EUROPACAT

13th European Congress on Catalysis

FLORENCE, ITALY 2017

27 - 31 August

CATALYSIS - A BRIDGE TO THE FUTURE

PROGRAMME

CONTENTS

The Organizing Committee warmly welcomes you to the 13th European Congress on Catalysis held in the wonderful Florence. The theme of "A bridge to the future" features the crucial roles of catalysis science and technology in enabling our sustainable future and will offer both the state-of-the-art on catalysis research and a perspective of new trends and opportunities for catalysis in the next decades.
The Congress will serve as a platform to exchange new ideas and to discuss the advances in all areas of catalysis is particularly built around four.
The Conference pillars: science, catalysis community, relations with companies and society.
The choice of the venue (Florence, a city of arts and cultural heritage) was made to strengthen the sense of catalysis community and attract participation with families. The Congress centre is located within walking distance from the city centre and most part of hotels and B&B are available at 5-10 min walking distance.
Inside the Conference centre area there are many places to sit together with colleagues and friends to discuss about science and plan collaborations and project proposals. Coffee stations and water dispensers will be available in different areas of the Congress centre and free during the Congress timetable. In addition, payment bars will be also available in the Congress area.
The Congress program will be mainly in the electronic form, with the distribution of a specific APP where the program, the last news and updates, the congress map and all the abstracts will be available. We really hope that you will enjoy the program, the Congress centre in the downtown area and the venue of the Meeting, Florence, a people-friendly, open-air-museum, which boasts an historical-artistic legacy known throughout the world.
We wish you a productive and inspiring Meeting and an unforgettable free time in Florence.

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Giorgio STRUKUL (DCI/SCI), Siglinda PERATHONER (INSTM)

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- Italian Group of Catalysis of the Italian Chemical Society (SCI)
- Division of Industrial Chemistry of SCI
- University Consortium on Science and Technology of Materials (INSTM)

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Hospitality Suite eni
Info Point

SECOND FLOOR
Room Verde
Coffee bar

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PALAZZO AFFARI

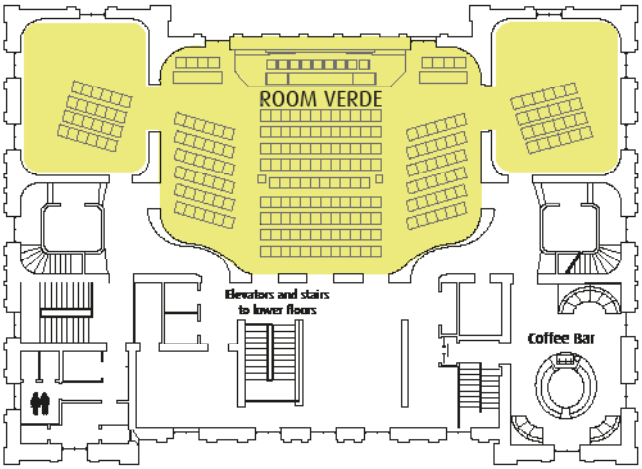
-2 FLOOR
Room Basement

GROUND FLOOR
Room Ground Floor
Info Point

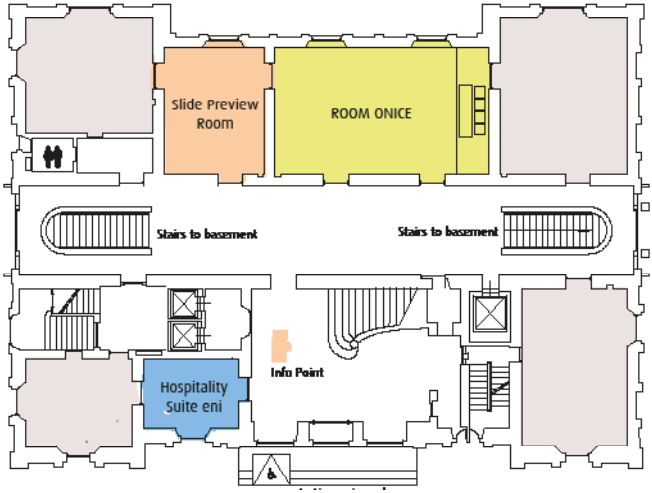
FIRST FLOOR
Room First Floor
Slide Preview Room
Coffee bar
Room Adua 1

SECOND FLOOR
Room Adua 2

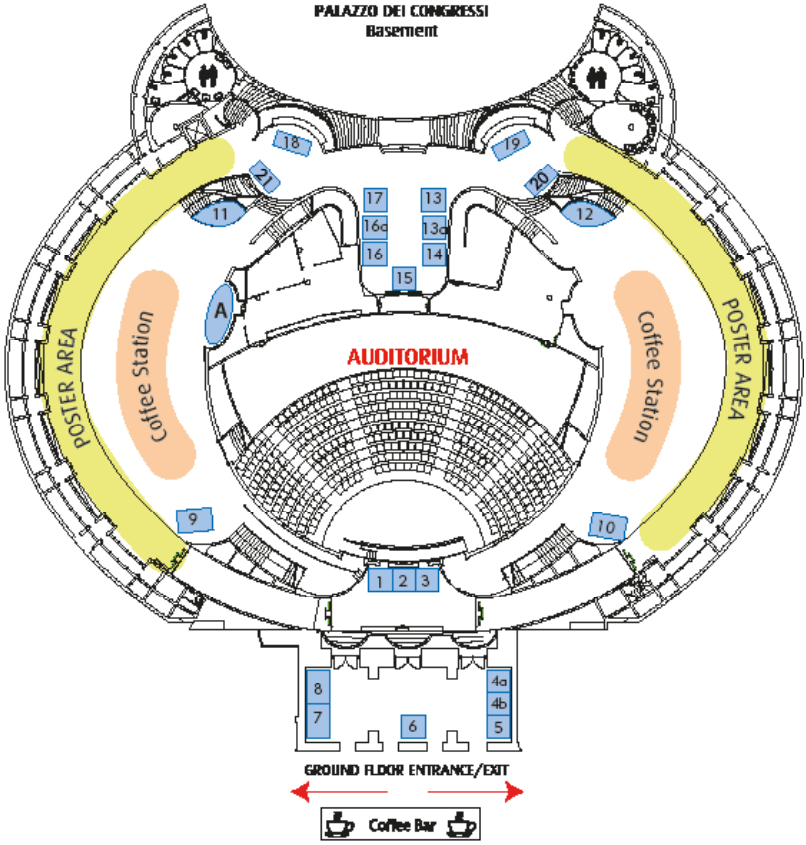
PALAZZO DEI CONGRESSI
Second Floor



Ground Floor



CONGRESS AREA



Advanced Machinery & Technology Chemnitz	20	hte	18
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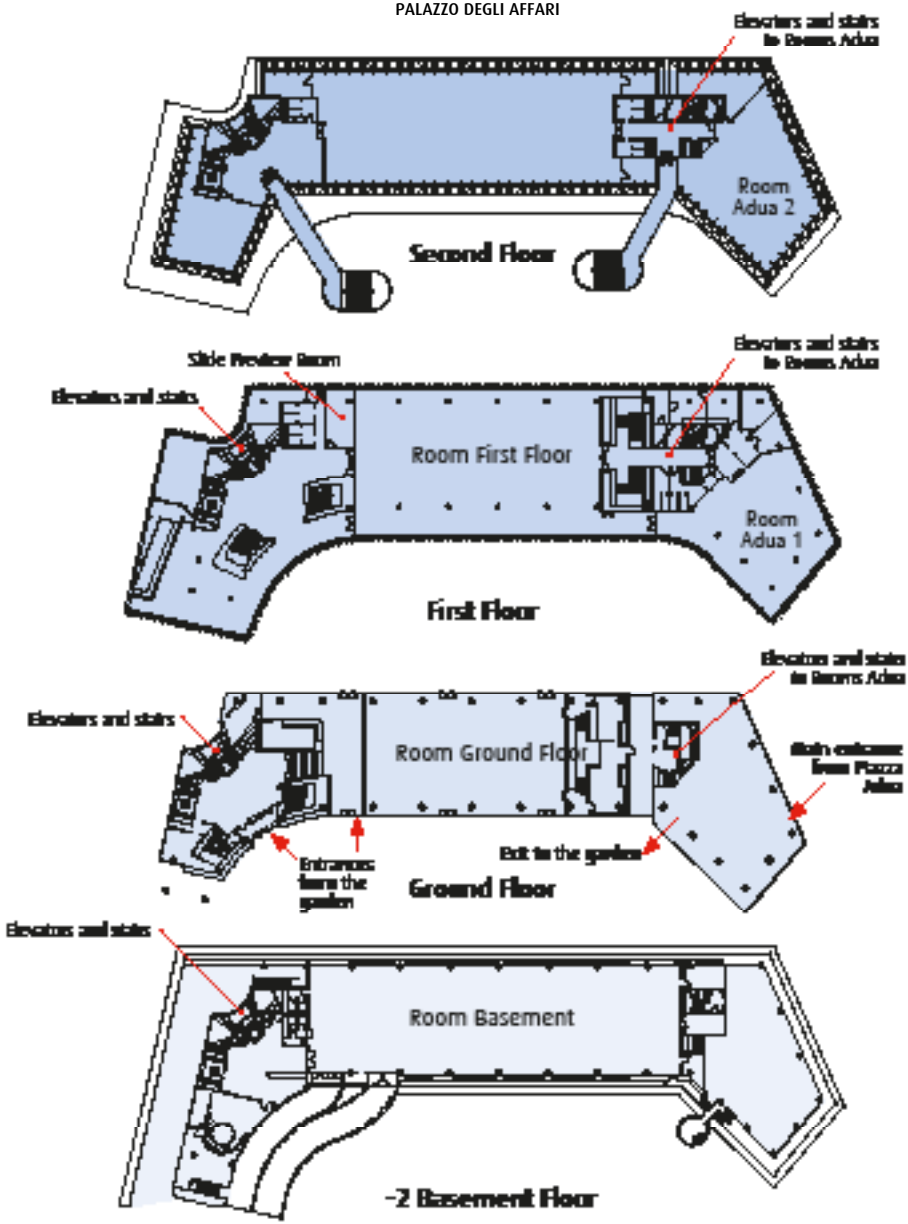
Hiden Analytical	5	Zeton BV	21

CONGRESS AREA

PALAZZO DEGLI AFFARI



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Palazzo dei Congressi
Piazza Adua, 1
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During the Meeting the Registration Desk is open at the Limonaia as follows:

Sunday, 27 August	08.30-20.00
Monday, 28 August	07.45-20.00
Tuesday, 29 August	07.45-20.00
Wednesday, 30 August	08.00-17.00
Thursday, 31 August	08.00-19.00

Organizing Secretariat

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Further information about the Meeting and Florence are available on the Congress App

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Horizon 2020

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	Sunday, 27 August				Monday, 28 August								Tuesday, 29 August								
	Palazzo CONGRESSI		Palazzo AFFARI		Palazzo CONGRESSI			Palazzo AFFARI					Palazzo CONGRESSI			Palazzo AFFARI				
	Auditorium	Verde	Basement	Adua 1	Auditorium	Verde	Onice	Basement	Ground Floor	First Floor	Adua 1	Adua 2	Auditorium	Verde	Onice	Basement	Ground Floor	First Floor	Adua 1	Adua 2
08.30-09.30					PL2								PL3							
09.30-09.40					*Break*								*Break*							
09.40-10.20					1B	3B		TS1.1	KNI-1	2B			TS2.1	KN7		6B.1		1D	4B	
10.20-11.00									6A					2D						
11.00-11.10					*Break*								*Break*							
11.10-11.50					1B	3B		TS1.1	6A	2B			TS2.1	2D		KNI-2	1D	4B		
11.50-12.30					KN3								KN-X1			6B.2				
12.30-14.30					*Lunch*								*Lunch*							
14.30-15.10	Opening Ceremony				2C.1	1C.1	SS4	TS1.2	SS5	4A.1	SS3	SS6	1E.1	KN9	SS12	TS2.2	SS13	2E.1	**SS11**	**SS14**
15.10-15.30	PL1													4C.1						
15.30-16.10													KN6							
16.10-16.20	*Break*				*Break*								*Break*							
16.20-17.00	KN1			SS1	4A.2													KN8		
17.00-17.40	1A	3A	2A			1C.2	SS10	TS1.3	SS9	2C.2	SS7	SS8	TS2.3	4C.2	SS18	1E.2	SS17	2E.2	**SS15**	**SS16**
17.40-18.00				SS2																
18.00-18.20					KN5								KN-X2							
18.20-18.40			KN2																	
18.40-19.00					P1 Poster Area								P2 Poster Area							
19.00-19.10	ChemSusChem																			
19.15-20.00	*Welcome cocktail (with a contribution of ChemSusChem)*																			
20.00-20.30																				

	Wednesday, 30 August				Thursday, 31 August						
	Palazzo CONGRESSI		Palazzo AFFARI		Palazzo CONGRESSI			Palazzo AFFARI			
	Auditorium	Verde	Basement	Ground Floor	Auditorium	Verde	Onice	Basement	Ground Floor	First Floor	Adua 1	Adua 2
08.30-09.30	PL4				PL5							
09.30-09.40	*Break*				*Break*							
09.40-10.20	1F	4D	6C	KN11	TS4.1	2L	SS20	KN14	SS21	2H	SS19	SS22
10.20-11.00			KN17	2F	KN-X3			2I				
11.00-11.10	*Break*				*Break*							
11.10-11.50	1F	4D	TS3.1	2F	P3 Poster Area							
11.50-12.30	KN10											
12.30-14.30	*Lunch*				*Lunch*							
14.30-15.10	2G	1G	KN13	TS3.2	2N.1	TS4.2	SS26	KN16	SS25	2M.1	SS23	SS24
15.10-15.30			4E					5A.1				
15.30-16.10	KN12				KN15							
16.10-16.20					Break							
16.20-18.40					2N.2	TS5	SS30	5A.2	SS29	2M.2	SS27	SS28
18.40-19.00					Closing Remarks & Poster Awards							
20.00-23.00					*Conference Banquet*							

PLENARY LECTURES

KEYNOTE LECTURES

SHOT SYMPOSIA

ORAL SESSIONS

THEMATIC SYMPOSIA

POSTER SESSIONS

SPONSORED LECTURES

PLENARY LECTURES	Session
Joachim SAUER - F. Gault Award	PL1
Avelino CORMA	PL2
Jiří ČEJKA	PL3
Silvia BORDIGA	PL4
Bruce GATES - M. Boudart Award	PL5

SHOT SYMPOSIA	Session
CO_2 conversion	SS1
Methane valorization	SS2
Industrial catalysis -1	SS3
Advances in reaction mechanism - 1	SS4
Catalysis for biomass use - 1	SS5
Catalysis is automotive uses	SS6
Industrial catalysis - 2	SS7
Photocatalytic processes	SS8
Hydrogen production and storage	SS9
Advances in oxidation reactions -1	SS10
New concepts and materials	SS11
Modelling and theoretical approaches	SS12
Methanol conversion and zeolite chemistry	SS13
Environmental catalysis - 1	SS14
Catalytic hydrogenation and hydrogenolisis	SS15
Catalysis for biomass use - 2	SS16
Novel catalysts	SS17
New type of catalytic reactions	SS18
CO_2 methanation and methanol synthesis	SS19
Advances in oxidation reactions - 2	SS20
Advances in syngas and Fischer-Tropsch	SS21
Environmental catalysis - 2	SS22
Catalysts optimization	SS23
New aspects in catalysis	SS24
Electro- and photo-catalysis	SS25
New aspects in catalytic reactions - 1	SS26
Advances in catalysts preparation	SS27
New aspects in catalytic reactions - 2	SS28
Catalysis for refinery and biorefinery	SS29
Reaction mechanism and deactivation	SS30

THEMATIC SYMPOSIA	Session
Catalysis for solar-driven chemistry	TS1
Design of advanced catalysts	TS2
Methane activation	TS3
Multiscale aspects in catalysis	TS4
New catalysts and concepts	TS5

KEYNOTE LECTURES	Session
Marcella BONCHIO	KN1
Stefan HECHT	KN2
Regina PALKOVITS	KN3
Valentin N. PARMON	KN4
Karl Petter LILLERUD	KN5
Rafael LUQUE	KN6
Veronique Van SPEYBROECK	KN7
Malgorzata WITKO	KN8
Gaetano GUERRA	KN9
E. Alessandra QUADRELLI	KN10
Angeliki A. LEMONIDOU	KN11
Duncan WASS	KN12
Ulrike DIEBOLD	KN13
Anders NILSSON	KN14
Dangsheng SU	KN15
Zhongmin LIU	KN-X1
Wataru UEDA	KN-X2
Stefan VAJDA	KN-X3
Jeffery BRICKER	KNI-1
Jean Paul LANGE	KNI-2
Young Researcher EFCATS Award	**Session**
Aleksandra VOJVODIC	KN16
Applied Catalysis EFCATS Award	**Session**
Gerhard MESTL	KN17

ORAL SESSIONS	Session
Topic 1: Catalysis to address the evolving energy and chemical scenario	1A, 1B, 1C, 1D, 1E, 1F, 1G
Topic 2: Catalysis for a cleaner and sustainable future	2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2L, 2M, 2N
Topic 3: Addressing catalysis complexity	3A, 3B
Topic 4: Understanding and design catalyst from molecular to material scale	4A, 4B, 4C, 4D, 4E
Topic 5: Expanding catalysis concepts	5A
Topic 6: Industrial catalysis	6A, 6B

POSTER SESSIONS	Session
Topic 1, 3, 6	P1
Topic 2	P2
Topic 2, 4, 5	P3

AUDITORIUM - PALAZZO CONGRESSI

14.30 **OPENING CEREMONY**
15.10 Chairs: **G. Centi** (Italy), **J.A. Lercher** (Germany)

AUDITORIUM - PALAZZO CONGRESSI

15.10 **PLENARY LECTURE 1 - PL1** (60')
16.10 Chairs: **S. Perathoner** (Italy), **G. Rupprechter** (Austria)

PL1 Understanding catalysis by oxides – Theory and experiment in concert
J. Sauer (Germany)

Break

AUDITORIUM - PALAZZO CONGRESSI

16.20 **KN1** (35'+5')
17.00 Chairs: **R. Burch** (United Kingdom), **F. Cavani** (Italy)

KN1 Hybrid catalysts for artificial photosynthesis
M. Bonchio (Italy)

AUDITORIUM - PALAZZO CONGRESSI

17.00 **1A** (15'+5')
19.00 Chairs: **R. Burch** (United Kingdom), **F. Cavani** (Italy)

1A.1 Understanding the role of Fe in bimetallic NiFe dry reforming catalysts: a combined in-situ XAS-XRD study
S.M. Kim, P.M. Abdala, T. Margossian, D. Hosseini, L. Foppa, A. Armutlulu, W. Van Beek*, A. Comas-Vives, C. Copéret, C. Müller (Switzerland, *France)

1A.2 Efficient active site structure for aqueous acetic acid reforming reaction formed by ion-exchange method over various supported Ru catalysts
S. Naito, T. Nozawa, A. Yoshida, S. Hikichi (Japan)

1A.3 Directed glycerol reforming through tailored platinum nanoparticles
J. Callison, N.D. Subramanian, S.M. Rogers, D. Gianolio, C.R.A. Catlow, P.P. Wells, N. Dimitratos (United Kingdom)

1A.4 PdZn/Mg(Al)(Pd)(Zn)O_x for ethanol conversion: reconstruction of the active phase upon a water containing feed
J. De Waele, V.V. Galvita, H. Poelman, J.W. Thybaut (Belgium)

1A.5 Stability of $Fe_2O_3/MgAl_2O_4$ for CO_2 utilization in super-dry reforming of CH_4
L.C. Buelens, N.V.R. Aditya Dharanipragada, H. Poelman, V.V. Galvita, G.B. Marin (Belgium)

1A.6 High selectivity ZnPd/ZnO catalysts for methanol steam reforming
E. Nowicka, S.M. Althahban*, Y. Luo, G. Shaw, D.J. Morgan, Q. He, M. Armbrüster**, C.J. Kiely*, G.J. Hutchings** (United Kingdom, *USA, **Germany)

AUDITORIUM - PALAZZO CONGRESSI

19.00 **10th Anniversary of *ChemSusChem*** (10')
19.10 **D.J. Smith** (Editor of *ChemSusChem)*

ROOM VERDE - PALAZZO CONGRESSI

16.20 **3A** (15'+5')
19.00 Chairs: **A. Jentys** (Germany), **A.M. Venezia** (Italy)

3A.1 Reaction intermediates and pathways for CO_2 hydrogenation on Cu/ZrO_2 catalysts: a combined DFT and experimental approach
K. Larmier, W.-C. Liao, S. Tada, E. Lam, R. Verel, A. Bansode*, A. Urakawa*, A. Comas-Vives*, C. Copéret* (Switzerland, *Spain)

3A.2 Imaging M1-$MoVTeNbO_x$ catalyst using environmental STEM: electronic and structural changes under catalytically relevant conditions
D. Melzer, Y. Zhu*, P.V. Sushko*, N.D. Browning*, M. Sanchez-Sanchez, J.A. Lercher (Germany, *USA)

