTC, Armaturvägen 1, Haninge, Sweden.
- P80**      **An investigation on diesel/bioethanol blends emissions abatement**  
*G. Corro and E. Ayala*  
 Benemerita Universidad Autonoma de Puebla, Puebla, Mexico.

## PARTICULATE EMISSION CONTROL (P81 – P100)

- P81**      **High-throughput and micro-kinetic approaches to the development of diesel soot combustion catalysts**  
*B. Badr, N. Guilhaume, K. Lombaert<sup>a</sup>, D. Bianchi, C. Mirodatos*  
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<sup>a</sup> Renault S.A.S., Centre Technique de Lardy, Direction de l'Ingénierie Matériaux, Lardy, France.
- P82**      **NO<sub>x</sub> storage and high temperature soot oxidation on Pt-Sr/ZrO<sub>2</sub> catalyst**  
*A. L. Kustov and M. Makkee*  
 Delft University of Technology, DelftChemTech, Catalysis Engineering, Delft, The Netherlands.
- P83**      **Simultaneous removal of soot and NO<sub>x</sub> from lean-burn engine emissions over K<sub>2</sub>Ti<sub>2</sub>O<sub>5</sub> - based catalysts**  
*Qiang Wang, Joo Young Lee<sup>a</sup>, Linhai Duan<sup>a,b</sup>, Jong Shik Chung<sup>a</sup>*  
 School of Environmental Science and Technology, Pohang, Republic of Korea.  
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<sup>b</sup> College of Petrochemical Engineering, Liaoning Shihua University, Fushun, Liaoning, P.R. China.

- P84** **EPR and SEM characterizations of the contact between carbon black and cerium oxide**  
*M. Issa, C. Petit, A. Aboukais<sup>a</sup>, J-F. Brilhac*  
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<sup>a</sup> Laboratoire de Catalyse et Environnement, Université du Littoral-Côte d'Opale, Dunkerque, France.
- P85** **Alumina supported Co-K-Mo based catalytic material for diesel soot oxidation**  
*M. Dhakad, Amish G. Joshi<sup>a</sup>, S. Rayalu, P. Tanwar, J. K. Bassin, R. Kumar, S. Lokhande, J. Subrt<sup>b</sup>, T. Mitsuhashi<sup>c</sup>, N. Labhsetwar*  
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<sup>b</sup> Institute of Inorganic Chemistry, Academy of Sciences of the Czech Republic, Řež, Czech Republic.  
<sup>c</sup> National Institute for Materials Science, Tsukuba, Japan.
- P86** **Influence of carbon-catalyst interactions on carbon black oxidation**  
*C. Ohlson, M. Skoglundh, B. Andersson, P.-A. Carlsson*  
 Department of Chemical and Biological Engineering and Competence Centre for Catalysis, Chalmers University of Technology, Göteborg, Sweden.
- P87** **CeO<sub>2</sub>/Pr<sub>4.8</sub>Bi<sub>1.2</sub>O<sub>11</sub> as active low temperature diesel soot oxidation**  
*T. Ishihara, S. Hamamoto, T. Oishi, H. Matsumoto*  
 Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan.
- P88** **Soot oxidation with NO + O<sub>2</sub> over Pt catalyst: direct evaluation of Pt catalyst efficiency in NO to NO<sub>2</sub> recycling**  
*A. Yu. Stakheev, A. M. Gololobov, S. Dahl<sup>a</sup>, G. N. Baeva, G. O. Bragina, N.S. Teleguina*  
 Zelinsky Institute of Organic Chemistry, Moscow, Russia.  
<sup>a</sup> Haldor Topsoe A/S, Lyngby, Denmark.
- P89** **Characterization of particulate matter emissions from automotive diesel engine**  
*N. Russo, D. Fino, F. Millo, S. Zancanaro, F. Ferrero<sup>a</sup>, A. Chianale*  
 Materials Science and Chemical Engineering Department, Politecnico di Torino, Torino, Italy.  
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- P90** **Comparison of different diesel particulate filters**  
*J.C. Caroca, G. Villata, D. Fino, N. Russo, V. Specchia*  
 Materials Science and Chemical Engineering Department, Politecnico di Torino, Torino, Italy.
- P91** **New tool for experimental analysis of diesel particulate filter loading**  
*D. Fino, N. Russo, F. Millo, S. Zancanaro, F. Ferrero<sup>a</sup>, A. Chianale<sup>a</sup>*  
 Materials Science and Chemical Engineering Department, Politecnico di Torino, C.so, Torino, Italy.  
<sup>a</sup> General Motors Powertrain Europe, Torino, Italy.
- P92** **Further insights into the key features of ceria-zirconia mixed oxides governing the catalysed soot combustion under NO<sub>x</sub>/O<sub>2</sub>**  
*I. Atribak, A. Bueno-Lopez, A. Garcia-Garcia*  
 Department of Inorganic Chemistry, University of Alicante, Alicante, Spain.
- P93** **NO<sub>x</sub> adsorption/desorption processes over Ce<sub>0.76</sub>Zr<sub>0.24</sub>O<sub>2</sub> and their influence on desoot activity: effect of the catalyst calcination temperature**  
*I. Atribak, B. Azambre<sup>a</sup>, A. Bueno-Lopez, A. Garcia-Garcia*  
 Department of Inorganic Chemistry, University of Alicante, Alicante, Spain.  
<sup>a</sup> Université Paul Verlaine de Metz, LCME, Saint Avold, France.
- P94** **Base metal oxide coating for actively regenerating DPF**  
*H. Christensen, L. C. Larsen, S. Enevoldsen*  
 Dinex Emission Technology A/S, Middelfart, Denmark.
- P95** **Soot combustion and NO<sub>x</sub> removal on CeFeO catalysts**  
*D. Han, Y. Xin, Y. Zhang<sup>a</sup>, Z. Wang, Z. Zhang, X. Gao<sup>a</sup>*  
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<sup>a</sup> Liaoning key laboratory of Internal Combustion Engines, Institute of Internal Combustion Engine, Dalian University of Technology, Dalian, P.R. China.