3A.3 How nanoscale metal-oxide boundaries activate micrometer-sized metal particles for CO oxidation via a long-range effect
Y. Suchorski, S.M. Kozlov, M. Datler, I. Bespalov, K.M. Neyman, G. Rupprechter (Spain)

3A.4 Hybrid palladium nanoparticles for direct H_2O_2 synthesis: the key role of the ligand
G.M. Lari, B. Puértolas, M. Shahrokhi*, N. López*, J. Pérez-Ramírez (Switzerland, *Spain)

3A.5 In-situ XPS study of selective oxidation of ethylene on Re and Ag-Re catalysts
A. Klyushin, E. Carbonio, T. Jones, M. Hävecker, E. Frei, M. Lamoth, E. Willinger, A. Knop-Gericke, R. Schlögl (Germany)

3A.6 The dynamics of active metal catalysts revealed by in situ electron microscopy
M.G. Willinger, J. Cao, R. Farra, Z.-J. Wang, M. Greiner, R. Schlögl (Germany)

3A.7 A new mode of operation of Pd-NHC systems studied in a catalytic Mizoroki-Heck reaction
V.M. Chernyshev, A.V. Astakhov, O.V. Khazipov, A.Yu. Chernenko, D.V. Pasyukov, V.P. Ananikov (Russia)

3A.8 Reactivity of Al_2O_3 and CeO_2 supported Ni catalysts toward H_2 production during dry reforming of methane under steady state and periodic operations
H. Ay, D. Üner (Turkey)

BASEMENT - PALAZZO AFFARI

16.20 **2A** (15'+5')
18.20 Chairs: **H. Bitter** (The Netherlands), **G. Strukul** (Italy)

2A.1 TiN-Cu nanocatalyst for effective two-step depolymerisation of lignin
M. Rashidi, M. Konarova, J.N. Beltramini (Australia)

2A.2 Bifunctional catalysts for the direct transformation of cellulose to sorbitol
S. Carlier, S. Hermans (Belgium)

2A.3 An unprecedented synthesis of terephthalic acid by p-cymene oxidation
M. Florea, F. Neatu, S. Nicolae, G. Culica, V.I. Parvulescu, F. Cavani* (Romania, *Italy)

2A.4 Gold-silver catalysts: effect of catalyst structure in the selectivity of glycerol oxidation
L. Prati, C. Evangelisti, A. Villa, A. Jouve, C. Tiozzo, R. Psaro, G. Nagy*, F. Somodi*, G. Sáfrán*, A. Beck* (Italy,*Hungary)

2A.5 Setting up the base for the first lignin biorefinery: from lignin to biofuels and chemicals
P.D. Kouris, M.D. Boot, E.J.M. Hensen (The Netherlands)

2A.6 Catalytic strategies for selective decarboxylation or deamination: a toolbox for producing bio-based chemicals from amino acids and citric acid
L. Claes, F. De Schouwer, J. Verduyckt, D.E. De Vos (Belgium)

BASEMENT - PALAZZO AFFARI

18.20 **KN2** (35'+5')
19.00 Chairs: **H. Bitter** (The Netherlands), **G. Strukul** (Italy)

KN2 Controlling and driving ground-state reactivity and catalysis with light
S. Hecht (Germany)

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS1** (7')
17.40 Chairs: **L. Frusteri** (Italy), **A. Gallo** (USA)

SS1.1 Hydrogenation of CO_2 to methane over zirconia supported bimetallic catalysts
M.P. Almeida, F. Bellot Noronha, L.V. Mattos (Brazil)

SS1.2 CO2 to methanol hydrogenation - A highly productive tandem catalytic approach via amide intermediates
M. Everett, D.F. Wass (United Kingdom)

SS1.3 CO_2 hydrogenation to methanol on Pd and PdZn catalysts
M. Bowker, H. Bahruji, J. Ruiz Esquius, G.J. Hutchings (United Kingdom)

SS1.4 Improving the stability of CeO_2 catalyst in the continuous dimethyl carbonate synthesis from CO_2 and methanol with 2-cyanopyridine
D. Stoian, A. Bansode, F. Medina, W. van Beek*, A. Urakawa (Spain, *France)

SS1.5 Understanding CO_2 hydrogenation on rhodium catalysts using a model nanoparticle: a study by field emission techniques
S.V. Lambeets, C. Barroo, S. Owczarek*, E. Genty, N. Gilis, L. Jacobs, T. Visart de Bocarmé (Belgium, *Poland)

SS1.6 Hydrogenation of CO_2 to methanol at atmospheric pressure: optimization of the molar percentage of Pd and Cu in PdCuZn/SiC catalysts
J. Díez-Ramírez, P. Sánchez, E. Monge-Ruiz, J.A. Díaz, F. Dorado (Spain)

SS1.7 Tuning the acid-base properties of pure ZrO_2 catalysts to build structure-activity relationships in CO_2 conversion
E. Wan, A. Travert, C. Daniel, F. Quignard, D. Tichit, N. Tanchoux, H. Petitjean (France)

SS1.8 Probing ZrO_2 surfaces with CO_2 adsorption followed by in-situ FTIR: beyond the empirical assignment, a surface-specific study
Y. Bleu, H. Petitjean (France)

SS1.9 Electrochemical promotion of dispersed catalysts supported on anionic and cationic conductors for the hydrogenation reaction of CO_2
M. Makri, I. Kalaitzidou, A. Kotsiras, A. Symillidis, D. Grigoriou, A. Katsaounis, C.G. Vayenas (Greece)

SS1.10 Methane production by supercritical gasification of aqueous organic compounds followed by selective CO_2 methanation
F. Frusteri, C. Cannilla, G. Bonura, A. Mezzapica, S. Perathoner, L. Frusteri (Italy)

ROOM ADUA 1 - PALAZZO AFFARI

17.40 **SS2** (7')
19.00 Chairs: **E. Borfecchia** (Italy), **A. Kulkarni** (USA)

SS2.1 Which species Zn^{2+} cations or ZnO clusters are efficient for methane activation on Zn-modified zeolite
A.G. Stepanov, A.A. Gabrienko, S.S. Arzumanov, D. Freude* (Russia, *Germany)

SS2.2 Single-atom catalyst of Rh deposited on ZrO_2 for conversion of methane to methanol
Y. Kwon, T.Y. Kim, G. Kwon, C. Kim, J. Kim, H. Lee (Korea)

SS2.3 Characterization of Cu-ZSM-5 for direct conversion of methane to methanol: an in situ IR study on methanol desorption
X. Wang, A. Hellman, M. Skoglundh, J. Gustafson, P.-A. Carlsson (Sweden)

SS2.4 From the investigation of reaction mechanism of oxidative coupling of methane to successful enhancement in its performance
S. Parishan, E. Nowicka, V. Fleisher, A. Thomas, F. Rosowski, R. Schomäcker (Germany)

SS2.5 Dry reforming of methane over $Ce_{0.38}Zr_{0.62}O_{2-\delta}$-supported Ni-Co Catalysts: the origin and reactivity of carbon formed studied by transient techniques
M.A. Vasiliades, P. Djinovic*, A. Pintar*, A.M. Efstathiou (Cyprus, *Slovenia)

SS2.6 Time-resolved operando DRIFTS/MS study of CO_2 reforming of methane over an efficient Ni-Ru supported catalyst
L.F. Bobadilla, A. Álvarez, V. Garcilaso, M.A. Centeno, J.A. Odriozola (Spain)

SS2.7 Kinetic study of dry reforming of methane over Ni-Ce/Al_2O_3 catalyst
D. Zambrano, J. Soler, J. Herguido, M. Menéndez (Spain)

SS2.8 Steam reforming of methane over nickel catalysts supported on CeO_2-NR: effect of nickel content for hydrogen production
A.C. López, A. Gutiérrez Martínez, C. Gutiérrez Wing, G. Mondragón Galicia, D. Mendoza Anaya, R. Pérez-Hernández (Mexico)

SS2.9 Methane oxidation to value-added products over Fe-beta catalysts
G. Zhao, E. Kennedy, M. Stockenhuber (Australia)

AUDITORIUM - PALAZZO CONGRESSI

08.30 **PLENARY LECTURE 2 - PL2** (60')
09.30 Chairs: **G. Bellussi** (Italy), **G.L. Haller** (USA)

PL2 From the lab discovery to the industrial application
A. Corma (Spain)

Break

AUDITORIUM - PALAZZO CONGRESSI

09.40 **1B** (15'+5')
11.50 Chairs: **F. Basile** (Italy), **J.N. Beltramini** (Australia)

1B.1 Influence of promotor, H_2O and H_2S on the hydrodeoxygenation of biomass pyrolysis vapor over MoS_2 catalysts
T.M.H. Arndal, M. Høj, A. Gaur*, T. Prüssmann*, D.G. Pintos, F. Studt*, J. Gabrielsen, J.-D. Grunwaldt*, T.W. Hansen, A.D. Jensen** (Denmark, *Germany, **USA)

1B.2 H_2CAP - Hydrogen assisted catalytic biomass pyrolysis for green fuels
M. Zingler Stummann, M. Høj, J. Gabrielsen, P. Arendt Jensen, A. Degn Jensen (Denmark)

1B.3 Selective hydrodeoxygenation of guaiacol with relay catalysis of tungsten carbides and supported nickel nanoparticles
H. Fang, J. Du, X. Duan, Y. Yuan (China)

1B.4 Platform chemicals from Kraft lignin through catalytic hydrotreatment using supported noble metal catalysts
I. Hita, P.J. Deuss, G. Bonura*, F. Frusteri*, H.J. Heeres (The Netherlands, *Italy)

Break

1B.5 Nanosized W-Nb-O oxides as effective catalysts for the valorization of light oxygenates in lignocellulosic biomass-derived aqueous effluents
D. Delgado, A. Fernández-Arroyo, M.E. Domine, E. García-González, J.M. López Nieto (Spain)

1B.6 In situ deoxygenation of lignin fast pyrolysis oil towards "green" aromatics
P. Lazaridis, S. Karakoulia, K. Triantafyllidis (Greece)

AUDITORIUM - PALAZZO CONGRESSI

11.50 **KN3** (35'+5')
12.30 Chairs: **F. Basile** (Italy), **J.N. Beltramini** (Australia)

KN3 Catalyst concepts for an efficient valorization of renewable carbon sources
R. Palkovits (Germany)

AUDITORIUM - PALAZZO CONGRESSI

14.30 **2C.1** (15'+5')
16.10 Chairs: **S. Albonetti** (Italy), **D. Uner** (Turkey)

2C.1.1 Effect of support on the hydrodeoxygenation of phenol over Pd catalysts
C.A. Teles, P.M. de Souza, A.C. Maldonado, R.C.R. Neto, G. Jacobs*, B.H. Davis*, L.E. Pizarro Borges, D.E. Resasco*, F. Bellot Noronha (Brazil, *USA)

2C.1.2 Influence of the edge composition of Ni-Mo-W sulfides on the elementary steps of hydrodenitrogenation
S. Albersberger, O.Y. Gutiérrez, H. Shi, J.A. Lercher (Germany)

2C.1.3 Bio-oil upgrading via vapor phase ketonization over nanostructured FeO_x and MnO_x: catalytic performance and mechanistic insight
E. Heracleous, D. Gu*, F. Schüth*, J.A. Bennett, M.A. Isaacs**, A.F. Lee**, K. Wilson**, A.A. Lappas** (Greece, *Germany, **United Kingdom)

Break

AUDITORIUM - PALAZZO CONGRESSI

16.20 **4A.2** (15'+5')
18.00 Chairs: **B. Bonelli** (Italy), **S. Perathoner** (Italy)

4A.2.1 Structure-reactivity relationships in heterogeneous catalysis revealed by advanced EPR techniques. The case of Ziegler-Natta polymerization catalysts
E. Morra, A. Piovano, E. Groppo, S. Bordiga, E. Giamello, M. Chiesa (Italy)

4A.2.2 The effect of triethylaluminum and diethylaluminum ethoxide on the active sites of Cr/SiO_2 Phillips catalyst
G.A. Martino, A. Piovano, C. Barzan, E. Groppo (Italy)

4A.2.3 Synthesis of supported single-layer MoS_2/TiO_2 nanocatalyst with enhanced catalytic activity of anthracene hydrogenation by hydrothermal method
D. Wang, J. Li, Y. Jiang, M. Li, H. Ma, Z. Pan, A. Zheng, Z. Tian (China)

4A.2.4 Chemical imaging of Fischer-Tropsch synthesis catalysts under operating conditions
S.W.T. Price, D.J. Martin, A. Parsons, W.A. Sławinski, A. Vamvakeros, S.J. Keylocka, A.M. Beale, J.F.W. Mosselmans (United Kingdom)

4A.2.5 New supported VO_x/β-SiC catalysts at sub- and mono-layer coverage for the partial oxidation of light hydrocarbons
C.A. Carrero, S.P. Burt, F. Huang, J.M. Venegas, A.M. Love, P. Mueller, J.T. Grant, M. Ball, J. Dumesic, I. Hermans (USA)

AUDITORIUM - PALAZZO CONGRESSI

18.00 **KN5** (35'+5')
18.40 Chairs: **B. Bonelli** (Italy), **M. Flytzani-Stephanopoulos** (USA)

KN5 Catalysis in confined space
K.P. Lillerud (Norway)

ROOM VERDE - PALAZZO CONGRESSI

09.40 **3B** (15'+5')
12.30 Chairs: **S. Coluccia** (Italy), **A. Brückner** (Germany)

3B.1 Nanoscale imaging of carbonaceous deposits on Zeolite ZSM-5 crystals with secondary ion mass spectrometry
O. Attila, D.A. Matthijs de Winter, M.V. Kienhuis, L. Polerecky, F. Meirer, B.M. Weckhuysen (The The Netherlands)

3B.2 Unravelling surface basicity and bulk morphology on metal-free carbon-based catalysts with unique dehydrogenation performance
G. Tuci, M. Pilaski*, H. Ba, A. Rossin, L. Luconi, C. Pham-Huu**, R. Palkovits*, G. Giambastiani** (Italy, *Germany, **France)

3B.3 Ultra-hydrothermal stable Pt/CeO_2 catalysts for low temperature CO oxidation
L. Nie, M. Wang, X.I. Pereira-Hernandez, H. Xiong, A. Datye, Y. Wang (USA)

3B.4 Understanding deactivation processes during bio-syngas methanation: SSITKA experiments and kinetic modeling over Ni/Al_2O_3 catalysts
D. Lorito, Y. Schuurman, C. Mirodatos (France)

Break

3B.5 Understanding reaction mechanisms in heterogeneously catalyzed reactions: the case of catalytic fast pyrolysis
P. Hemberger, V.B.F. Custodis, A. Bodi, T. Gerber, J.A. van Bokhoven (Switzerland)

3B.6 Tuning catalyst surface functionalities by controlled deposition of metal oxide layers for metal nanoparticles stabilization and acid sites generation
F. Héroguel, B.P. Le Monnier, L. Silvioli, J.S. Luterbacher (Switzerland)

3B.7 Operando XAFS study of Au/C catalysts for acetylene hydrochlorination reaction
G. Malta, S.A. Kondrat, S.J. Freakley, C.J. Kiely*, G.J. Hutchings (United Kingdom, *USA)

3B.8 Synergic combination of miniemulsion and solvothermal routes: exploiting unconventional conditions for the synthesis of highly crystalline and magnetic transition metal ferrites catalytically active for oxidation reactions
A. Antonello, P. Dolcet*, G. Jakob, R. Momper, K. Landfester, R. Muñoz-Espí, S. Gross*** (Germany, *Italy, **Spain)

ROOM VERDE - PALAZZO CONGRESSI

14.30 **1C.1** (15'+5')
16.10 Chairs: **A. Efstathiou** (Cyprus), **L.F. Liotta** (Italy)

1C.1.1 Effect of crystallite size on the performance and phase transformation of Co_3O_4/Al_2O_3 catalysts during CO-PrOx. An in situ study
T. Nyathi, N. Fischer, A. York*, M. Claeys (South Africa, *United Kingdom)

1C.1.2 Steam reforming of the producer gas obtained from the gasification of beech wood: scale up from laboratory benches to full-size demonstrator
J.A.Z. Pieterse, G. Aranda Almansa, M. Klotz*, K. Hakouk*, S. Theofanidis, V. Galvita**, K. Toch**, J.W. Thybaut**, D. Laprune*, F. Meunier*** (The Netherlands, *France, **Belgium)

ROOM VERDE - PALAZZO CONGRESSI

14.30 **1C.1** (cont.)
16.10

1C.1.3 Development of active and stable low nickel content catalysts for dry reforming of methane
Q.L.M. Ha, U. Armbruster, A. Martin (Germany)

1C.1.4 Oxidative dehydrogenation of cyclohexanol to cyclohexanone over $Au/MgCuCr_2O_4$ catalyst
Y. Gao, E.J.M. Hensen (The Netherlands)

1C.1.5 Interfacial effects in CuO_x/CeO_2 CO-PROX catalysts
M. Monte, R. Castañeda*, A.B. Hungría*, J.C. Conesa*, G. Munuera*, A. Martínez-Arias* (France, *Spain)

Break

ROOM VERDE - PALAZZO CONGRESSI

16.20 **1C.2** (15'+5')
18.40 Chairs: **D. Kubicka** (Czech Republic), **R. Pirone** (Italy)

1C.2.1 Restructuring of silver nanoparticles during ethylene epoxidation
A.J.F. van Hoof, E.A.R. Hermans, H. Friedrich, E.J.M. Hensen (The Netherlands)

1C.2.2 Synergy and anti-synergy between palladium and gold in nanoparticles dispersed on a reducible support
J.H. Carter, S. Althahban, E. Nowicka, S.J. Freakley, D.J. Morgan, P.M. Shah, S. Golunski, C.J. Kiely, G.J. Hutchings (USA)

1C.2.3 Enhanced activity in methane dry reforming by CO_2 induced surface restructuring of Ni/ZrO_2
A. Jentys, M. Steib, Y. Lou, J. Lercher (Germany)

1C.2.4 High-yield conversion of propane to propylene by (O_2 + HCl) over NiO-modified CeO_2 catalysts
Q. Zhang, Q. Xie, H. Zhang, J. Kang, J. Cheng, Y. Wang (China)

1C.2.5 Cryptomelane-type manganese oxides obtained by hydrothermal method with remarkable catalytic activities and stability for CO oxidation
H. Pan, X. Chen, M.A. Cauqui, J.J. Delgado (Spain)

1C.2.6 Selective oxidative dehydrogenation of alkanes using boron nitride
J.T. Grant, C.A. Carrero, F. Goeltl, J.M. Venegas, P. Mueller, S.P. Burt, S.E. Specht, W.P. McDermott, A. Chieregato, I. Hermans (USA)

1C.2.7 Selective oxidation of methane to methanol over Cu-ZSM-5 catalysts in aqueous hydrogen peoxide: the role of formaldehyde and copper
S. Al-Shihri*, C. Richard (Saudi Arabia, *United Kingdom)

ROOM ONICE - PALAZZO CONGRESSI

14.30 **SS4** (7')
16.10 Chairs: **J.M. Coronado** (Spain), **K. Lomachenko** (France)

SS4.1 From simple systems to real catalysts: in-situ investigations of CO oxidation on Pt model catalysts by sum frequency generation spectroscopy
V. Pramhaas, M. Roiaz, M. Corva*, C. Rameshan, E. Vesselli*, G. Rupprechter (Austria, *Italy)

SS4.2 Hydrodeoxygenation of guaiacol and acetic acid blends over Ni_2P/ZSM-5 catalyst: elucidating molecular interactions during bio-oil upgrading
S. Gutiérrez-Rubio, I. Moreno, P. Pizarro, J.M. Coronado, D.P. Serrano (Spain)

SS4.3 Analyzing the stability and reactivity of carbenium ion intermediates in H-ZSM-5 catalyzed octene cracking
P. Cnudde, K. De Wispelaere, M. Waroquier, J. Van der Mynsbrugge, V. Van Speybroeck (Belgium)

SS4.4 Unravelling water effects on acidic catalysts by the AEIR method and in situ acidity measurements
Z. Buniazet, J. Couble, D. Bianchi, A. Cabiac, S. Maury, S. Loridant (France)

SS4.5 Identification of active species in ceria-based catalysts using transient X-ray spectroscopy
O.V. Safonova, R. Kopelent, J.A. van Bokhoven, M. Nachtegaal (Switzerland)

SS4.6 Operando synchrotron X-ray absorption and diffraction study of Co-based catalysts: insights into structural and microstructural changes
N. Yigit, L. Lukashuk, A. Nagl, P. Hans, M. Leoni*, K. Föttinger, G. Rupprechter (Austria, *Italy)

SS4.7 Microstructural evolution of Co catalysts during activation and Fischer-Tropsch reaction investigated by operando transmission electron microscopy
A.-S. Gay, K. Dembélé, M. Bahri, S. Maury, L. Lemaitre, M. Rivallan, O. Ersen (France)

SS4.8 Unravelling the role of catalytically active metals in continuous production of methyl formate by hydrogenation of carbon dioxide
J.J. Corral-Pérez, A. Bansode, A. Urakawa (Spain)

SS4.9 Operando near ambient pressure XPS (NAP-XPS) study of a model Pt-Cu catalyst for the PrOx reaction
R. Castillo, F. Romero-Sarria, J.A. Odriozola (Spain)

SS4.10 Transient x-ray spectroscopy to unravel mechanistic insights of the selective catalytic reduction of NO_x on Cu-SSZ13
A. Marberger, A. Petrov, P. Steiger, D. Ferri, M. Elsener, O. Kröcher, M. Nachtegaal (Switzerland)

SS4.11 Much more than reduction - Activating a Cu/ZnO:Al catalyst: decomposition, self-doping and polymorphism
E. Frei, C. Heine, M. Friedrich, M. Greiner, T. Lunkenbein, J. Schumann*, A. Trunschke, H. Lichtenberg, A. Gaur, J.-D. Grunwaldt, R. Schlögl (USA, *Germany)

Break

16.20 **SS10** (7′)
18.40 Chairs: **P. Koci** (Czech Republic), **A. Villa** (Italy)

SS10.1 Synergy between Au and Ag in the aerobic oxidation of 5-hydroxymethylfurfural
B. Donoeva, N. Masoud, P. de Jongh (The Netherlands)

SS10.2 Fe-Pt bimetallic system: insights on active sites for preferential oxidation of CO and water-gas shift reactions
I.B. Aragao, I. Ro*, Y. Liu*, M.R. Ball*, G.W. Huber*, J.A. Dumesic*, D. Zanchet (Brazil, *USA)

SS10.3 Structurally defined SnO_2 substrates, nanostructured Au/SnO_2 interfaces, and their distinctive behaviors in benzene and methanol oxidations
W. Jiang, Y. Pang, L. Gu, Y. Yao, Q. Su, W. Ji, C.-T. Au* (China, *Hong Kong)

SS10.4 Perovskites as catalysts in selective oxidation of propane and butane
G. Koch, P. Kube, C. Schulz, T. Lunkenbein, F. Rosowski, R. Schlögl, A. Trunschke (Germany)

SS10.5 Layered W-V oxides with M1 phase-like local structure for ammoxidation and selective oxidation of toluene
K. Shimizu, Y. Goto, T. Toyao, T. Murayama, N. Hiyoshi, Z. Zhang, W. Ueda (Japan)

SS10.6 Selective oxidation of benzyl alcohol using Au-Pd/titanate nanotubes prepared by sol-immobilisation
M. Khawaji, D. Chadwick (United Kingdom)

SS10.7 Challenging reactive behavior of bismuth molybdates during selective oxidation of propylene observed by combined operando Raman/XAS
P. Sprenger, M. Stehle, A. Gaur, A.M. Gänzler, W. Kleist, A. Fischer, J.-D. Grunwaldt (Germany)

SS10.8 Supported niobium oxides catalysts for methylesters epoxidation reaction
R. Turco, R. Vitiello, V. Russo, R. Tesser, M. Di Serio (Italy)

SS10.9 The selective oxidation of n-butanol by using Pt-supported catalysts
S. Alghareeb*, I. Gandarias, B.J. May*, S.H. Taylor* (Spain, *United Kingdom)

SS10.10 Dynamic evolution of atomically dispersed platinum over alumina under adsorption and reaction conditions, and related CO oxidation performance
C. Dessal, F. Morfin, M. Aouine, J.-L. Rousset, L. Piccolo (France)

SS10.11 Co_3O_4 morphology and supported catalysts for total oxidation of methylbenzene
C. Wang*, L. Retailleau, Y. Guo*, S. Gil, A. Giroir-Fendler (France, *China)

SS10.12 Manganese oxide-based catalysts for toluene oxidation
Z. Sihaib, F. Puleo*, J.M. Garcia-Vargas, L. Retailleau, C. Descorme, L.F. Liotta*, J.L. Valverde, S. Gil, A. Giroir-Fendler** (France, *Italy, **Spain)

SS10.13 Novel catalyst concept for ethylene epoxidation catalysts based on 3R-$AgAlO_2$
L. Zwiener, E. Willinger, F. Girgsdies, F. Rosowski, A. Trunschke, R. Schlögl, E. Frei (Germany)

SS10.14 Kinetic study of H_2S selective oxidation to elemental sulfur on a TiO_2-based catalyst
T. Hamzehlouyan, S. Askari, A. Rashidi (Iran)

ROOM ONICE - PALAZZO CONGRESSI

16.20 **SS10** (cont.)
18.40

SS10.15 Two-step CO oxidation light-off kinetics on Pt/γ-Al_2O_3 in the presence of C_3H_6
P. Koci, A. Arvajová, J. Brezina (Czech Republic)

SS10.16 Low temperature gas/liquid phase oxidation by nanoparticulate gold catalysts deposited on niobium oxide
T. Murayama, K. Nakajima, N. Kumar Gupta, A. Fukuoka, M. Haruta (Japan)

BASEMENT - PALAZZO AFFARI

09.40 **TS1.1** (15'+5')
12.30 Chairs: **J.C. Conesa** (Spain), **G. Pacchioni** (Italy)

TS1.1.1 Rational design of metal-organic gel-derived materials as effective catalysts for oxygen reduction reaction
H. Wang, F. Yin, B. Chen (China)

TS1.1.2 Influence of TiO_2 morphologies in TiO_2-WO_3 composites on electron trapping energy states
G. Žerjav, M.S. Arshad, P. Djinovic, A. Pintar (Slovenia)

TS1.1.3 Supercritical synthesis of carbon-supported Pt_xNi and Pt_xCo nanoparticles as oxygen reduction reaction catalysts for PEMFCs
A.A. Velázquez-Palenzuela, C.M. Pedersen, P. Hernández-Fernández, L.H. Christensen, C. Kallesøe (Denmark)

TS1.1.4 Catalytic SO_3 decomposition activity and stability of Pt supported on anatase TiO_2 for solar thermochemical water splitting cycles
M. Machida, T. Matsukawa, S. Hinokuma (Japan)

Break

TS1.1.5 Nanostructured anode electrocatalysts for high performance platinum free anion exchange membrane fuel cells
H.A. Miller, F. Vizza, A. Lavacchi, F. Di Benedetto, F. D'Acapito, M. Page, Y. Paska, M. Marelli, D.R. Dekel (Italy, *Israel, **France)

TS1.1.6 Chemical energy conversion related processes at electrified solid-liquid interfaces decoded by soft X-ray spectroscopy: CO_2RR on Cu and EOR on IrO_x
J.J. Velasco Vélez, M. Hävecker, V. Pfeifer, K. Skorupska, L. Fravel, C.-H. Chuang*, R. Schlögl, A. Knop-Gericke (Germany, *Taiwan)

TS1.1.7 Eu as structural probe for controlling the photocatalytic behaviour of mesoporous tantalum oxide in selective oxidation of amines
G.A. Seisenbaeva, B. Cojocaru*, B. Jurca*, C. Tiseanu*, J.-M. Nedelec, V.G. Kessler, V.I. Parvulescu*** (Sweden, *Romania, **France)

TS1.1.8 Visible light driven heck cross-coupling reaction using supported palladium nanoparticles
F. Wang, Q. Xiao, S. Sarina, H. Zhu (Australia)

BASEMENT - PALAZZO AFFARI

14.30 **TS1.2** (15'+5')
16.10 Chairs: **S. Gross** (Italy), **T. Maschmeyer** (Australia)

TS1.2.1 Photocatalytic conversion of lignin into aromatics under visible-light irradiation using CdS quantum dots
X. Wu, S. Xie, J. Lin, Q. Zhang, W. Deng, Y. Wang (China)

TS1.2.2 Engineering the TiO_2-electrolyte interface in TiO_2-protected photoanodes for photoelectrochemical water splitting applications
B. Mei, R. Brüninghof, W. Vijselaar, B. Seger*, J. Huskens, G. Mul (The Netherlands, *Denmark)

TS1.2.3 Mixed perovskites as potential materials for solar thermochemical water splitting
G. Luciani, G. Landi, A. Aronne, A. Di Benedetto (Italy)

TS1.2.4 Oxygen evolution reaction in electrocatalytic water splitting on model electrodes with deposited gas-phase NiFe clusters produced by laser ablation
L. Geerts, S. Cosentino, V. Zharinov, K.-J. Hu, J. Rongé, P. Lievens, J.A. Martens (Belgium)

TS1.2.5 Toward efficient photocatalytic and photo-assisted carbon dioxide reduction processes
A.V. Puga, F. Gonell, L.C. Liu, H. García, A. Corma (Spain)

Break

BASEMENT - PALAZZO AFFARI

16.20 **TS1.3** (15'+5')
18.40 Chairs: **J.L. Faria** (Portugal), **I.G. Rossetti** (Italy)

TS1.3.1 Combinations between a sulphide semiconductor and an electroactive enzyme: a path for visible light-induced water photo-splitting
M. Pita, C. Tapia, S. Shleev*, J.C. Conesa, A.L. de Lacey (Spain, *Sweden)

TS1.3.2 Electrocatalytic synthesis of ammonia at room temperature and atmospheric pressure from water and nitrogen on a carbon nanotubes based electrocatalyst
S. Chen, S. Perathoner, C. Ampelli, C. Mebrahtu, D. Su*, G. Centi (Italy, *China)

TS1.3.3 Tantalum oxynitride nanotube arrays as photoanode in photo-electrocatalytic (PECa) cells
F. Tavella, C. Ampelli, S. Perathoner, G. Centi (Italy)

TS1.3.4 Novel Pt electrocatalysts: multifunctional composite supports for enhanced corrosion resistance and improved CO tolerance
I. Borbáth, D. Gubán, Á. Vass, I. Bakos, Z. Pászti, I. Sajó, A. Tompos (Hungary)

TS1.3.5 Nitrogen-doped carbon nanofibers for oxygen reduction: the role of iron in forming active ORR sites
M.E.M. Buan, N. Muthuswamy, J.C. Walmsley, D. Chen, M. Rønning (Norway)

TS1.3.6 Chasing down the nature of the active sites responsible for the C-C coupling in the electrochemical activation of CO_2 over C-supported FeOOH catalysts
S. Krick Calderon, C. Genovese*, V. Pfeifer, M.E. Schuster, P. Tsaousis**, C. Euaruksakul**, P. Wells**, E. Gibson**, S. Perathoner*, G. Centi*, J.J. Velasco Velez, M. Haevecker, A. Knop-Gericke, G. Held**, R. Arrigo**** (Germany, *Italy, **United Kingdom)

TS1.3.7 Electrochemical reduction of CO_2 catalyzed by metal complexes bearing local proton sources
C. Nervi, C. Garino, R. Gobetto (Italy)

GROUND FLOOR - PALAZZO AFFARI

09.40 **KNI-1** (35'+5')
10.20 Chairs: **P. Biasi** (Switzerland), **E. Santacesaria** (Italy)

KNI-1 Breakthrough opportunities in catalysis for petrochemicals
J.C. Bricker (USA)

GROUND FLOOR - PALAZZO AFFARI

10.20 **6A** (15'+5')
12.30 Chairs: **P. Biasi** (Switzerland), **E. Santacesaria** (Italy)

6A.1 Effect of pre-treatment method over the performance of catalysts employed in the Fischer-Tropsch synthesis
D.I. Enache, G.J. Kelly, P. Ellis, K. Metcalfe, R.W. Mitchell, P.L. Gai, E.D. Boyes (United Kingdom)

6A.2 Hydrotreating performance of sulfided CoMo and NiMo catalysts in upgrading of Jatropha-derived bio-oil co-fed with petroleum distillates
S.-Y. Chen, W. Roschat*, T. Mochizuki, M. Toba, Y. Yoshimura* (Japan, *Thailand)

Break

6A.3 Modeling of diffusion resistances for cobalt-based catalyst particles in Fischer-Tropsch synthesis
D. Bukur, M. Mandic, B. Todic, N. Nikacevic (Serbia)

6A.4 Fe zeolites for high temperature decomposition of N_2O under real conditions of nitric acid production
E. Tabor, G. Sádovská, M. Bernauer, A. Vondrova, P. Sazama, Z. Sobalik (Czech Republic)

6A.5 Metal organic mediated synthesis of highly active Fischer-Tropsch catalysts: tailoring the catalytic performance by modifying the pyrolysis temperature and alkali promotion
V. Santos, T.A. Wezendonk, A.I. Dugulan, A. Chojecki, A. Koeken, M. Ruitenbeek, T. Davidian, G.R. Meima, F. Kapteijn, M. Makkee, J. Gascon (The Netherlands)

6A.6 Continuous selective hydrogenation of refametinib iodo-nitroaniline key intermediate DIM-NA at kg/day scale with online UV-VIS conversion control
S. Roggan, J. Hassfeld, T. Baramov (Germany)

GROUND FLOOR - PALAZZO AFFARI

14.30 **SS5** (7')
16.10 Chairs: **S. Hermans** (Belgium), **M. Manzoli** (Italy)

SS5.1 Selective hydrodeoxygenation of guaiacol to phenolics by gold and silver activated anatase TiO_2
J. Mao, J. Zhou, Z. Xia, Z. Wang, Z. Xu, W. Xu, P. Yan, K. Liu, X. Guo, Z.C. Zhang (China)

SS5.2 Hydrodeoxygenation of guaiacol on mesoporous carbon materials supporting Ni and ZrO_2 particles
M. López, R. Palacio, J.J. Fernández (Colombia)

SS5.3 Heterogeneously catalyzed aqueous phase amination of biogenic alcohols
R. Engel, J. Niemeier, M. Rose (Germany)

GROUND FLOOR - PALAZZO AFFARI

14.30 **SS5** (cont.)
16.10

SS5.4 A new route for synthesis of adipic acid from cellulose via glucose and glucaric acid
S. Li, S. Wang, W. Deng, P. Wang, Q. Zhang, Y. Wang (China)

SS5.5 Sequential decarbonylation of furfural over Ni catalysts as a viable path for biorefinery
S.-H. Chen, Y.-C. Tseng, S.D. Lin (Taiwan)

SS5.6 Renewable levulinic acid esterification over acid-modified mesoporous silicas
M. Popova, P. Shestakova, T. Parac-Vogt, H. Lazarova, I. Trendafilova, T.L.N. Luong, A. Szegedi (Bulgaria)

SS5.7 One-pot cellulose catalytic conversion into valuable products using nickel supported on carbon nanofibers
E. Frecha, I. Suelves, J.L. Pinilla (Spain)

SS5.8 Glucose to 6-C carboxylic acids
D. Carnevali, G. Patience, F. Cavani* (Canada, *Italy)

SS5.9 Hydrodeoxygenation of guaiacol and lignin-derived phenolic mixtures over Mo-based catalysts
S. Ansaloni, R. Pirone, N. Russo (Italy)

SS5.10 Production of 2,5-dimethylfuran as biofuel from catalytic transformation of 5-hydroxymethylfurfural over copper supported catalysts
F. Passos, M.H. Brijaldo, E.G. Oliveira, A. Caytuero, H. Rojas*, J.J. Martinez (Brazil)

SS5.11 HMF oxidation to FDCA on mixed oxide catalysts
A.E. Demet, O. Gimello*, R. Arletti, N. Tanchoux*, F. Quignard*, G. Centi, S. Perathoner, F. Di Renzo* (France, *Italy)

Break

GROUND FLOOR - PALAZZO AFFARI

16.20 **SS9** (7')
18.40 Chairs: **P. Benito** (Italy), **I.S. Pieta** (Poland)

SS9.1 Reforming of ethanol on supported Co catalysts
Z. Ferencz, K. Baán, A. Oszkó, J. Kiss, A. Erdohelyi (Hungary)

SS9.2 Amorphous silica-alumina as an efficient solid acid for steam reforming of dimethyl ether
S.-S. Wang, Z.-T. Liu, Z.-W. Liu (China)

SS9.3 Rh and Ir promoted bimetallic catalysts in the CO_2 reforming of CH_4 for H_2 production
A. Al-Fatesh, A. Ibrahim, H. Atia*, J. Abu-Dahrieh, A. Fakeeha, Y. Arafat, A. Alzahrani, A. Al-Awadi, N. Labhasetwar***, A. Fakeeha** (Saudi Arabia, *Germany, **United Kingdom, ***India)

SS9.4 Design of hydrogen storage materials based on boron-containing hydrides using catalysts
V.I. Simagina, O.V. Netskina, O.V. Komova, N.L. Kayl (Russia)

GROUND FLOOR - PALAZZO AFFARI

16.20 **SS9** (cont.)
18.40

SS9.5 Metallic sintering of a Ni supported catalyst during the steam reforming of volatiles from waste polyethylene pyrolysis
A. Ochoa, I. Barbarias, J. Valecillos, M. Artetxe, A.G. Gayubo, M. Olazar, J. Bilbao, P. Castaño (Spain)

SS9.6 Catalysts based on nickel and strontium supported on activated carbon from coconut waste in the glycerol conversion to hydrogen
P.M.M. de Almeida, V.V. Thyssen, B.C. Silva, D.F.P. Suffredini, E.M. Assaf, M.A. Fraga, S.T. Brandao (Brazil)

SS9.7 Catalytic aqueous-phase reforming of methanol to produce hydrogen
I. Coronado, M. Stekrova, L. García Moreno*, M. Reinikainen, P. Simell, R. Karinen, J. Lehtonen (Finland, *Spain)

SS9.8 Hydrogen production from the steam reforming of glycerol over Ni catalysts supported on Al_2O_3 and $AlCeO_3$
N.D. Charisiou, G. Siakavelas, K. Papageridis, D.G. Avraam, L. Tzounis, K. Polychronopoulou*, M.A. Goula (Greece, *United Arab Emirates)

SS9.9 Highly active and stable Ni/SiO_2 fiber catalysts for hydrogen production from ethanol steam reforming
P. Reubroycharoen, N. Prasongthum, S. Mhadmhan, P. Natewong (Thailand)

SS9.10 Development of a hybrid material with CO_2 capture, oxygen transfer and reforming functionalities for high-purity H_2 production via an intensified reforming process
A. Antzara, E. Heracleous, D. Bukur*, A.A. Lemonidou (Greece, *Qatar)

SS9.11 Oxidative and non-oxidative steam reforming of glycerol in a microchannel reactor
A. Delparish, S. Koc, C. Ekici, A.K. Avci (Turkey)

SS9.12 Hydrogen production by steam reforming of DME over Ni-V catalysts experimental vs. model data
R. Gonzalez-Gil, P. Kowalik*, K. Antoniak-Jurak*, M.C. Herrera, M.A. Larrubia, L.J. Alemany, W.S. Epling, I.S. Pieta*** (Spain, *Poland, **USA)

SS9.13 Aqueous phase reforming activity of Pt over mixed oxides with acid/basic and redox properties
E. Lombardi, F. Basile (Italy)

SS9.14 Study of the stability of $Pt/\gamma\text{-}Al_2O_3$ catalyst for the low temperature steam reforming of ethanol
M. Kourtelesis, X. Verykios (Greece)

SS9.15 Catalytic dry reforming of biogas using two-zone fluidized bed reactor with hydrogen separation by Pd/Ag metallic membranes
P. Durán, P. Ugarte, A. Sanz, J. Soler, M. Menéndez, J. Herguido (Spain)

FIRST FLOOR - PALAZZO AFFARI

09.40 **2B** (15'+5')
12.30 Chairs: **D. Kondarides** (Greece), **M. Maestri** (Italy)

2B.1 Enhanced visible-light-driven overall water splitting via visible-to-ultraviolet upconversion coupling with hydrogen-oxygen recombination inhibition
W. Gao, W. Zhang, G. Lu (China)

2B.2 Hydrogen evolution with nanoengineered beetroot extract and molecular hydrogenase mimic
M.Y. Pavliuk*, A.M. Cieslak°, M. Abdellah*, L. D'Amario*, S. Pullen*, J. Föhlinger*, A. Budinská*, D.L.A. Fernandes*, K. Sokołowski°, U. Rybinska*, F. Mamedov*, S. Ott*, L. Hammarström*, T. Edvinsson*, J. Lewinski°, J. Sá*,° (*Sweden,°Poland)

2B.3 Hydroxyl radical induced two sides of C_3N_4 in sunlight-driven water treatment: High efficiency versus chemical instability
J. Xiao, Y. Xie, H. Cao (China)

2B.4 Structural investigation of cobalt oxide clusters derived from molecular cobalt oligomers in a phosphate electrolyte
X. Li, E.B. Clatworthy, S. Bartlett, A.F. Masters, T. Maschmeyer (Australia)

Break

2B.5 Photocatalytic water splitting over Au-$SrTiO_3$ with different metal dopants
D. Saadetnejad, R. Yıldırım (Turkey)

2B.6 Chemical and biological response of H_2O_2-assisted heterogeneous photocatalytic systems used on effluents from urban wastewater treatment plants
N.F.F. Moreira, C. Narciso-da-Rocha, M.I. Polo-López*, L. Pastrana-Martínez, J.L. Faria, C.M. Manaia, P. Fernández-Ibáñez, O.C. Nunes, A.M.T. Silva** (Portugal, *Spain, **United Kingdom)