- P96** **MnO<sub>x</sub> and Cu- and Pt-doped MnO<sub>x</sub> catalysts for heavy duty truck soot oxidation**  
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- P97** **In situ microwave regeneration of SiC WFF for diesel engines**  
*V. Palma, P. Russo, F. Ricciardi, P. Ciambelli, A. Sin<sup>a</sup>, T. Ambrosini<sup>a</sup>*  
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- P98** **Possibility of using metallo-zeolites as soot oxidation catalysts**  
*N. Labhsetwar, M. Dhakad, P. Kumar, P. Chankapure, S. Rayalu, S. Shinde, Y. Matsui<sup>a</sup>, S. Hishita<sup>a</sup>, Y. Teraoka<sup>b</sup>*  
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- P99** **Potassium stability in soot combustion perovskite catalysts**  
*F. E. López-Suárez, A. Bueno-López, M.J. Illán-Gómez, B. Ura<sup>a</sup>, J. Trawczynski*  
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- P100** **Exposure of diesel bus particulates after two different exhaust catalysts; Inhaled particulate deposition into a school age child**  
*K. Oravisjärvi, M. Pietikäinen, A. Rautio<sup>a</sup>, M. Haataja<sup>b,c</sup>, A. Voutilainen<sup>d</sup>, J. Ruuskanen<sup>e</sup>, R. L. Keiski*  
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## INNOVATIVE TECHNOLOGIES (P101 –P104)

- P101** **On-board hydrogen production through catalytic exhaust-gas reforming of isooctane**  
*E. Ambrose, C. Courson, A. Kiennemann, A.-C. Roger, O. Pajot<sup>a</sup>, E. Samson<sup>a</sup>, G. Blanchard<sup>a</sup>*  
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- P102** **Arc plasma processing of Pt and Pd catalysts supported on  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> powders**  
*S.Hinokuma, K.Murakami, K.Uemura, M.Matsuda, K.Ikeue, N.Tsukahara<sup>a</sup>, M.Machida*  
 Department of Nano Science and Technology, Graduate School of Science and Engineering, Kumamoto University, Kumamoto, Japan.  
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- P103** **Simulation of on-board fuel conversion in catalytic microchannel reactor heat exchanger systems**  
*M. Karakaya and A. K. Avci*  
 Department of Chemical Engineering, Bogaziçi University, Istanbul, Turkey.
- P104** **Nanostructured carbons as catalyst supports for fuel cell electrodes**  
*N. Job, S. Berthon-Fabry<sup>a</sup>, M. Chatenet<sup>b</sup>, M. Brigaudet<sup>a</sup>, F. Maillard<sup>b</sup>, J. Marie<sup>a</sup>, J-P. Pirard*  
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