2B.7 Pure and F-doped TiO_2: correlation between catalytic efficiency and UV-induced peroxide species formation
D.V. Barsukov, A.V. Saprykin, I.R. Subbotina (Russia)

2B.8 Promoting catalytic oxygen activation on reduced graphene oxide-Pt/TiO_2 with UV light pre-treatment
R.J. Wong, A. Lim, J. Scott, R. Amal (Australia)

FIRST FLOOR - PALAZZO AFFARI

14.30 **4A.1** (15'+5')
16.10 Chairs: **R. Arrigo** (United Kingdom), **J. Spivey** (USA)

4A.1.1 Contribution of NMR and Raman Imaging to monitor the preparation step of CoMo(P)/γ-Al_2O_3 catalysts
L. Catita, A.-A. Quoineaud, O. Delpoux, C. Pichon (France)

4A.1.2 Ammonia synthesis over Ru-loaded Ca_2NH: Effect of H- ion on the catalytic performance
M. Kitano, Y. Inoue, T. Nakao, T. Tada, M. Hara, H. Hosono (Japan)

4A.1.3 Brønsted and Ga Lewis acid synergy in ZSM-5 for alkane dehydrogenation
M.W. Schreiber, M. Baumgaertl, A. Jentys, R. Bermejo-Deval, J.A. Lercher (Germany)

FIRST FLOOR - PALAZZO AFFARI

14.30 **4A.1** (cont.)
16.10

4A.1.4 Model HDS catalysts on planar alumina substrates: surface-dependent speciation of the active phase
C. Bara, A.-F. Lamic-Humblot, E. Devers, M. Digne, G.D. Pirngruber, X. Carrier (France)

4A.1.5 Direct visualization of carburization of Fe nanoparticles in synthetic gas: application of Environmental TEM for Fischer-Tropsch catalysis
X. Liu, C. Zhang, Y.W. Li, J.W. Niemantsverdriet, J.B. Wagner*, T.W. Hansen* (China, *Denmark)

Break

FIRST FLOOR - PALAZZO AFFARI

16.20 **2C.2** (15'+5')
18.40 Chairs: **L. Pinard** (France), **A.M. Raspolli Galletti** (Italy)

2C.2.1 Kinetic study of cellulose transformation to glucose and 5-HMF over solid acid carbon catalyst
N.V. Gromov, O.P. Taran, P.A. Kolinko, C. Aymonier*, V.N. Parmon (Russia, *France)

2C.2.2 The influence of water and methanol on the activity of molybdenum carbide catalysts in HDO reactions
J. Engelhardt, Z. Cao, G.-H. Wang, R. Rinaldi*, P. Lyu, P. Nachtigall**, Á. Morales-García**, F. Schüth** (Germany, *United Kingdom, **Czech Republic)

2C.2.3 Defunctionalisation of biomass derived 6-amyl-α-pyrone to chemicals and fuels
M.d.I. Alam, S. Gupta, A. Bohre, E. Ahmad, T.S. Khan, B. Saha, M.A. Haider (India)

2C.2.4 Experimental, theoretical and spectroscopic studies of hydrodeoxygenation of furanic compounds
K.A. Goulas, A.V. Mironenko, W. Zheng, J. Luo, H. Yun, J.D. Lee, C.B. Murray, R.J. Gorte, D.G. Vlachos (USA)

2C.2.5 Hydrogenation of levulinic acid in aqueous phase using novel sol-gel Ru-based bifunctional catalysts by sol-gel
M. Di Serio, V. Russo, L. Minieri, S. Esposito, B. Bonelli, F. Dorsola, B. Silvestri, A. Vergara, A. Aronne (Italy)

2C.2.6 Guaiacol hydrodeoxigenation over carbon supported nickel phosphide (Ni_2P/C) - The effect of carbon support on synthesis and catalytic activity
L.F. Feitosa, G. Berhault*, D. Laurenti*, V. Teixeira da Silva (Brazil, *France)

2C.2.7 Selectivity control in solid acid and Pd-catalyzed tandem catalytic aromatization of biobased furanics
H.C. Genuino, S. Thyjagarajan, J.C. van der Waal, E. de Jong, J. van Haveren, D. van Es, B.M. Weckhuysen, P.C.A. Bruijnincx (The Netherlands)

ROOM ADUA 1 - PALAZZO AFFARI

14.30 **SS3** (7')
16.10 Chairs: **G. Garbarino** (Italy), **C. Sievers** (USA)

SS3.1 Catalytic coatings for continuous and highly selective semi-hydrogenation in vitamin and fine chemical production
R. Goy, S. Vernuccio, M. Altheimer, P.R. von Rohr, W. Bonrath, J. Medlock (Switzerland)

SS3.2 Fischer-Tropsch synthesis in microchannel reactor over promoted Co/Al_2O_3 catalyst
R. Xu, C. Hou, Z. Hu, H. Nie (China)

SS3.3 One-step synthesis of methyl isobutyl ketone using a bifunctional zeolite catalyst
R. Pulikkal Thumbayil, J. Mielby, S. Kegnæs (Denmark)

SS3.4 Chemoselective hydrogenation of alkynes to alkenes catalyzed by supported iron oxide nanoparticles
M. Tejeda Serrano, A. Leyva Pérez, A. Corma Canós (Spain)

SS3.5 Process intensification in metallic monoliths for FTS
D. Merino, O. Sanz, A. Egaña, M. Montes (Spain)

SS3.6 Studies of deactivation of methanol to formaldehyde selective oxidation catalyst
K.V. Raun, M. Schumann*, M. Høj, M. Thorhauge, P. Beato, C.D. Damsgaard, J. Chevallier, K. Nielsen, J.-D. Grundwaldt*, A.D. Jensen (Denmark, *Germany)

SS3.7 Process simulation for the production of hydrogen and ethylene: exploitation of diluted 2nd generation bioethanol solutions as poorly expensive raw material
I. Rossetti, A. Tripodi, M. Compagnoni, G. Ramis (Italy)

SS3.8 A screening of FCC catalysts for the catalytic cracking of polyethylene pyrolysis waxes
E. Rodríguez, Á. Ibarra, J. Bilbao, J.M. Arandes (Spain)

SS3.9 Maximizing the re-use of HDS spend catalysts: a key process for the refinery performance and profitability
S. Morin, N. Chandak, P. Laveille, G.P. Singaravel, M. Berthod (United Arab Emirates)

SS3.10 Structured catalysts for industrial bioethanol steam reforming
C. Ruocco, E. Palo, A. Ricca, G. Iaquaniello, L. Mosca, V. Palma (Italy)

SS3.11 High throughput testing of catalysts with fast deactivation for methanol-to-hydrocarbons (MTH)
M. Kirchmann, C. Hauber, A. Haas (Germany)

Break

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS7** (7')
18.40 Chairs: **S. Scirè** (Italy), **S. Tolborg** (Sweden)

SS7.1 Direct non-oxidative conversion of natural gas to value-added chemicals
J. Hu (USA)

SS7.2 Silica poisoning influence on the HDT catalyst processing coker naphtha
P. Pérez-Romo, C. Aguilar-Barrera, J. Navarrete-Bolaños (Mexico)

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS7** (cont.)
18.40

SS7.3 Catalytic strategies for simultaneous upgrading of biomass derived oxygenated compounds to high density biofuel
N. Pino, G. Hincapié, D. López (Colombia)

SS7.4 Improved new catalyst for FT slurry phase application
G.J. Kelly, D.I. Enache, L.H. Davies, C. Sibbald, P. Ellis (United Kingdom)

SS7.5 UOP zeolitc materials (UZM) in aromatic alkylation
D.-Y. Jan, P. Cox (USA)

SS7.6 Ammonia decomposition and synthesis over multinary magnesioferrites: promotional effect of Ga on Fe catalysts for the decomposition reaction
K. Friedel Ortega, D. Rein, C. Lüttmann, J. Heese, F. Özcan, M. Heidelmann, J. Folke*, K. Kähler*, R. Schlögl*, M. Behrens (Germany, *Georgia)

SS7.7 Catalytic cracking of hydrocarbons over zeolite-based composites for on-purpose propylene production
S. Hodoshima, A. Motomiya, S. Wakamatsu, R. Kanai, F. Yagi (Japan)

SS7.8 New synthetic strategies for an efficient production of organic carbonate
T. Tabanelli, S. Cailotto, E. Monti, A. Perosa, M. Selva, F. Cavani (Italy)

SS7.9 Three-stage heavy oil hydroprocessing over hierarchically porous catalysts: effect of macroporous structure
V.S. Semeykina, A.V. Polukhin, A.I. Lysikov, E.V. Parkhomchuk (Russia)

SS7.10 Promotional effect of Mn on supported Fe-based catalysts for the production of lower olefins from alternative feedstocks
A. Kirilin, K. Andrews*, A. Koeken, A. Ciftci Sandikci, G. Bonte, J. Depicker, A. Malek*, M. Ruitenbeek (The Netherlands, *USA)

SS7.11 Sustainable biochemicals production by esterification reaction using a sulfonic resin as catalyst
R. Vitiello, R. Turco, V. Russo, R. Tesser, A. Buonerba, A. Grassi, M. Di Serio (Italy)

SS7.12 Catalyst development for deactivating systems - Looking beyond initial activity
E.-J. Ras, R. Moonen, S. Janbroers, P. Imhof (The Netherlands)

SS7.13 Improving long-term stability of sn-beta in flow: continuous production of methyl lactate from sugars
S. Tolborg, I. Sádaba, E. Taarning (Denmark)

SS7.14 Solid catalyzed isobutane/butene alkylation process based on short reaction regeneration cycles
D.A. Sladkovskiy*, K.V. Semikin*, E.V. Sladkovskaia*, N.V. Kuzichkin*, D.Yu. Murzin (Finland, *Russia)

ROOM ADUA 2 - PALAZZO AFFARI

14.30 **SS6** (7')
16.10 Chairs: **F. Can** (France), **P. Sazama** (Czech Republic)

SS6.1 Active sites and mechanistic steps of NH_3-SCR over Fe zeolites
W. Grünert, I. Ellmers, K.G. Padmalekha, R. Pérez-Vélez, M. Salazar, S. Hoffmann, P.S. Joshi, H. Vuong, R. Becker, V. Schünemann, U. Bentrup, A. Brückner (Germany)

SS6.2 Transient kinetic modeling and model validation of NH_3-SCR and related reactions on Cu-chabazite monolith catalyst
S.E. Bozbag, M. Simsek, O. Demir, D. Sanlı, B. Ozener, G. Hisar, C. Erkey (Turkey)

SS6.3 Remarkable enhancement of the deNO_x efficiency at low temperature: collaborative effect of ethanol and NH_3 for the NO selective catalytic reduction
M. Barreau, F. Can, X. Courtois, D. Duprez (France)

SS6.4 An investigation on the redox kinetics of NH_3-SCR and Hg oxidation over a V/Mo/Ti catalyst
A. Beretta, N. Usberti, S. Alcove Clave*, M. Nash* (Italy, *United Kingdom)

SS6.5 Gas phase phosphorus-poisoning on Cu-SSZ-13 for selective catalytic reduction of NO_x by ammonia
K. Xie, A. Kumar*, K. Kamasamudram*, L. Olsson (Sweden, *USA)

SS6.6 Hydrothermal stability and SCR mechanistics of x/SSZ-13 with different cations
K. Leistner, A. Kumar*, K. Kamasamudram*, L. Olsson (Sweden, *USA)

SS6.7 Correlation between vehicle- and rapid- aged commercial lean NO_x trap catalysts
J. De Abreu, A. Kristoffersson, T. Wentworth, L. Olsson (Sweden)

SS6.8 Perovskite based formulations rival Pt-Ba/Al_2O_3 LNT catalysts for NO_x removal in simulated diesel exhaust
J.A. Onrubia, A. Bermejo, B. Pereda, J.R. Gonzalez-Velasco (Spain)

SS6.9 EU-7, an exceptionally stable small-pore BIK type zeolite, useful in NH_3-SCR catalysis
M. De Prins, S. Kerkhofs, A. Hoffmann, S.P. Sree, E. Verheyen, C. Kirschhock, F.-W. Schütze*, J. Martens (Belgium, *Germany)

SS6.10 Cu-CHA material efficient in the SCR process in the presence of water and CO_2
M. Cortés-Reyes, C. Herrera, M.A. Larrubia, L.J. Alemany (Spain)

SS6.11 Low temperature MnFe/Al_2O_3 Catalyst for SCR of NO by NH_3 in industrial off-gases
R. Fehrmann, L. Schill, S.S.R. Putluru, A.D. Jensen (Denmark)

SS6.12 N_2O formation during operation of NO_x storage and reduction catalyst
D. Marinò, L. Castoldi, R. Matarrese, P. Forzatti, M. Daturi*, L. Lietti (Italy, *France)

Break

ROOM ADUA 2 - PALAZZO AFFARI

16.20 **SS8** (7')
18.40 Chairs: **P. Djinovic** (Slovenia), **N. Homs** (Spain)

SS8.1 Visible-light-enhanced H_2 production from formic acid over plasmonic Au@Pd nanoparticle supported on metal organic framework
M. Wen, K. Mori, Y. Kuwahara, H. Yamashita (Japan)

SS8.2 Promoting overall photocatalytic water splitting by addition of Mg to $SrTiO_3$
K. Han, B. Mei, G. Mul (The Netherlands)

SS8.3 Photocatalytic activity of the modified coupled semiconductors and its relationship with surface properties
S. Khameneh Asl, D. Unar* (Iran, *Turkey)

SS8.4 CO_2 conversion to solar fuels: importance of reaction conditions for significant assessment of photocatalytic performances
A. Olivo, M. Signoretto, E.R.B. Bay*, W.A. Thompson*, M. Maroto Valer* (Italy, *United Kingdom)

SS8.5 Enhanced photocatalytic CO_2 reduction over heterogenized rhodium complex within microporous polymer
F.M. Wisser, J. Canivet, D. Farrusseng (France)

SS8.6 Fundamental investigations of photocatalytic CO_2 reduction with TiO_2 under continuous flow conditions
M. Dilla, R. Schlögl, J. Strunk (Germany)

SS8.7 Photocatalytic CO_2 reduction using water as an electron donor by Z-scheme system consisting of powdered metal sulfide and oxide materials
A. Kudo, T. Takayama, A. Iwase (Japan)

SS8.8 Construction of $CoMoS_2$ / rGO/C_3N_4 nanosheets ternary heterojunction with novel visible-light photocatalytic activity and stability for water splitting
X. Xu, Z. Si, Z. Wang, L.P. Liu, Y. He, D. Weng (China)

SS8.9 NiO-ZnO/TiO_2 composites in the photocatalytic water splitting reaction
S. Neatu, F. Neatu, M. Florea, L.E. Abramiuc, C.M. Teodorescu (Romania)

SS8.10 Photocatalytic conversion of ethanol$_{aq}$ over tailored Pt/TiO_2 catalysts with different morphological and structural characteristics
A.C. Sola, P. Ramirez de la Piscina, N. Homs (Spain)

SS8.11 Combined electrocatalytic and photocatalytic conversion of CO_2 to fuels using superbase ionic liquids
A. Greer, J. Jacquemin*, S.F.R. Taylor, C. Hardacre, M.T. Galante, C. Longo****
(United Kingdom, *France, **Brazil)

SS8.12 Hydrogen production over PtO_x/TiO_2 photocatalysts: catalytic activity - Catalyst structure correlations
K. Majrik, Z. Pászti, L. Korecz, J. Mihály, A. Domján, A. Tompos, E. Tálas (Hungary)

SS8.13 Pd/TiO_2-WO_3 photocatalysts for hydrogen generation from water-methanol mixtures
Y. Toledo Camacho, A. Rey, F. Medina, S. Contreras (Spain)

16.20 **SS8** (cont.)
18.40

SS8.14 Photocatalytic synthesis of vanillin using N-doped carbon nanotubes/ZnO composites under UV-LED irradiation
M.J. Sampaio, A. Benyounes*, P. Serp*, J.L. Faria, C.G. Silva (Portugal, *France)

SS8.15 New insights on mechanical stability of TiO_2/SiO_2 photocatalytic films
A. Šuligoj, U. Lavrencic Štangar, M. El-Roz, G. Dražic, N. Novak Tušar (Slovenia)

AUDITORIUM - PALAZZO CONGRESSI

08.30 **PLENARY LECTURE 3 - PL3** (60')
09.30 Chairs: **G. Giordano** (Italy), **M. Hronec** (Slovakia)

PL3 From porous 3D frameworks towards 2D zeolites: material and catalytic consequences
J. Čejka (Czech Republic)

Break

AUDITORIUM - PALAZZO CONGRESSI

09.40 **TS2.1** (15'+5')
11.50 Chairs: **E.M. Gaigneaux** (Belgium), **A. Scarso** (Italy)

TS2.1.1 Parameters influencing reactivity in the methoxycarbonylation of higher internal olefins using novel highly active catalysts
P. Kucmierczyk, K. Dong, R. Jackstell, R. Franke, M. Beller (Germany)

TS2.1.2 Guideline for the control of Ru particles sizes on supports based on the chemical bond between metal and support's anion
T. Nakao, T. Tada, M. Kitano, M. Sasase, H. Hosono (Japan)

TS2.1.3 Bifunctional catalysis and intimacy criterion: industrial application for hydrocracking and hydroisomerization
E. Gutierrez Acebo, C. Leroux, C. Bouchy, C. Chizallet, Y. Schuurman, C. Bouchy (France)

TS2.1.4 Up-scaling the production of nanoparticulate catalysts with customized properties: supercritical flow technology
P. Hernandez-Fernandez, A.K. Baden, A.A. Velazquez-Palenzuela, C.M. Pedersen, H. Silva, L.H. Christensen, C. Kallesøe (Denmark)

Break

TS2.1.5 Ligands on nanoparticles - Combining the benefits of homogeneous and heterogeneous catalysis
I. Schrader, S. Neumann, A. Sulce, F. Schmidt, V. Azov, S. Kunz (Germany)

TS2.1.6 Application of tip-enhanced optical spectroscopy in nanoscale characterisation of catalytic activity
N. Kumar, S. Kalirai, B. Weckhuysen (The Netherlands)

AUDITORIUM - PALAZZO CONGRESSI

11.50 **KN-X1** (35'+5')
12.30 Chairs: **E.M. Gaigneaux** (Belgium), **A. Scarso** (Italy)

KN-X1 Catalysis and process advances in DMTO technology
Z. Liu (China)

AUDITORIUM - PALAZZO CONGRESSI

14.30 **1E.1** (15'+5')
15.30 Chairs: **A. Beretta** (Italy), **C. Mirodatos** (France)

1E.1 Design of heterogeneous nano-catalysts for the use of formic acid as a hydrogen energy storage material
K. Mori, S. Masuda, H. Yamashita (Japan)

1E.2 Copper nanoparticles socketed into copper phyllosilicate nanotubes with enhanced performance for chemoselective hydrogenation of esters to alcohols
X. Gong, M. Wang, L. Ye, Y. Yuan (China)

1E.3 Activity and stability of WO_x-ZrO_2/MWCNT for cyclohexanol dehydration in liquid water
P. Keller, C. Thomas*, H. Shi, L. Kovarik, G.L. Haller (USA, *France)

AUDITORIUM - PALAZZO CONGRESSI

15.30 **KN6** (35'+5')
16.10 Chairs: **A. Beretta** (Italy), **C. Mirodatos** (France)

KN6 Nano(bio)catalytic processes for biofuels and chemicals production
R. Luque (Spain)

Break

AUDITORIUM - PALAZZO CONGRESSI

16.20 **TS2.3** (15'+5')
18.00 Chairs: **E. Groppo** (Italy), **P.P. Pescarmona** (The Netherlands)

TS2.3.1 Aquivion® PFSA as an efficient pickering interfacial catalyst for the hydrolysis of triglycerides
H. Shi, Z. Fan, B. Hong, M. Pera-Titus (China)

TS2.3.2 Atomic layer deposition of platinum: an avenue to the scalable synthesis of stable ultra-low-loading fuel cell catalysts?
A. Goulas, F. Grillo, A. Dokania, D. Valdesueiro, H. Van Bui, B. van Limpt, J.A. Moulijn, J.R. van Ommen (The Netherlands)

TS2.3.3 Selective oxidation of methane to methanol in zeolites: a window of opportunity
A. Kulkarni, J. Nørskov, F. Studt* (USA, *Germany)

TS2.3.4 Fluorine substitution effect in bis(imino)pyridine cobalt complex in production of 1-hexene from propylene
A.P. Rodrigues Ehlert, E. Miraglia Carvalho, C. Favero, I. Vicente, K. Bernardo-Gusmão, R. Stieler, R.F. de Souza, M. Oberson de Souza (Brazil)

TS2.3.5 Investigating the hydrothermal stability of Pd/TS-1 in comparison with Pd/Silicalite-1 for VAM combustion, understanding the role of titanium
H. Hosseiniamoli, E. Kennedy, M. Stockenhuber (Australia)

AUDITORIUM - PALAZZO CONGRESSI

18.00 **KN-X2** (35'+5')
18.40 Chairs: **E. Groppo** (Italy), **P.P. Pescarmona** (The Netherlands)

KN-X2 New porous crystalline complex oxide catalysts synthesized by unit assembly
W. Ueda (Japan)

ROOM VERDE - PALAZZO CONGRESSI

09.40 **KN7** (35'+5')
10.20 Chairs: **F. Frusteri** (Italy), **A. Fukuoka** (Japan)

KN7 Molecular modeling in methanol to olefins reaction
V. Van Speybroeck (Belgium)

ROOM VERDE - PALAZZO CONGRESSI

10.20 **2D** (15'+5')
12.30 Chairs: **F. Frusteri** (Italy), **A. Fukuoka** (Japan)

2D.1 Solvent-free amidation of stearic acid with ethanolamine over supported iron catalysts
P. Mäki-Arvela, J. Zhu, N. Kumar, K. Eränen, A. Aho, J. Linden, J. Salonen, M. Peurla, V. Matveev*, D.Yu. Murzin (Finland, *Russia)

2D.2 Selective removal of 1,2-propanediol and 1,2-butanediol from bio-ethylene glycol by catalytic reaction
S. Ai, M. Zheng, T. Zhang (China)

Break

2D.3 Comparison of basic, amphoteric and acidic catalysts in the oxidative coupling of a mixture of methanol and ethanol for acrolein production
A. Lilic, V. Folliard, T. Wei, S. Bennici, J.-F. Devaux, J.-L. Dubois, A. Auroux (France)

2D.4 Direct synthesis of alkenes from alcohols with sulfones by heterogeneous Pt catalysts
S.M.A.H. Siddiki, A.S. Touchy, K. Shimizu (Japan)

2D.5 One-pot terpene alcohols amination towards biologically active compounds synthesis
Yu.S. Demidova, I.L. Simakova, E.V. Suslov, S. Beloshapkin*, K.P. Volcho, N.F. Salakhutdinov, A.V. Simakov, D.Yu. Murzin*** (Russia, *Ireland, **Mexico, ***Finland)

2D.6 An MOF immobilized Hoveda-Grubbs metathesis catalyst for the production of methyl acrylate from waste water
J.H. Bitter, J. Spekeijse, J. Lenotre, J. Holgueras Ortega, J. Sanders, E. Scott (The Netherlands)

ROOM VERDE - PALAZZO CONGRESSI

14.30 **KN9** (35'+5')
15.10 Chairs: **G. Busca** (Italy), **J.M.E. Hensen** (The Netherlands)

KN9 Graphene-based catalysts for organic synthesis and crosslinking of thermoset polymers
M.R. Acocella, L. D'Urso, M. Maggio, G. Guerra (Italy)

ROOM VERDE - PALAZZO CONGRESSI

15.10 **4C.1** (15'+5')
16.10 Chairs: **G. Busca** (Italy), **J.M.E. Hensen** (The Netherlands)

4C.1.1 Pt and Pd-based catalysts with hierarchical porosity prepared by a combination of latex synthesis, sonochemistry and sol-gel process
A.F. Sierra Salazar°,*, W.S.J. Li°, M. Bathfield°, T. Chave°, A. Ayral°, S.I. Nikitenko°, V. Hulea°, P.J. Kooyman*, F.D. Tichelaar**, S. Abate***, S. Perathoner***, P. Lacroix-Desmazes°** (°France, *South Africa, **The Netherlands, ***Italy)

4C.1.2 Porous tin-organic frameworks selectively catalyze epimerization of aldoses
I. Delidovich, A. Hoffmann, A. Willms, M. Rose (Germany)

4C.1.3 Interfacial structure of copper clusters on rod-shaped ceria
A. Chen, Y. Zhou, J. Ning, Y. Li, W. Shen (China)

Break

ROOM VERDE - PALAZZO CONGRESSI

16.20 **4C.2** (15'+5')
18.40 Chairs: **M. Daturi** (France), **M. Guidotti** (Italy)

4C.2.1 Covalent triazine-based frameworks - Tailored solid supports straight from the "chemical toolbox"
J. Artz, M. Pilaski, R. Palkovits (Germany)

4C.2.2 Concerted catalysis in tight spaces: mesoporous silica-supported palladium complex and tertiary amine for allylation of nucleophiles
K. Motokura, M. Ikeda, M. Nambo, W.-J. Chun, K. Nakajima, S. Tanaka (Japan)

4C.2.3 Design of metal pyrazolate MOFs as heterogeneous catalysts for multi CC bond forming reactions
F.G. Cirujano, E. López-Maya*, M.L. Rodriguez-Albelo*, J.A.R. Navarro*, D. De Vos (Belgium, *Spain)

4C.2.4 Single ensembles on indium oxide as active sites for the semi-hydrogenation of acetylene
D. Albani, M. Capdevila-Cortada*, G. Vilé, S. Mitchell, N. López*, J. Pérez-Ramírez (Switzerland, *Spain)

4C.2.5 New route for the production of acrolein from a mixture of light alcohols: an in situ X-ray photoelectron spectroscopy study
P. Simon, M. Trentesaux, A. Borowiec, M. Capron, F. Dumeignil, J.-J. Gallet, F. Bournel, J.-F. Paul, A.-S. Mamede (France)

4C2.6 Design of hierarchical catalysts through surfactant-templating
N. Linares, A. Sachse, E. Serrano, A. Grau-Atienza, E. De Oliveira Jardim, J. Silvestre-Albero, M.A.L. Cordeiro*, F. Fauth, G. Beobide, O. Castillo, J. García-Martínez (Spain, *USA)

4C2.7 Enhancing selectivity in hydrogenation of prenal to prenol by steric effect using Pt@ ZIF-8 catalyst
X. Lan, N. Huang, K. Xue, T. Wang (China)

ROOM ONICE - PALAZZO CONGRESSI

14.30 **SS12** (7')
16.10 Chairs: **D. Rutkowska-Zbik** (Poland), **S.N. Steinmann** (France)

SS12.1 Modelling formic acid decomposition: what are the differences between electrocatalysis and promoted heterogeneous catalysis?
S.N. Steinmann, C. Michel, P. Wang*, G. Fu*, P. Sautet** (France, *China, **USA)

SS12.2 Dynamics and complexity of proton-transfer processes in zeolites studied at the single molecule level: role of solvent polarity and carbocation stability
Z. Ristanovic, A.V. Kubarev*, J. Hofkens*, M.B.J. Roeffaers*, B.M. Weckhuysen (The Netherlands, *Belgium)

SS12.3 First-principles assessment of catalysis by confinement: NO oxidation on pure silica frameworks with voids of molecular dimensions
M. Maestri, E. Iglesia* (Italy, *USA)

SS12.4 First principle study of active sites on UiO-66 for Fischer esterification
C. Caratelli, J. Hajek, F.G. Cirujano, M. Waroquier, F.X. Llabrés I Xamena*, V. Van Speybroeck (Belgium, *Spain)

SS12.5 Accurate calculation of dispersion energies in hybrid systems and in gas adsorption processes
L. Canti, A. Fraccarollo, L. Marchese, M. Cossi (Italy)

SS12.6 Genesis of the active site in metallocene-based olefin polymerization catalysis: role of catalyst heterogeneities in metallocene activation
M.E.Z. Velthoen, A. Muñoz-Murillo, J.M. Boereboom, A. Bouhmadi*, M. Cecius*, S. Diefenbach, B.M. Weckhuysen** (The Netherlands, *Belgium, **USA)

SS12.7 Rational design of a hierarchical pore network: mathematical models and catalytic experiments
E.V. Parkhomchuk, V.S. Semeykina, K.A. Sashkina, N. Sankova, I.A. Tiuliukova, A.I. Lysikov, A.V. Polukhin, Ya.V. Bazaikin, E.G. Malkovich (Russia)

SS12.8 The next level of quantum mechanics simulations: massive screenings, morphology, dynamics, artificial intelligence
M.P. Checinski, K. Stier (Germany)

SS12.9 A closer look at the electronic properties of bimetallic cobalt-iron model catalysts
A.S.M. Ismail, M. Casavola*, B. Liu, K. de Jong, F.M.F. de Groot (The Netherlands, *United Kingdom)

SS12.10 Investigation of catalyst deactivation from first principles
P.N. Plessow (Germany)

Break

ROOM ONICE - PALAZZO CONGRESSI

16.20 **SS18** (7′)
18.40 Chairs: **M. Chiesa** (Italy), **A. Martinez** (Spain)

SS18.1 Design of multifunctional heterogeneous catalysts for the selective conversion of glycerol into methyl lactate
Z. Tang, H.G. Heeres, P. Pescarmona, (The Netherlands)

SS18.2 Acid catalyzed carbohydrate dehydration to HMF and furfural in superior yield with the use of extraction solvent hexafluoroisopropanol
E. Weingart, C. Staude, U. Prüße (Germany)

SS18.3 Conversion of ethylene to propene (EtP) over Ni impregnated on silica-aluminas
M. Stoyanova, M. Schneider, M.-M. Pohl, U. Rodemerck (Germany)

SS18.4 Successful development of benign catalytic oxidation methodologies for the synthesis of bio-succinic acid
I. Podolean, N. Candu, M. Tudorache, V. Parvulescu, S.M. Coman (Romania)

SS18.5 Impact of SCILL catalysts in alcohol oxidation
I. Podolean, O.D. Pavel, H.G. Manyar*, P. Goodrich*, C. Hardacre*, V.I. Parvulescu (Romania, *United Kingdom)

SS18.6 Dehydrogenative coupling reaction: a way to optimize and upgrade bio alcohols over copper catalyst
N. Scotti, F. Zaccheria, C. Evangelisti, R. Psaro, N. Ravasio (Italy)

SS18.7 Photoinduced ethylene polymerization on the Cr^{VI}/SiO_2 Phillips catalyst
A. Piovano, C. Barzan, L. Mino, G. Spoto, E. Groppo (Italy)

SS18.8 Ethanol to chemicals: unraveling the mechanism behind the Lebedev and Guerbet reactions
J. Velasquez Ochoa, A. Chieregato, C. Bandinelli, A. Malmusi, C. Recchi, O. Vozniuk, M. Mella, F. Cavani (Italy)

SS18.9 Guerbet condensation of ethanol to n-butanol in liquid phase over Cu-hydrotalcite derived mixed oxides: striking effect of the copper content
A.M. Raspolli Galletti, P. Benito, A. Vaccari, C. Antonetti, D. Licursi, A. Matteuzzi, N. Schiarioli, E. Rodriguez-Castellon* (Italy, *Spain)

SS18.10 Catalytic ammonia synthesis from N_2 and H_2 on metal electrodes in atmospheric-pressure non-thermal plasma
M. Akiyama, K. Aihara, T. Deguchi, M. Tanaka, M. Iwamoto (Japan)

SS18.11 Challenging fine chemical synthesis by combining metal-free photocatalysts with energy-efficient light sources
M.J. Lima, M.J. Sampaio, R.A. Fernandes, A.M.T. Silva, J.L. Faria, C.G. Silva (Portugal)

SS18.12 From sugars to high-added value chemicals through a bifunctional catalyst
C. Moreno-Marrodan, F. Liguori, P. Barbaro (Italy)

SS18.13 "Hydrogen free" catalytic hydrogenation in the single-pot production of furfuryl alcohol
L. Collado, M. Li, R. Aguado-Molina, S. Treceno-Martín, F. Cárdenas-Lizana, M.A. Keane (United Kingdom)

ROOM ONICE - PALAZZO CONGRESSI

16.20 **SS18** (cont.)
18.40

SS18.14 Rh nanoparticles stabilized by NHC ligands: synthesis, surface study and application in selective catalysis
C. Godard, F. Martinez, C. Claver, S. Castillón, B. Chaudret* (Spain, *France)

SS18.15 Promotional role of Al species on the Ni-related activity of Ni-Al-MCM-41 catalysts in ethene oligomerization
S. Moussa, P. Concepción, M.A. Arribas, A. Martinez (Spain)

BASEMENT - PALAZZO AFFARI

09.40 **6B.1** (15'+5')
11.00 Chairs: **D.E. De Vos** (Belgium), **R. Millini** (Italy)

6B.1.1 Novel polymeric ion exchange resin catalysts for the synthesis of p,p-bisphenol A
B. Yang, E. Ferfecki, K.-D. Topp (China)

6B.1.2 Zeolite for industrial propylene oxide production
A.-N. Parvulescu, H.J. Teles, M. Weber, D. Urbanczyk, D. Riedel, U. Wegerle, U. Müller (Germany)

6B.1.3 Catalytic application of nanocrystalline beta zeolites on alkylation of benzene with propylene
M.E. Martínez Armero, R. Martínez-Franco, M. Moliner, C. Martínez, A. Corma (Spain)

6B.1.4 Problems arising in the use of acid exchange resins as catalysts in industrial processes
E. Santacesaria (Italy)

Break

BASEMENT - PALAZZO AFFARI

11.10 **KNI-2** (35'+5')
11.50 Chairs: **D.E. De Vos** (Belgium), **R. Millini** (Italy)

KNI-2 Catalysis for biorefineries – Industrial requirements
J.-P. Lange (The Netherlands)

BASEMENT - PALAZZO AFFARI

11.50 **6B.2** (15'+5')
12.30 Chairs: **D.E. De Vos** (Belgium), **R. Millini** (Italy)

6B.2.1 Low temperature NO adsorption ability of Pd/SSZ-13 activated by hydrothermal aging for cold start application
Y.S. Ryou, J. Lee, H. Lee, C.H. Kim, D.H. Kim (Korea)

6B.2.2 Hydrogen production by a thermally integrated ATR based fuel processor
A. Ricca, E. Palo, V. Palma, G. Iaquaniello, L. Mosca, M. Colozzi (Italy)

BASEMENT - PALAZZO AFFARI

14.30 **TS2.2** (15'+5')
16.10 Chairs: **W.J. Roth** (Poland), **F. Trifirò** (Italy)

TS2.2.1 The effect of surface chemistry on the performances of Pd-based catalysts supported on activated carbons
A. Lazzarini, R. Pellegrini, A. Piovano*, S. Rudic, C. Castan-Guerrero, P. Torelli, M.R. Chierotti, R. Gobetto, C. Lamberti, E. Groppo** (Italy, *France, **United Kingdom)

TS2.2.2 In situ observations of dynamic formation of highly dense isolated metal atom catalytic sites
X. Wang, Y. Chen, T. Kasama*, Z. Huang, X. Tang, X. Liu (China, *Denmark)

TS2.2.3 Imidazolium-functionalized carbon nanohorns for the conversion of CO_2 unprecedented increase of catalytic activity after recycling
C. Calabrese, L.F. Liotta, E. Carbonell, F. Giacalone, M. Gruttadauria, C. Aprile (Italy)

TS2.2.4 Accessible acid sites in hierarchical architectures for Beckmann rearrangement
E. Gianotti, A. Erigoni, I. Miletto, S. Chapman, R. Raja*, L. Marchese (Italy, *United Kingdom)

TS2.2.5 Electronic, geometric, and surface coverage effects in bimetallic Pd/Cu alloy catalysts on their selectivity for (de-)hydrogenation versus decarbonlylation
Y. Song, L.C. Grabow (USA)

Break

BASEMENT - PALAZZO AFFARI

16.20 **1E.2** (15'+5')
18.40 Chairs: **S.T. Brandao** (Brazil), **V.I. Parvulescu** (Germany)

1E.2.1 Hydrogenation of alkylaromatics over Rh/SiO_2
F. Alshehri, H.M. Weinert, S.D. Jackson (United Kingdom)

1E.2.2 Selective hydrogenolysis of glucose to propylene glycol over $Cu\text{-}La_2O_3/Al_2O_3$ mixed metal oxides
P. Yazdani, B. Wang, S. Kawi, A. Borgna (Singapore)

1E.2.3 Design and development of Pt-based trimetallic WGS catalysts
Ö. Özer, B.S. Çaglayan, A.E. Aksoylu (Turkey)

1E.2.4 Hydrogen production from bioethanol over nanostructured $Ni/Ce_{1-x}M_xO_y$ (M = Gd, La, Mg) catalysts
M.A. Kerzhentsev, E.V. Matus, L.B. Okhlopkova, I.Z. Ismagilov, O.B. Sukhova, O.A. Stonkus, P. Bharali*, Z.R. Ismagilov (Russia, *India)

1E.2.5 Investigation of the promoting effect of Mn on a Pt/C catalyst for the steam and aqueous phase reforming of glycerol
F. Bossola, X.I. Pereira-Hernández*, C. Evangelisti, Y. Wang*, V. Dal Santo (Italy, *USA)

1E.2.6 Production of pure H2 through CH_4 oxy-reforming coupled with Pd-dense membrane reactor
F. Basile, S. Abate, A. Fasolini, E. Lombardi, G. Centi (Italy)

1E.2.7 Identity of reactive hydrogen species and their transfer during hydrogenation and transfer hydrogenation of aldehydes
F. Lin, J. Shangguan, Z. Wu, Y.-H. Chin (Canada)

GROUND FLOOR - PALAZZO AFFARI

09.40 **1D** (15'+5')
12.30 Chairs: **K. De Jong** (The Netherlands), **J. Kaspar** (Italy)

1D.1 Bifunctionality of mesoporous Co/HZSM-5: toward direct production of liquid fuel from syngas
J.E. Mim, S. Kim, G. Kwak, K. Jun, S.K. Kim (Korea)

1D.2 Promotion with soldering metals for the major enhancement of light olefin yield in Fischer-Tropsch synthesis over iron catalysts
V.V. Ordomsky, B. Gu, Y. Luo, A. Carvalho, K. Cheng*, P.A. Chernavskii, A.Y. Khodakov** (France, *China, **Russia)

1D.3 Cobalt nanocrystals as highly active catalysts in Fischer-Tropsch synthesis
T.W. van Deelen, K.P. de Jong (The Netherlands)

1D.4 Transient kinetics for methane pathways identification over Fischer-Tropsch catalysts
D. Lorito, Y. Schuurman, P. Fongarland, D. Decottignies (France)

Break

1D.5 Application of nanoreactors for Fischer-Tropsch synthesis
V.V. Ordomsky, Y. Chen, N. Batalha, M. Marinova, M. Imperor, A.Y. Khodakov (France)

1D.6 Influence of manganese promotion on cobalt based catalysts for Fischer-Tropsch synthesis and the production of lower olefins
T.F. Kimpel, E.J.M. Hensen (The Netherlands)

1D.7 CO activation mechanism of Fischer-Tropsch synthesis on hcp Co studied by density functional theory (DFT) using K adsorption as a probe
Q. Chen, I.-H. Svenum, Y. Qi, L. Gavrilovic, D. Chen, A. Holmen, E.A. Blekkan (Norway)

1D.8 Chemistry in 5D; Operando time-resolved 3D-XRD-CT of a packed-bed reactor during methane partial oxdiation
A. Vamvakeros, S.D.M. Jacques, V. Middelkoop*, M. Di Michiel, I.Z. Ismagilov***, A.M. Beale** (United Kingdom, *Belgium, **France, ***Russia)

GROUND FLOOR - PALAZZO AFFARI

14.30 **SS13** (7')
16.10 Chairs: **N. Linares** (Spain), **M. Migliori** (Italy)

SS13.1 Sustainable zeolite catalysts for the synthesis of bio-based bisphenols
P. Ferrini, S.-F. Koelewijn, B. Sels (Belgium)

SS13.2 Non-thermal plasma for complete regeneration of coked zeolite
L. Pinard, S. Hedan, J.-D. Comparot, K. Ben Tayeb, H. Vezin, C. Batiot-Dupeyrat (France)

SS13.3 Direct conversion of syngas into lower olefins and aromatics over bifunctional catalysts via methanol intermediate
K. Cheng, X. Liu, W. Zhou, J. Kang, Q. Zhang, Y. Wang (China)

SS13.4 Bifunctional catalysis for synthesis gas conversion to olefins and aromatics
J.L. Weber, I. Dugulan, P.E. de Jongh, K.P. de Jong (The Netherlands)

GROUND FLOOR - PALAZZO AFFARI

14.30 **SS13** (cont.)
16.10

SS13.5 Enhancement of concentration and functionality of acid and redox active sites in zeolite based catalysts
P. Sazama, R. Pilar, L. Mokrzycki, V.I. Parvulescu, E. Tabor, A. Vondrova, D. Kaucky, P. Klein, S. Sklenak, J. Moravkova (Czech Republic)

SS13.6 Conversion of methanol to aromatic-free gasoline on zeolite ZSM-23: dramatic influence of particle size on catalyst deactivation
A. Molino, D. Rojo-Gama, K.A. Lukaszuk, K.P. Lillerud, U. Olsbye, S. Bordiga*, S. Svelle, P. Beato** (Norway, *Italy, **Denmark)

SS13.7 Partial oxidation of methanol over oxides of Cr, Mo and W supported on mixed CeO_2-ZrO_2 carrier
H. Inokawa, S. Zaman, H. Driss, M. Daous, A. Al-Zahrani, L. Petrov (Saudi Arabia)

SS13.8 Highly active Ti-SBA-15 catalysts prepared by grafting method
Y.-C. Lin, C.-C. Chang, K.-H. Sung, S. Cheng (Taiwan)

SS13.9 Role of HCP species in the deactivation behavior for low-temperature methanol conversion over HZSM-5 and HSAPO-34 Catalyst
L. Qi, Z. Liu (China)

SS13.10 Controlling light olefin selectivity and coke formation in the methanol transformation by P or Zn modifications of HZSM-5 zeolite
J. Valecillos, M. Gamero, A. Ochoa, A.T. Aguayo, P. Castaño (Spain)

SS13.11 Surface modification of zeolites with alkali phosphates enhances selectivity to acrylic acid via dehydration of lactic acid
Y. Noda, H. Zhang*, R. Dasari*, R. Singh*, R.M. Rioux* (Czech Republic, *USA)

Break

GROUND FLOOR - PALAZZO AFFARI

16.20 **SS17** (7')
18.40 Chairs: **A. Di Michele** (Italy), **M. Shamzhy** (Czech Republic)

SS17.1 Improved redox properties and catalytic performance of three-dimensionally ordered macroporous ceria-based catalysts
A. Davó-Quiñonero, J. González-Mira, I. Such-Basañez, J. Juan-Juan, D. Lozano-Castelló, A. Bueno-López (Spain)

SS17.2 P-toluylic acid assisted synthesis of size and morphology controlled hierarchical NH_2-MIL-125 for the removal of organic dyes
M. Liu, S. Hu, X. Guo, C. Song (China)

SS17.3 Efficient bulk binary $ZrCrO_x$ catalysts with low Cr content for non-oxidative dehydrogenation of low alkanes: synergy effect of Cr and Zr_{cus} sites
T. Otroshchenko, U. Rodemerck, D. Linke, E.V. Kondratenko (Germany)

SS17.4 Functionalization of nanocarbon for the anchoring of organometallic catalysts
A. Desmecht, O. Riant, S. Hermans (Belgium)

GROUND FLOOR - PALAZZO AFFARI

16.20 **SS17** (cont.)
18.40

SS17.5 Heterogeneously-acid catalyzed dehydration of light alcohols in gas phase over superacid Aquivion® PFSA
S. Andreoli, C. Oldani, G. Fornasari, S. Albonetti (Italy)

SS17.6 Oxoiron(V) intermediates that oxygenate C=C and C-H groups
A.M. Zima, O.Y. Lyakin, K.P. Bryliakov, E.P. Talsi (Russia)

SS17.7 Synthesis of Brownmillerite-type $Ca_2Fe_{2-x}Co_xO_5$ ultrafine particles as cocatalysts by reverse Micelle method on TiO_2 nanoparticles
E. Tsuji, R. Nanbu, K. Hirao, Y. Degami, S. Suganuma, N. Katada (Japan)

SS17.8 Boron nitride as a new candidate for adsorption and conversion of saccharides
H. Kobayashi, A. Fukuoka (Japan)

SS17.9 In-situ galvanic replacement as a strategy to tailor the catalytic performance of metal oxide based catalysts
C. Wu, R. Brescia, M. Prato, S. Marras, L. Manna, M. Colombo (Italy)

SS17.10 Cooperative effect of metal and acid sites of supported Ni_2P catalysts in methyl palmitate hydrodeoxygenation
I.V. Deliy, I.V. Shamanaev, I.M. Antonov, V.P. Pakharukova, E.Yu. Gerasimov, I.V. Yakovlev, A.S. Andreev, O.B. Lapina, G.A. Bukhtiyarova (Russia)

SS17.12 Zr modified MCM-41 in perillyl alcohol preparation
E. Vyskocilova, B. Fidlerova, L. Cerveny (Czech Republic)

SS17.13 Selective conversion of xylose into furfural using Nb_2O_5 as a heterogeneous catalyst with water-tolerant lewis acid sites
N.K. Gupta, A. Fukuoka, K. Nakajima (Japan)

SS17.14 Using MCM-41 as a hard template for the synthesis of mesoporous TiO_2, with quasielastic neutron scattering studies of confined liquids
T.-L. Hughes, S. Chansai, A. Garforth, D. Dervin, H.G. Manyar, M. Falkowska, J. Szala-Bilnik, D.T. Bowron, T.G.A. Youngs, M. Leutzsch, M. Mantle, C. Hardacre (United Kingdom)

SS17.16 Highly active and selective mixed oxides supported Ni formulations (MONiFs) for the direct amination of alcohols
A. Tomer, Z. Yan*, A. Ponchel, M. Pera-Titus* (France, *China)

FIRST FLOOR - PALAZZO AFFARI

09.40 **4B** (15'+5')
12.30 Chairs: **G. Ramis** (Italy), **N. Tanchoux** (France)

4B.1 The active Cu structure for low-temperature water gas shift reaction
W. Huang (China)

4B.2 The effect of high Al content on catalytic activity and modifiability of layered MWW zeolites
W.J. Roth, B. Gil, A. Korzeniowska, J. Grzybek (Poland)

4B.3 Understanding the role of NO2 in the fast NH_3-SCR of NOx - A combined in situ FTIR and EPR spectroscopic study
R. Pérez-Velez, W. Grünert, A. Brückner, U. Bentrup (Germany)

4B.4 Regeneration of Mo/HZSM-5 methane dehydroaromatization catalysts
N. Kosinov, F. Coumans, E. Uslamin, E. Hensen (The Netherlands)

Break

4B.5 Zeolite-trapped acetate and methyl acetate provide evidence for the initial carbon-carbon bond formation during the methanol-to-olefin process
A. Dutta Chowdhury, K. Houben, G.T. Whiting, M. Baldus, B.M. Weckhuysen (The Netherlands)

4B.6 Methanol-to-hydrocarbons reaction over acid zeolites: toward the operando UV-Raman study of the catalyst deactivation path
M. Signorile, D. Rojo Gama*, F. Bonino, A. Damin, S. Svelle*, P. Beato, S. Bordiga** (Italy, *Norway, **Denmark)

4B.7 Tracking by XAS the birth of Cu-active sites in zeolite-based catalysts: composition effects on Cu-speciation and reducibility in Cu-CHA
E. Borfecchia, A. Martini, K.A. Lomachenko*, C. Negri, G. Berlier, P. Beato, H. Falsig**, C. Lamberti, S. Bordiga** (Italy, *Russia, **Denmark)

4B.8 Modeling zeolite catalysis at operating conditions: an advanced molecular dynamics benchmark study
S. Bailleul, K. De Wispelaere, R. Demuynck, V. Van Speybroeck (Belgium)

FIRST FLOOR - PALAZZO AFFARI

14.30 **2E.1** (15'+5')
16.10 Chairs: **M. Di Serio** (Italy), **S. Fuentes Moyado** (Mexico)

2E.1.1 Highly dispersed gold nanoparticles supported on inorganic oxides for the future bio-refineries
F. Menegazzo, M. Signoretto, M. Manzoli (Italy)

2E.1.2 Hydrogenating the full scope of natural amino acids to the corresponding amino alcohols
A. Vandekerkhove, F. De Schouwer, L. Claes, D.E. De Vos (Belgium)

2E.1.3 Catalytic hydrogenolysis of kraft and soda lignins to alkylphenolic monomers
D. Fragoso, D. Jackson (United Kingdom)

FIRST FLOOR - PALAZZO AFFARI

14.30 **2E.1** (cont.)
16.10

2E.1.4 Acid properties of niobium oxophosphate catalysts and their use in catalytic hydrolysis of carbohydrates
S. Bennici, A. Auroux, P. Carniti*, A. Gervasini* (France, *Italy)

2E.1.5 The transfer hydrogenation of methyl levulinate to γ-Valerolactone over Cu-ZrO_2
M. Douthwaite, S. Iqbal, P.J. Miedziak, J.K. Bartley, D.J. Willock, G.J. Hutchings (United Kingdom)

Break

FIRST FLOOR - PALAZZO AFFARI

16.20 **KN8** (35'+5')
17.00 Chairs: **E. Pidko** (The Netherlands), **M. Signoretto** (Italy)

KN8 Role of molybdenum in hetero, homo, and enzymatic catalysis: selected examples studied by theory approach
M. Witko (Poland)

FIRST FLOOR - PALAZZO AFFARI

17.00 **2E.2** (15'+5')
18.40 Chairs: **E. Pidko** (The Netherlands), **M. Signoretto** (Italy)

2E.2.1 CeO_2 supported low loading Pd-Ni catalysts for highly selective amination of alcohols
L. Fang, B.W.L. Southward*, Z. Yan, A. Liebens, M. Pera-Titus (China, *USA)

2E.2.2 Versatile methylation of C-H/N-H bonds with methanol by heterogeneous Pt catalysts
A.S. Touchy, S.M.A.H. Siddiki, K.-I. Shimizu (Japan)

2E.2.3 Highly efficient unsupported cobalt nanoparticles for the acceptor-less dehydrogenation of alcohols
A. Viola, J. Peron, M. Giraud, L. Sicard, P. Lang, J.-Y. Piquemal (France)

2E.2.4 Investigation on the active phases of Ir-Fe/Al_2O_3 catalyst for hydrogen production via ethanol steam reforming
C. Choong, L. Chen, J. Tan, Y. Du, C.K. Poh, D. Ong, A. Borgna (Singapore)

2E.2.5 Hydrolytic hydrogenation of chitin to N-containing polyols
K. Techikawara, H. Kobayashi, A. Fukuoka (Japan)

ROOM ADUA 1 - PALAZZO AFFARI

14.30 **SS11** (7′)
16.10 Chairs: **Z. Li** (China), **F. Meirer** (The Netherlands)

SS11.1 Unexpectedly high activity of pure alumina and alumina-containing mixed oxides in dehydrogenation of propane and isobutane
U. Rodemerck, E.V. Kondratenko, T. Otroshchenko, D. Linke (Germany)

SS11.2 The confinement of active Cu nanoparticles in ordered mesoporous carbon for the synthesis of dimethyl carbonate
J. Wang, J. Mi, Z. Li (China)

SS11.3 Close to perfection: atom-efficient biocatalysis through redox neutral systems
S. Gandomkar, O. Laggner, E. Tassano, A. Dennig, N.G. Turrini, K. Faber, M. Hall (Austria)

SS11.4 Functionality of ligand-free alloy nanoparticles for heterogeneous catalysis made by scaleable laser synthesis
G. Marzun, I. Haxhiaj, S. Kohsakowski, S. Reichenberger, S. Barcikowski (Germany)

SS11.5 The extraordinary amphoteric nature of defective UiO-66 in catalytic reactions
J. Hajek, B. Bueken, M. Waroquier, D. De Vos, V. Van Speybroeck (Belgium)

SS11.6 Tandem dehydration-MPV reduction reactions of pentoses on Al- and Zr- substituted SBA-15
R.F. Perez, L.E.P. Borges, M.A. Fraga (Brazil)

SS11.7 A frustrated-Lewis-pair approach to boost gold activity for hydrogenations
L.M. Rossi, J.L. Fiorio, N. López* (Brazil, *Spain)

SS11.8 Catalyst Surface modification by Ion-beam sputtering
R. O'Donnell, S. Scaglione*, N. Artioli (United Kingdom, *Italy)

SS11.9 Enhanced direct production of sorbitol from cellulose over carbon supported Ru-Ni catalysts
L.S. Ribeiro, J.J. Delgado*, J.J.M. Órfão, M.F.R. Pereira (Portugal, *Spain)

SS11.10 Imogolite nanotubes: a new and tunable heterogeneous catalyst as a superior acid catalyst to zeolites
A.R. Reyes, T.E. Davies, J.A. Lopez-Sanchez (United Kingdom)

SS11.11 Use of $C_{10}MI.CF_3SO_3$, a hydrophobic ionic liquid, and HCl for the production of HMF from sugars
F. Colpo de Melo, R.F. de Souza, M. Oberson de Souza (Brazil)

Break

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS15** (7′)
18.40 Chairs: **F. Liguori** (Italy), **F. Meunier** (France)

SS15.1 Catalytic hydrolysis of the hydrides to produce hydrogen for fuel cells
V. Minkina, S. Shabunya, V.I. Kalinin (Belarus)

SS15.2 Selective hydrogenation of acetylene over supported bimetallic Pd-in catalyst: the promotional effect of indium
Y. Cao, Z. Sui, Y. Zhu, X. Zhou, D. Chen* (China, *Norway)

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS15** (cont.)
18.40

SS15.3 High-selective hydrogenolysis of xylitol on Ru-based catalyst in absence of base
M. Rivière, N. Perret, A. Cabiac, D. Delcroix, C. Pinel, M. Besson (France)

SS15.4 Tandem hydrogenation/hydrogenolysis of furfural to 2-methylfuran over Fe/Mg/O catalysts
S. Albonetti, L. Grazia, Y. Zhang, A. Lolli, M. Renom-Carrasco*, C. Thieuleux*, E.A. Quadrelli*, F. Cavani (Italy, *France)

SS15.5 Selective transfer hydrogenolysis of aromatic ethers promoted by the co-precipitated Pd/Fe_3O_4 catalyst
E. Paone, M.G. Musolino, R. Pietropaolo, F. Mauriello (Italy)

SS15.6 Promoting effect of oxygen-deficient tungsten oxide on selective C-O bond hydrogenolysis of biomass-derived cyclic ether compounds
E. Soghrati Khorasgani, P.C. Kok, S. Kawi, A. Borgna (Singapore)

SSS15.7 Effect of the extent of reduction of Co@SiO_2 catalysts in the selective hydrogenation of α,β-unsaturated carbonyl
T.M. Bustamante, C.H. Campos, G. Pecchi (Chile)

SS15.8 Ni-MOF: fast and facile synthesis for using as hydrogenation catalyst
T. Zaki, H.M. Abd El Salam, D. Aman, D.R. Abd El-Hafiz (Egypt)

SS15.9 Deactivation of nickel catalyst during the hydrogenation of fats and fatty acids: extent of Ostwald ripening and poisoning
F.H. Wong, T.J. Tiong, U.A. Asli, Y.H. Yap (Malaysia)

SS15.10 On stability and deactivation of Ru/TiO_2 catalysts in the hydrogenation of levulinic acid into gamma-valerolactone
F. Liu, J. Ftouni, P.C.A. Bruijnincx, B.M. Weckhuysen (The Netherlands)

SS15.11 Selective hydrogenation of aromatic carboxylic acids over Pt-Sn catalysts
X. Chen, R. Morgan, H. Manyar, H. Daly, Z. Wang, P. Hu, C. Hardacre (United Kingdom)

SS15.12 Improving Cu-alumina catalyst stability for glycerol hydrogenolysis by incorporation of lanthanum
A. Bouriakova, J. Lauwaert, B. Katryniok*, J. De Clercq, J.W. Thybaut (Belgium, *France)

SS15.13 A novel Pt-based catalytic system for the selective hydrogenation of carbonyl compounds under ambient conditions
E. Redina, K. Vikanova, G. Kapustin, L. Kustov (Russia)

SS15.14 Designing supported bimetallic nanoalloy catalysts for the selective hydrogenation of nitroaromatics
M. Macino, R. Qu, M. Sankar*, G.J. Hutchings (United Kingdom, *China)

SS15.15 Hydrogenolysis of glycerol over copper and copper-silver based catalysts: Ru and Ce as promoters
A. Zelazny, K. Samson, A. Kornas, M. Ruggiero-Mikołajczyk, M. Sliwa, W. Rojek, D. Rutkowska-Zbik (Poland)

ROOM ADUA 2 - PALAZZO AFFARI

14.30 **SS14** (7′)
16.10 Chairs: **M. Frediani** (Italy), **E.F. Iliopoulou** (Greece)

SS14.1 Exploring the effects of heat treatments on 2 wt.% Pd-Al_2O_3 for N_2O decomposition
N. Richards, J. Carter, Q. He, E. Nowicka, N.F. Dummer, S.E. Golunski, G.J. Hutchings (United Kingdom)

SS14.2 Morphology effect of α-Mn_2O_3 catalyst for soot combustion
Y. Men, L. Cheng, J. Wang, W. An, Y. Wang (China)

SS14.3 Activation of oxygen in the ceria lattice by incorporation of platinum in Pt/CeO_2 catalysts for low-temperature CO oxidation
A.I. Boronin, A.I. Stadnichenko, E.M. Slavinskaya, T.Yu. Kardash, V.V. Muravyov, A. Figueroba*, A. Bruix, K.M. Neyman*** (Russia, *Spain, **Denmark)

SS14.4 In-situ characterizations of Pt/CeO_2 during lean/rich sequences
G. Ferré, A. Gaenzler, M. Casapu, J.-D. Grunwaldt, M. Aouine, T. Epicier, F.J. Cadete Santos Aires, C. Geantet, S. Loridant, P. Vernoux (France)

SS14.5 CO catalytic combustion on high porosity open cell foams: the influence of washcoat deposition process
G. Groppi, M. Ambrosetti, R. Balzarotti, C. Cristiani, E. Tronconi (Italy)

SS14.6 Catalytic reduction of bromate over Pd nanoparticles synthesized via water-in-oil microemulsion
A.M. Perez-Coronado, O.S.G.P. Soares*, L. Calvo, J.J. Rodriguez, M.A. Gilarranz, M.F.R. Pereira* (Spain, *Portugal)

SS14.7 Bimetallic Pd-Pt/γ- Al_2O_3 catalysts for complete methane oxidation: the effect of the Pt:Pd ratio and Pd dispersion
A.K. Khudorozhkov, A.V. Bukhtiyarov, I.P. Prosvirin, V.I. Bukhtiyarov (Russia)

SS14.8 Degradation of N-containing compounds by pure and doped titania: study of the reaction in dark conditions, under UV light and after incubating the catalysts in ascorbic acid
F.S. Freyria, M. Armandi, M. Compagnoni, G. Ramis, I. Rossetti, B. Bonelli (Italy)

SS14.9 Catalytic performance of N-rich carbon nanotubes in catalytic wet air oxidation of short chain carboxylic acids and aromatic model compounds
R.P. Rocha, O.S.G.P. Soares, J.J.M. Órfão, M.F.R. Pereira, J.L. Figueiredo (Portugal)

SS14.10 CO oxidation over Pd-based alloys
M.H. Farstad, M.D. Strømsheim, J. Knudsen*, V.R. Fernandes, A. Borg, H.J. Venvik (Norway, *Sweden)

Break

ROOM ADUA 2 - PALAZZO AFFARI

16.20 **SS16** (7')
18.40 Chairs: **M. Compagnoni** (Italy), **G.T. Whiting** (The Netherlands)

SS16.1 Deactivation study of the hydrodeoxygenation of p-methylguaiacol over silica supported PGM catalysts
F.F.P. Bouxin, X. Zhang, I.N. Kings, A.F. Lee, M.J.H. Simmons, K. Wilson, S.D. Jackson (United Kingdom)

SS16.2 Production of high purity fructose with a heterogeneous catalyst - From batch to continuous operation
A. Nebreda, T. Salmi, K. Eränen, D.Yu. Murzin, H. Grénman (Finland)

SS16.4 Catalytic upgrading of ethanol to butanol: a highly selective route to an advanced biofuel
K.J. Pellow, R.L. Wingad, D.F. Wass (United Kingdom)

SS16.5 Kinetic studies of the catalytic conversion of lignin model compounds in ethanol/water hydrothermal conditions
N. Guilhaume, X. Besse, Y. Schuurman (France)

SS16.6 Etherification of glycerol with tert-butyl alcohol on amorphous silicaoluminophosphates
R. Estevez, S. Lopez-Pedrajas, D. Luna, F.M. Bautista (Spain)

SS16.7 Tetrabutylphosphonium bromide catalyzed dehydration of polyols and its application in the production of bio-based butadiene
M. Stalpaert, F. García Cirujano, D.E. De Vos (Belgium)

SS16.8 Cyclopentanone as alternative linking molecule in the furfural upgrading via aldol condensation
J. Cueto, L. Faba, E. Diaz, S. Ordonez (Spain)

SS16.9 Sustainable catalytic valorization of fructose-derived HMF to 2,5-bis(hydroxymethyl) furan and 2,5-bis(hydroxymethyl)tetrahydrofuran
C. Antonetti, S. Fulignati, D. Licursi, M. Pieraccioni, A.M. Raspolli Galletti (Italy)

SS16.10 Sn-silica nanotubes as catalysts for the synthesis of ethyl lactates
L.A. Bivona, L. Fusaro, C. Aprile (Belgium)

SS16.11 Bifunctional sulfated zirconia catalyst for synthesis of platform chemicals
A. Osatiashtiani, G. Morales*, J. Iglesias*, J.A. Melero*, M. Paniagua*, B. Hernández*, A.F. Lee, K. Wilson (United Kingdom, *Spain)

SS16.12 Acid-basic property of $YNbO_4$ for lactic acid formation from glucose in water
M. Kim, H. Kato, A. Fukuoka, K. Nakajima (Japan)

SS16.13 Perrhenate salts as catalysts for the deoxydehydration of vicinal diols and polyols
M. Curcio, K. van Rees, D.S. Morris, M. Cokoja*, F.E. Kühn*, J.B. Love (United Kingdom, *Germany)

SS16.14 Upgrading of bio-oils: catalytic HDO of guaiacol over Mo_2C supported in carbon nanofibers
E. Ochoa, E. Aylon, J.L. Pinilla, I. Suelves (Spain)

SS16.15 Biocatalysis for designing artificial lignin structures with predictable properties
M. Tudorache, C. Opris, M. Alcalde, V. Parvulescu (Romania)

SS16.16 Extraction and analysis of green oil present in the hydrogenation catalyst
B. Rijo, I. Fonseca, A. Vilelas, E. Santos, F. Lemos (Portugal)

AUDITORIUM - PALAZZO CONGRESSI

08.30 **PLENARY LECTURE 4 - PL4** (60')
09.30 Chairs: **J. Sullivan** (Ireland), **B. Weckhuysen** (The Netherlands)

PL4 Addressing the catalyst characterization challenges with spectroscopies
S. Bordiga (Italy)

Break

AUDITORIUM - PALAZZO CONGRESSI

09.40 **1F** (15'+5')
11.50 Chairs: **S. Bensaid** (Italy), **C. Pinel** (France)

1F.1 Experimental and numerical study of dynamic CO_2 hydrogenation to CH_3OH
C. Schmidt, K. Hildebrandt, A. Zschutschke, D. Messig, C. Hasse, S. Kureti (Germany)

1F.2 Designing novel multifunctional MOF catalysts for sustainable CO_2 utilization
M.E. Potter, W.R. Webb, D.J. Stewart, S.J. Elliott, P.J. Sazio, R. Raja (United Kingdom)

1F.3 Plasmon aided surface catalytic reaction using shape-controlled Ag-Ni binary nanoparticles
C. Kim, Y. Kwon, J. Kim, H. Lee (Korea)

1F.4 Visible light-induced carbon-carbon bond formation from CO_2 as a feedstock with dye molecule-biocatalyst hybrid redox system
Y. Amao, T. Katagiri, S. Ikeyama (Japan)

Break

1F.5 Photocatalytic hydrogen production from pure water by graphitic carbon nitride sensitized with meso-tetra(meta-carboxyphenyl)porphyrin
E.S. Da Silva, N.M.M. Moura, M.G.P.M.S. Neves, A. Coutinho, M. Prieto, C.G. Silva, J.L. Faria (Portugal)

1F.6 CO_2 methanation - Insights into catalyst deactivation
S. Ewald, O. Hinrichsen (Germany)

AUDITORIUM - PALAZZO CONGRESSI

11.50 **KN10** (35'+5')
12.30 Chairs: **S. Bensaid** (Italy), **C. Pinel** (France)

KN10 Surface organometallic chemistry on MOFs and inorganic oxides for CO_2 and N_2 reduction: en route to renewable energies storage
E.A. Quadrelli (France)

AUDITORIUM - PALAZZO CONGRESSI

14.30 **2G** (15'+5')
15.30 Chairs: **Z. Ismagilov** (Russia), **J.M. Lopez Nieto** (Spain)

2G.1 Palladium-non noble metal catalysts for the direct synthesis of H_2O_2 with high selectivity - Moving beyond Au
S.I. Freakley, Q. He, J. Harrhy, L. Lu*, D.A. Crole, D.J. Morgan, E.N. Ntanjua, J.K. Edwards, A.F. Carley, A. Borisevich*, C.J. Kiely*, G.J. Hutchings (United Kingdom, *USA)

2G.2 Catalytic wet peroxide oxidation as a solution for the treatment of liquid effluents from mechanical biological treatment plants for municipal solid waste
R.S. Ribeiro, R.O. Rodrigues, A.M.C. Carvalho, A.M.T. Silva, J.L. Figueiredo, J.L. Faria, H.T. Gomes (Portugal)

2G.3 New perspectives in the action of halide ions as promoter for the direct synthesis of hydrogen peroxide over palladium catalysts
C. Dalla Valle, F. Frison, P. Centomo, M. Zecca (Italy)

AUDITORIUM - PALAZZO CONGRESSI

15.30 **KN12** (35'+5')
16.10 Chairs: **Z. Ismagilov** (Russia), **J.M. Lopez Nieto** (Spain)

KN12 Transition metal frustrated Lewis pairs in catalysis
D.F. Wass (United Kingdom)

ROOM VERDE - PALAZZO CONGRESSI

09.40 **4D** (15'+5')
12.30 Chairs: **J. Hargreaves** (United Kingdom), **H. Olivier-Bourbigou** (France)

4D.1 Stable, solubilized active Au atom clusters for selective epoxidation of cis-cyclooctene with molecular oxygen
L. Qian, Z. Wang, E.V. Beletskiy*, J. Liu*, H.J. dos Santos, T. Li, M.C. Rangel**, M.C. Kung*, H.H. Kung*** (China, *USA, **Brazil)

4D.2 Well-structured bimetallic surface capable of molecular recognition for chemoselective nitroarene hydrogenation
S. Furukawa, K. Takahashi, T. Komatsu (Japan)

4D.3 The role of size and shape and the influence of water in the oxidation activity of copper clusters. A combined DFT and spectroscopic study
E. Fernández, M. Boronat, P. Concepción, S. García, A. Corma (Spain)

4D.4 Generation of subnanometric platinum with high stability during transformation of a 2D zeolite into 3D
L. Liu, A. Corma (Spain)

Break

4D.5 Influence of surface segregation on the catalytic activity of Au-Ag samples
N. Gilis, L. Jacobs, S. Lambeets, E. Genty, C. Barroo, T. Visart de Bocarmé (Belgium)

ROOM VERDE - PALAZZO CONGRESSI

09.40 **4D** (cont.)
12.30

4D.6 Microkinetic analysis of steam methane reforming over transition metal surfaces: combined DFT calculations and UBI-QEP method
Y. Wang, L. Xiao*, Y. Qi, S.E. Liland, K.R. Rout, Y.-A. Zhu*, J. Yang, D. Chen, A. Holmen (Norway, *China)

4D.7 Direct synthesis of H_2O_2 in continuous flow: an operando XAS study on palladium catalysts
B.J. Deschner, M. Selinsek, D.E. Doronkin, T.L. Sheppard, J.-D. Grunwaldt, R. Dittmeyer (Germany)

4D.8 Spatial extent of hydrogen spillover on catalyst supports
W. Karim, C. Spreafico, A. Kleibert, J. Gobrecht, J. VandeVondele, Y. Ekinci, J.A. van Bokhoven (Switzerland)

ROOM VERDE - PALAZZO CONGRESSI

14.30 **1G** (15'+5')
16.10 Chairs: **G. Martra** (Italy), **S. Wrabetz** (Germany)

1G.1 Insight into the shape selectivity of zeolites for dealkylation of lignin-derived alkylphenols to phenol and olefins
Y. Liao, D. Verboekend, B.F. Sels (Belgium)

1G.2 Operando Kerr-Gated Raman monitoring of methanol conversion on zeolites
I. Lezcano-Gonzalez, M. Agote-Aran, E.K. Gibson, A. Greenaway, M. Crozier, I. Sazanovich, M. Towrie, A.M. Beale (United Kingdom)

1G.3 Towards a disentangled control over chemical and spatial intimacies in solid tandem catalysts: the wax-free synthesis of liquid hydrocarbons from syngas
N. Duyckaerts, M. Bartsch, A. Lorke, F. Schueth, G. Prieto (Germany)

1G.4 Investigations into the mechanisms for the formation of primary olefins from methanol over ZSM-5 zeolite catalysts
T. Omojola, N. Cherkasov, A.C. van Veen, E.V. Rebrov, D.B. Lukyanov (United Kingdom)

1G.5 Gallium-modified zeolites as catalysts for the aromatization of furanics
E.A. Uslamin, N.A. Kosinov, E.A. Pidko, E.J.M. Hensen (The Netherlands)

BASEMENT - PALAZZO AFFARI

09.40 **6C** (15'+5')
10.20 Chairs: **E. Palo** (Italy), **S. Roggan** (Germany)

6C.1 Towards the continuous production of supported monometallic and bimetallic nanoparticles for applications in catalysis
S. Cattaneo, N. Dimitratos, S.J. Freakley, M. Sankar, G.J. Hutchings (United Kingdom)

6C.2 Ammonia synthesis catalyst poisoning: from laboratory experiments to field
P. Biasi, M. Furlan, J. D'Alessandri, C. Ferrini (Switzerland)

BASEMENT - PALAZZO AFFARI

10.20 **KN17** (35'+5')
11.00 Chairs: **E. Palo** (Italy), **S. Roggan** (Germany)

KN17 Beating the challenges of catalytic selective oxidation
G. Mestl (Germany)

Break

BASEMENT - PALAZZO AFFARI

11.10 **TS3.1** (15'+5')
12.30 Chairs: **E. Gianotti** (Italy), **M. Mühler** (Germany)

TS3.1.1 Active site requirements and mechanism of selective methane activation by Cu and Fe species in zeolites
Á. Szécsényi, G. Li, E. Hensen, J. Gascon, E.A. Pidko (The Netherlands)

TS3.1.2 Identification of the active sites in copper- and iron zeolites for the low temperature activation of Methane
M. Bols, B. Snyder*, P. Vanelderen, J. Woertink*, R. Schoonheydt, E. Solomon*, B. Sels (Belgium, *USA)

TS3.1.3 Selective oxidation of methane into methanol over copper-exchanged mordenite
V.L. Sushkevich, D. Palagin, M. Ranocchiari, J.A. van Bokhoven (Switzerland)

TS3.1.4 Metal-organic frameworks as catalysts for mild methane oxidation
D. Osadchii, A.I. Olivos Suarez, Á. Szécsényi , G. Li, M.A. Nasalevich, I.A. Dugulan, P. Serra Crespo, E.J.M. Hensen, S.L. Veber*, M.V. Fedin*, G. Sankar, E.A. Pidko*, J. Gascon (The Netherlands, *Russia)

BASEMENT - PALAZZO AFFARI

14.30 **KN13** (35'+5')
15.10 Chairs: **P. Barbaro** (Italy), **M. Oberson De Souza** (Brazil)

KN13 Model systems for catalysis: single-crystal oxide surfaces
U. Diebold (Austria)

BASEMENT - PALAZZO AFFARI

15.10 **4E** (15'+5')
16.10 Chairs: **P. Barbaro** (Italy), **M. Oberson De Souza** (Brazil)

4E.1 Single-event kinetic modeling for olefins cracking and MTO on ZSM-5
S. Standl, M. Tonigold, O. Hinrichsen (Germany)

4E.2 Role of oxide reducibility in catalysis: from biomass conversion to CO oxidation
G. Pacchioni, S. Tosoni, H.-Y.T. Chen, A. Ruiz-Puigdollers (Italy)

4E.3 Isolated nickel atoms in MgO: "single atom catalyst" or "doped oxide"
M.-M. Millet, S. Wrabetz, G. Algara-Siller, F. Girgsdies, A. Tarasov, R. Schlögl, E. Frei (Germany)

GROUND FLOOR - PALAZZO AFFARI

09.40 **KN11** (35'+5')
10.20 Chairs: **V. Dal Santo** (Italy), **A.-N. Parvulescu** (Germany)

KN11 Redox catalysis in fossil and bio-based olefins production routes
A. Lemonidou (Greece)

GROUND FLOOR - PALAZZO AFFARI

10.20 **2F** (15'+5')
12.30 Chairs: **V. Dal Santo** (Italy), **A.-N. Parvulescu** (Germany)

2F.1 High purity hydrogen production with SESR of bio-oil model compounds
E. Acha, D. Chen*, J.F. Cambra (Spain, *Norway)

Break

2F.2 Effect of metal, nanoparticle size and support on hydrogen generation through partial oxidation of ethanol
V.A. Kondratenko, A. Malmusi*, U. Rodemerck, F. Cavani*, E.V. Kondratenko (Germany, *Italy)

2F.3 Catalytic membrane-contactor-reactor based on CNFs in -alumina; the effect of egg-shell type structures on nitrite hydrogenation
R.B. Espinosa, R.S. Postma, L. Lefferts (The Netherlands)

2F.4 Low-temperature oxidation of ethylene by silica-supported platinum catalysts
A. Fukuoka, T. Yokoya, C. Jiang, K. Nakajima (Japan)

2F.5 Synergy of Li-N-H with 3d transition metals in catalytic ammonia decomposition and synthesis
J. Guo, P. Wang, F. Chang, W. Gao, G. Wu, T. He, P. Chen (China)

2F.6 Binder-free catalytic coatings for heterogeneous and electrocatalysis: Pd on mesoporous carbon coatings and its performance in butadiene hydrogenation and hydrogen evolution
D. Bernsmeier, L. Chuenchom, B. Paul, S. Rümmler, B.M. Smarsly, R. Kraehnert (Germany)

GROUND FLOOR - PALAZZO AFFARI

14.30 **TS3.2** (15'+5')
16.10 Chairs: **A. Donazzi** (Italy), **A. Erdohelyi** (Hungary)

TS3.2.1 Catalyst design for selective natural gas functionalization via oxyhalogenation chemistry
G. Zichittella, V. Paunovic, A.P. Amrute, J. Pérez-Ramírez (Switzerland)

TS3.2.2 Reaction stoichiometry and role of mono-atomically dispersed Co^{2+} cation in direct methylation of benzene with methane on Co/ZSM-5 zeolite catalyst
K. Nakamura, H. Matsubara, E. Tsuji, K. Okumura, S. Suganuma, N. Katada (Japan)

TS3.2.3 Probing the role of non-thermal plasma (NTP) in the hybrid NTP-catalytic oxidation of CH_4
E.K. Gibson, C.E. Stere, B. Curran-McAteer, G. Cibin, D. Gianolio, A. Goguet, P.P. Wells, C.R.A. Catlow, P. Collier, P. Hinde, C. Hardacre (United Kingdom)

GROUND FLOOR - PALAZZO AFFARI

14.30 **TS3.2** (cont.)
16.10

TS3.2.4 Conversion of methane to methanol and ethanol over NiO on ceria-zirconia in a single reactor
C. Okolie, Y. Lyu, E. Stavitski, L. Kovarik, C. Sievers (USA)

TS3.2.5 Low temperature selective oxidation of methane using gold-palladium based catalysts
N. Agarwal, S.J. Freakley, N. Dimitratos, D.J. Morgan, R.L. Jenkins, C.J. Kiely*, G.J. Hutchings (United Kingdom, *USA)

AUDITORIUM - PALAZZO CONGRESSI

08.30 **PLENARY LECTURE 5 - PL5** (60')
09.30 Chairs: **J.A. Lercher** (Germany), **R. Psaro** (Italy)

PL5 Molecular catalysts on supports: organometallic chemistry meets surface science
B.C. Gates (USA)

Break

AUDITORIUM - PALAZZO CONGRESSI

09.40 **TS4.1** (15'+5')
10.20 Chairs: **E. Kondratenko** (Germany), **L. Petrov** (Saudi Arabia)

TS4.1.1 Spatiotemporal studies of the deactivation of zeolites by coking
D. Rojo-Gama, M. Signorile*, F. Bonino*, S. Bordiga*, U. Olsbye, K.P. Lillerud, P. Beato, S. Svelle** (Norway, *Italy, **Denmark)

TS4.1.2 Molecular mobility in zeolite catalysts: neutron scattering and simulation studies
A. O'Malley, C.R.A. Catlow (United Kingdom)

AUDITORIUM - PALAZZO CONGRESSI

10.20 **KN-X3** (35'+5')
11.00 Chairs: **E. Kondratenko** (Germany), **L. Petrov** (Saudi Arabia)

KN-X3 Catalysis and electrocatalysis by size and composition selected subnanometer clusters
S. Vajda (USA)

AUDITORIUM - PALAZZO CONGRESSI

14.30 **2N.1** (15'+5')
15.30 Chairs: **TBA, A. Pintar** (Slovenia)

2N.1.1 A kinetic and mechanistic study of the catalytic wet air oxidation of ammonia over Mn-Ce-O catalysts
H. Ayadi, L. Bois, C. Descorme (France)

2N.1.2 N_2O abatement in nitric acid production
L.A. Isupova, E.F. Sutormina, Yu.A. Ivanova (Russia)

2N.1.3 One the role of promoted MoS_2 edge structures in hydrotreating catalysts
A.-L. Christoffersen, A. Bodin, P.G. Moses, S. Helveg, I. Chorkendorff, C.F. Elkjær (Denmark)

AUDITORIUM - PALAZZO CONGRESSI

15.30 **KN15** (35'+5')
16.10 Chairs: **N. Novak Tusar** (Slovenia), **A. Pintar** (Slovenia)

KN15 Nanocarbon-based catalysts to open new possibilities for sustainable production
D. Su (China)

Break

AUDITORIUM - PALAZZO CONGRESSI

16.20 **2N.2** (15'+5')
18.40 Chairs: **E.F. Iliopoulou** (Russia), **T. Montini** (Italy)

2N.2.1 Environmental applications of Co-catalysts
T. Laitinen, E. Genty*, J. Brunet*, S. Ojala, R. Cousin*, S. Siffert*, R.L. Keiski (Finland, *France)

2N.2.2 Surface acidity of mesoporous Co/SBA catalyst for catalytic combustion of chlorinated alkanes
E. Finocchio, J. Gonzalez-Prior, J.I. Gutierrez-Ortiz*, R. Lopez-Fonseca*, G. Busca, B. de Rivas* (Italy, *Spain)

2N.2.3 Double role of alkali promoter in soot oxidation over transition metal oxide catalysts
W. Kaspera, T. Jakubek, P. Legutko, P. Stelmachowski, A. Kotarba (Poland)

2N.2.4 Sulfur resistant soot oxidation catalysts based on metal orthovanadates
T. Gallert, M. Casanova, F. Puzzo, A. Trovarelli (Italy)

2N.2.5 Photoelectrochemical abatement of arsenic in water by hematite photoelectrodes
D. Spanu, F. Malara, A. Turolla, A. Naldoni, M. Antonelli, S. Recchia, V. Dal Santo (Italy)

2N.2.6 Cerium-copper oxide catalysts for total oxidation reactions
M. Piumetti, S. Bensaid, T. Andana, D. Fino, N. Russo, R. Pirone (Italy)

2N.2.7 Long-term activity and reactivation of Pd-based catalysts for total oxidation of methane
P. Lott, A. Gremminger, A. Boubnov, M. Casapu, J.-D. Grunwaldt, O. Deutschmann (Germany)

AUDITORIUM - PALAZZO CONGRESSI

18.40 **CLOSING REMARKS & POSTER AWARDS** (20')
19.00 Chairs: **G. Centi** (Italy), **J.A. Lercher** (Germany)

ROOM VERDE - PALAZZO CONGRESSI

09.40 **2L** (15'+5')
11.00 Chairs: **E. Finocchio** (Italy), **U. Prüße** (Germany)

2L.1 Could we overcome the space velocity limitations of Cu-ZnO catalysts for the WGS reaction?
L. Pastor-Pérez, C. Price*, E. le Saché*, A. Sepúlveda-Escribano, T.R. Reina* (Spain, *United Kingdom)

2L.2 Room temperature synthesis of glycerol carbonate catalyzed by spray dried sodium aluminate microspheres
R. Sreerangappa, D.P. Debecker (Belgium)

2L.3 Efficient way of carbon dioxide utilization in gas-to-methanol process
K.-W. Jun, G.-J. Kwak, H.-G. Park (Korea)

2L.4 Mechanism for the Cu-Zn synergy in industrial-type methanol catalysts
S. Kuld, M. Thorhauge, H. Falsig, P.G. Moses, C.F. Elkjær, C. Conradsen, I. Chorkendorff, S. Helveg, J. Sehested (Denmark)

ROOM VERDE - PALAZZO CONGRESSI

14.30 **TS4.2** (15'+5')
16.10 Chairs: **C. Claver** (Spain), **K. Triantafyllidis** (Greece)

TS4.2.1 In situ multimodal X-ray tomography on a bifunctional core@shell catalyst for one-step DME synthesis
T.L. Sheppard, S.W.T. Price*, F. Benzi, S. Baier, M. Klumpp, R. Dittmeyer, W. Schwieger, J.-D. Grunwaldt (Germany, *United Kingdom)

TS4.2.2 Metal poisoning of catalyst particles as studied by X-ray microscopy at multiple length scales
F. Meirer, S. Kalirai, B.M. Weckhuysen (The Netherlands)

TS4.2.3 QuickEXAFS study of Pd leaching from solid catalysts exposed to liquids
M.A. Newton, D. Ferri*, K.K. Hii (United Kingdom, *Switzerland)

TS4.2.4 Catalytic oxidation of methane over palladium oxide studied by multiscale modelling
C.-R. Florén, M. van den Bossche, P.-A. Carlsson, D. Creaser, H. Grönbeck, M. Skoglundh (Sweden)

TS4.2.5 Catalytic reactions in water; a multi-scale computational approach
R.E. Bulo (The Netherlands)

Break

ROOM VERDE - PALAZZO CONGRESSI

16.20 **TS5** (15'+5')
18.40 Chairs: **G. Giambastiani** (Italy), **L. Lefferts** (The Netherlands)

TS5.1 Aldol condensation of furfural and cyclohexanone: a way to produce bio-derived components of aviation fuel
D. Kubicka, O. Kikhtyanin (Czech Republic)

TS5.2 Encapsulation of phosphomolybdic acid in MIL-101(Cr) via "building a bottle around the ship": a long-term catalyst for epoxidation of cyclooctene
X. Yi, B. Katryniok, S. Paul (France)

TS5.3 Synthesis of ethyl lactate in high yields with mesoporous SnSi mixed oxide catalysts prepared by the aerosol-assisted sol-gel process
D.P. Debecker, A. Vivian, N. Godard, L. Fusaro, L. Cannavicci, C. Aprile (Belgium)

TS5.4 Catalysis at the rim: a mechanism for high PROX-activity of Pt_3Sn
M. Vandichel, H. Grönbeck (Sweden)

TS5.5 Ceria: an oxygen carrier for "chemical looping" dry reforming of methane
A. Löfberg, J. Guerrero, T. Kane, L. Jalowiecki-Duhamel (France)

TS5.6 New approach for the preparation of Rh and Pt nanoparticles stabilized by phosphine-functionalized silica for selective hydrogenation reactions
C. Claver, J. Llop Castelbou, K. Szeto, W. Barakat, N. Merle, C. Godard, M. Taoufik (France)

TS5.7 Bioinspired multicopper(II) cores and metal-organic networks as catalysts for the mild oxidative functionalization of alkane
T.A. Fernandes, C.I.M. Santos, V. André, M.V. Kirillova, A. Kirillov (Portugal)

ROOM ONICE - PALAZZO CONGRESSI

09.40 **SS20** (7′)
11.00 Chairs: **S. Suganuma** (Japan), **R. Turco** (Italy)

SS20.1 Effect of support on the selectivity in the Ag-catalyzed oxidation of ethylene
J.E. van den Reijen, P.H. Keijzer, W.C. Versluis, S. Kanungo, M.F. Neira d'Angelo, K.P. de Jong, P.E. de Jongh (The Netherlands)

SS20.2 The role of palladium β-hydrides in the direct synthesis of hydrogen peroxide
P. Biasi, P. Canu*, R. Lanza** (Switzerland, *Italy, **Sweden)

SS20.3 Oxidehydration of glycerol catalyzed by ZSM-5 zeolite-supported Keggin-type molybdovanadophosphoric acid
S. Suganuma, T. Hisazumi, K. Taruya, E. Tsuji, N. Katada (Japan)

SS20.4 Development of Pd and Pt-based host-guest catalysts for selective oxidation reactions
A. Lazzarini, S. Øien, M. Carosso*, L. Braglia*, A.L. Bugaev, E. Groppo*, C. Lamberti*, R. Pellegrini*, U. Olsbye, K.P. Lillerud, S. Bordiga*** (Norway, *Italy, **Russia)

SS20.5 Hydrogen peroxide and water formation in the catalytic direct synthesis of H_2O_2: on the active sites tailored by bromide and iodide
P. Biasi, S. Sterchele, S. Lindholm, P. Ek, J. Bobacka, J.-P. Mikkola, T. Salmi, M. Manzoli* (Finland, *Italy)

SS20.6 Direct synthesis of hydrogen peroxide in AuPd coated micro channels: an in-situ XAS study
S. Kanungo, M.F. Neira D'Angelo, L. van Haandel, V. Ordomskiy*, E.J.M. Hensen, J.C. Schouten (The Netherlands, *France)

SS20.7 Influence of intra-tunnel alkali cations on the cryptomelane matrix towards higher catalytic oxidation activity
T. Jakubek, S. Vieitez Calo, E. Nowicka, S. Golunski*, A. Kotarba (Poland, *United Kingdom)

SS20.8 H_2 separation and pure H_2O_2 aq. production by a carbon-Nafion-membrane catalyst
I. Yamanaka, Y. Satake, Y. Tamada, H. Ogihara (Japan)

SS20.9 Selective oxidation of bio-based unsaturated compounds into the corresponding epoxides with H_2O_2 catalyzed by gallium oxide nanorods
B. Singh, D. Mandelli*, P.P. Pescarmona (The Netherlands, *Brazil)

ROOM ONICE - PALAZZO CONGRESSI

14.30 **SS26** (7′)
16.10 Chairs: **C. Evangelisti** (Italy), **M. Kitano** (Japan)

SS26.1 Reaction-controlled phase transfer catalysis for epoxidation of allyl chloride
S. Gao (China)

SS26.2 One step sustainable synthesis of adipic acid
A. Mazzi, S. Paul, F. Cavani, R. Wojcieszak (France)

SS26.3 CO preferential oxidation (PROx) over Au catalysts: the role of water in achieving industrially useful performance
T. Whittaker, J. Saavedra, C.J. Pursell, B.D. Chandler (USA)

ROOM ONICE - PALAZZO CONGRESSI

14.30 **SS26** (cont.)
16.10

SS26.4 First ionization energy as a descriptor of alkali metals promoted oxychlorination Cu-based catalyst
E. Fenes, M.F. Baidoo, K.R. Rout, T. Fuglerud, D. Chen (Norway)

SS26.5 Understanding the selectivity difference between Co and Ru catalysts and tuning the product selectivity in Fischer-Tropsch synthesis
J. Kang, X. Yu, Y. You, K. Cheng, Q. Zhang, Y. Wang (China)

SS26.6 The role of acidity for vacuum gasoil hydrocracking over silica-alumina based nickel-molybdenum catalysts
I. Danilova, P.P. Dik, O.V. Klimov, E.Yu. Gerasimov, M.O. Kazakov, A.S. Noskov (Russia)

SS26.7 Influence of crystalline defects on catalytic performance
P. Bartosz, W. Paulus, P.-A. Répécaud, D. Aubert, H. Kaper (France)

SS26.8 Study of the catalytic activity of chiral half-sandwich Ruthenium(II) complexes containing α-aminoacidate ligands, for asymmetric transfer hydrogenation
I. Abdalghani, M. Crucianelli, L. Biancalana, F. Marchetti, G. Pampaloni (Italy)

SS26.9 Catalysis and kinetics of carbon nanotubes and nanofibers growth
L. Sousa Lobo (Portugal)

SS26.10 Single molecule fluorescence microscopy reveals local diffusion coefficients within the pore network of an individual catalyst particle
F.C. Hendriks, F. Meirer, A.V. Kubarev*, Z. Ristanovic, M.B.J. Roeffaers*, E.T.C. Vogt, P.C.A. Bruijnincx, B.M. Weckhuysen (The Netherlands, *Belgium)

SS26.11 Understanding the high activity of Ni-promoted WS_2 for hydrogenation of polyaromatic compounds
W. Luo, E. Schachtl, O.Y. Gutiérrez, J.A. Lercher (Germany)

Break

ROOM ONICE - PALAZZO CONGRESSI

16.20 **SS30** (7')
18.40 Chairs: **F. Ivars Barceló** (Germany), **D. Potemkin** (Russia)

SS30.1 Study of methane oxidation over alumina supported Pd-Pt catalysts using operando DRIFTS/MS and in situ XAS techniques
N.M. Martin, J. Nilsson, M. Skoglundh, E.C. Adams, X. Wang, G. Smedler, A. Raj, D. Thompsett, G. Agostini*, S. Carlson, K. Norén, P.-A. Carlsson (Sweden, *France)

SS30.2 CO PROX on Pt-M and Pt-MOx (M = Fe, Ni, Co) model catalysts: catalytic performance and operando XRD studies
D.I. Potemkin, E.Yu. Filatov, A.V. Zadesenets, P.V. Snytnikov, V.A. Sobyanin (Russia)

SS30.3 Mechanistic studies of C-C bond formation and O removal on $Zn_xZr_yO_z$ with Lewis acid-base pairs
J. Sun, H. Li, R.A. Baylon, Y. Wang (USA)

ROOM ONICE - PALAZZO CONGRESSI

16.20 **SS30** (cont.)
18.40

SS30.4 Clustering of Pd on ceria and the role of atoms and clusters in CO oxidation
Y. Su, I.A.W. Filot, J. Liu, E.J.M. Hensen (The Netherlands)

SS30.5 Operando study on the redox properties of Cu-based catalysts
L. Kang, F. Schüth*, F.R. Wang (United Kingdom, *Germany)

SS30.6 FTIR-DRIFT analysis of surface interaction of each species at Co-Ce/ZrO_2 System for carbon dioxide reforming of methane (CDRM)
A.I. Paksoy, B. Selen-Caglayan, A.E. Aksoylu (Turkey)

SS30.7 EPR characterization of active sites on the surface of operating catalysts
A.F. Bedilo, E.I. Shuvarakova, V.V. Chesnokov, R.M. Kenzin (Russia)

SS30.8 (Micro-)spectroscopic study of the (de)activation of shaped catalyst particles used in bio-oil upgrading at the Pilot Plant Scale
A.M. Hernandez-Gimenez, P.C.A. Bruijnincx, K. Houben, M. Baldus, R.M. Danisi, B.M. Weckhuysen (The Netherlands)

SS30.9 The effect of hydride and carbide phases on the catalytic performance of the palladium catalyst: operando study by XAS and XRD
A. Bugaev°,*, A. Lazzarini*, K. Lomachenko°, A. Guda°, R. Pellegrini*, E. Groppo*, L. Bugaev°, J. van Bokhoven, C. Lamberti°,*** (°Russia, *Italy, **Switzerland)

SS30.10 Selective hydrogenation of an unsaturated aldehyde controlled by molecular self-assembly on Pd-based model catalysts
F. Ivars-Barceló, K.-H. Dostert, C.P. O'Brien, S. Schauermann, H.-J. Freund (Germany)

SS30.11 FT-IR study of pore-size effect of mesoporous silica for cyclohexanone acetalization
R. Osuga, Y. Hiyoshi, T. Yokoi, J.N. Kondo (Japan)

SS30.12 Enhancing the activity in Pt/CeO_2 catalysts investigated by operando X-ray absorption spectroscopy
A.M. Gänzler, F. Maurer, M. Casapu, J.-D. Grunwaldt (Germany)

SS30.13 Application of 2D COS analysis for evaluation of xylene isomerization over 10-MR zeolites of various pore arrangement
K.A. Tarach, K. Gołabek, K. Góra-Marek (Poland)

SS30.14 Characterization of catalysts with operando x-ray spectroscopy
D. Sokaras (USA)

SS30.15 Promotional effect of water on direct dimethyl ether synthesis from carbon monoxide and hydrogen over Cu-Zn/Al_2O_3 catalysts prepared by using the sol-gel method
K. Takeishi (Japan)

BASEMENT - PALAZZO AFFARI

09.40 **KN14** (35'+5')
10.20 Chairs: **G. Groppi** (Italy), **A. Holmen** (Norway)

KN14 Probing surface catalysis in real time
A. Nilsson (Sweden)

BASEMENT - PALAZZO AFFARI

10.20 **2I** (15'+5')
11.00 Chairs: **G. Groppi** (Italy), **A. Holmen** (Norway)

2I.1 Kinetic modelling of water inhibited methane oxidation reactions over a Pd/Al_2O_3 wash-coated monolith using spatially and temporally resolved experimental data
C. Coney, C. Stere, A. Raj, S. Wilkinson, M. Caracotsios*, C. Hardacre, D. Thompsett, A. Goguet (United Kingdom, *USA)

2I.2 Hierarchical catalysts for catalytic methane combustion: study of deactivation mechanisms by H_2O, phosphorus and SO_2
T. Montini, M. Monai, T. Duchon*, P. Kúš*, E. Fonda, C. Chen***, N. Tsud*, K.C. Prince, V. Matolin*, R.J. Gorte***, P. Fornasiero** (Italy, *Czech Republic, **France, ***USA)

BASEMENT - PALAZZO AFFARI

14.30 **KN16 - EFCATS Young Research Award** (35'+5')
15.10 Chairs: **L. Prati** (Italy), **S. Svelle** (Norway)

KN16 Computational design of transition-metal compound materials for catalysis
A. Vojvodic (USA)

BASEMENT - PALAZZO AFFARI

15.10 **5A.1** (15'+5')
16.10 Chairs: **L. Prati** (Italy), **S. Svelle** (Norway)

5A.1.1 Low temperature catalytic ammonia synthesis in electric field
K. Murakami, H. Nakatsubo, R. Manabe, S. Ogo, H. Tsuneki, M. Ikeda, Y. Sekine (Japan)

5A.1.2 Single gold atom catalyzed ion-molecule reactions
B. Sitorus, A. Al Hindawi, C. Pughe, A. Ellis, H. Wu*, J. Yang*, S. Yang (United Kingdom, *China)

5A1.3 Photo-activated degradation of tartrazine by H_2O_2 as catalyzed by both bare and Fe-doped methyl-imogolite nanotubes and the related collapsed phases
E. Bahadori, V. Vaiano, S. Esposito, M. Armandi, D. Sannino, B. Bonelli (Italy)

Break

BASEMENT - PALAZZO AFFARI

16.20 **5A.2** (15'+5')
18.40 Chairs: **J.A. Odriozola** (Spain), **V. Sadykov** (Russia)

5A.2.1 Orbital physics of active perovskites for oxygen catalysis
J. Gracia, R. Sharpe*, T. Lin*, Y. Jiao*, J.W. Niemantsverdriet (The Netherlands, *China)

5A.2.2 Photocatalytic cyanomethylation of hydrocarbons with acetonitrile over metal loaded titanium oxide
H. Yoshida, E. Wada, T. Takeuchi, Y. Fujimura, T. Kato (Japan)

5A.2.3 Innovative photoreactors to remove N-containing pollutants from water
M. Compagnoni, V. Praglia, G. Ramis, F. Freyria, M. Armandi, B. Bonelli, I. Rossetti (Italy)

5A.2.4 Coating a supported nickel catalyst with [BMIM][BF_4] provides an exceptional partial hydrogenation performance at all conversion levels
A. Jalal, A. Uzun (Turkey)

5A.2.5 Recovery from carbon deposition - Stable La-Fe-Ni CO_2 hydrogenation catalysts exploiting the reversible segregation of Ni
P. Steiger, O. Kröcher, D. Ferri (Switzerland)

5A.2.6 Adamantane-based COF - New support for palladium and gold catalysts for the selective hydrogenation of 4-nitrostyrene
M.-M. Trandafir, L. Pop, N.D. Hadade, M. Florea, F. Neatu, C.M. Teodorescu, B. Duraki*, J.A. van Bokhoven*, I. Grosu, H. Garcia, V.I. Parvulescu** (Romania, *Switzerland, **Spain)

5A.2.7 Sequential metal and enzyme catalysis: one-pot selective dihydroxylation of limonene
D. Monti, C. Palumbo, E. Ferrandi, C. Marchesi, S. Riva, R. Psaro, M. Guidotti (Italy)

GROUND FLOOR - PALAZZO AFFARI

09.40 **SS21** (7')
11.00 Chairs: **R. Balzarotti** (Italy), **M. Claeys** (South Africa)

SS21.1 Activity enhancement by reduction-oxidation-reduction treatments of supported cobalt catalysts for the Fischer-Tropsch synthesis
C. Hernández Mejía, T. van Deelen, K. de Jong (The Netherlands)

SS21.2 On the role of cobalt carbide in higher alcohol synthesis over Co-Cu catalysts derived from hydrotalcite precursors
J. Nebel, C. Froese, S. Schmidt, S. Stürmer, K. Lotz, H. Antoni, S. Kaluza, M. Muhler (Germany)

SS21.3 Production of higher alcohols over ternary FeCoCu supported catalysts via Fischer-Tropsch synthesis
J. Plana-Pallejà, S. Abelló, D. Montané (Spain)

SS21.4 A more realistic model for Fischer-Tropsch catalysis by including lateral interactions and adsorbate migration
B. Zijlstra, R.J.P. Broos, J.-X. Liu, I.A.W. Filot, E.J.M. Hensen (The Netherlands)

09.40 **SS21** (cont.)
11.00

SS21.5 The selective addition of platinum on Co_3O_4/SiO_2 and its performance in the Fischer-Tropsch reaction
S. Govender, E. van Steen (South Africa)

SS21.6 Direct fuel production from syngas on cobalt zeolite composites with intimate contact between acid sites and metal species
A. Carvalho, N. Batalha, V. Ordomsky, N.R. Marcilio*, A. Khodakov (France, *Brazil)

SS21.7 Size dependent stability of cobalt nanoparticles on silica under simulated Fischer-Tropsch environment: deactivation via direct oxidation by water?
M. Wolf, H. Kotzé, E.K. Gibson*, C.R.A. Catlow*, N. Fischer, M. Claeys (South Africa, *United Kingdom)

SS21.8 Fischer-Tropsch synthesis on Co-Ru/TiO_2 catalysts: repercussion of support surface area on the SMSI effect and catalytic performance
F. Bertella, P. Concepción, A. Martínez (Spain)

SS21.9 Using organic precursors to develop highly active Co-based Fischer-Tropsch catalysts via incipient wetness impregnation
L. Fratalocchi, C.G. Visconti, L. Lietti (Italy)

14.30 **SS25** (7′)
16.10 Chairs: **S. Chen** (Italy), **A. Suligoj** (Slovenia)

SS25.2 NdBa1-xCo_2O_5+δ layered perovskites for the electrocatalytic reduction of oxygen
A. Donazzi, M. Maestri, G. Groppi (Italy)

SS25.3 Transition metals-embedded C_2N graphene: a promising electro-catalyst for CO_2 reduction
W. An, X. Cui, H. Wang, X. Liu (China)

SS25.4 Enhancing the rate of hydrogen and oxygen evolution from CeO_2 during solar thermal water splitting: addition of Pd and Al_2O_3
D. Kaya, D. Uner (Turkey)

SS25.5 Fe-Co oxide nanoparticles supported on multiwalled carbon nanotubes as bifunctional electrocatalysts for oxygen reduction/oxygen evolution in alkaline media
M. Kazakova, K. Elumeeva*, D.M. Morales*, V. Kuznetsov, W. Schuhmann* (Russia,*Germany)

SS25.6 TiO_2-AC hybrid materials to produce H_2 and biogas by photocatalytic decomposition of acetic acid
A. Amorós-Pérez, L. Cano-Casanova, M. Ouzzine*, M.A. Lillo-Ródenas, M.C. Román-Martínez (Spain, *Japan)

GROUND FLOOR - PALAZZO AFFARI

14.30 **SS25** (cont.)
16.10

SS25.7 Selective photo-oxidation of α-pinene with O_2 and MoO_2Ln complexes [Ln = acetylacetonate (acac) and 2,2-bipyridine-4,4-dicarboxylic acid] anchored on TiO_2
H. Martínez, E.A. Páez-Mozo, F. Martinez (Colombia)

SS25.8 Homogeneous and heterogeneous electrocatalysis in the reactions of CH-fluoroalkylation and phosphorylation of arenes
M.N. Khrizanforov, S.O. Strekalova, V.V. Grinenko, V.V. Khrizanforova, T.V. Gryaznova, Y.H. Budnikova (Russia)

SS25.9 A comparative study on adsorption and photocatalytic degradation of VOCs by Mn-Oxides modified TiO_2 micro-particles
M. Stucchi, E. Pargoletti, G. Cappelletti, D.C. Boffito, C.L. Bianchi, G. Cerrato (Italy)

SS25.10 Metal nitrides for electrochemical ammonia synthesis in molten salt systems
T. Sudmeier, I. McPherson, S.C.E. Tsang (United Kingdom)

Break

GROUND FLOOR - PALAZZO AFFARI

16.20 **SS29** (7')
18.40 Chairs: **E. Heracleous** (Greece), **F. Menegazzo** (Italy)

SS29.1 Lignin catalytic hydroconversion: an experimental and modeling study
J. Pu, T. Nguyen, D. Laurenti, I. Pitault, M. Tayakout, C. Geantet (France)

SS29.2 A molecular approach to hydrotreating catalysts
R.A. Arancon, A. Bonduelle-Skrzypczak, C. Legens, A. Morvan, A. Fedorov, V. Mougel, A.-S. Gay, V. Briois, C. Copéret, P. Raybaud (France)

SS29.3 Deoxygenation of organic oxygenates over bifunctional Pt-heteropoly acid catalysts in the gas phase
K. Alharbi, O. Poole, D. Belic, M. Alotaibi, E.F. Kozhevnikova, I.V. Kozhevnikov (United Kingdom)

SS29.4 Cesium and potassium metal ion substituted phosphotungstic acid catalysts for the production of biofuels
M. Lara-Serrano, S. Morales-de la Rosa, J.M. Campos-Martín, J.L. García-Fierro (Spain)

SS29.5 Valorization biomass derived reactants in liquid-phase flow-type reactor
N. Mimura, N. Muramatsu, O. Sato, Y. Masuda, A. Yamaguchi (Japan)

SS29.6 Towards modeling of long-chain hydrocarbon formation in the Fischer-Tropsch reaction over Fe-carbide surfaces
R.J.P. Broos, B. Zijlstra, I.A.W. Filot, E.J.M. Hensen (The Netherlands)

SS29.7 Acid catalysis for the conversion of pyrolytic vapors of bio oils
A. Margeriat, C. Lorentz, N. Guilhaume, C. Mirodatos, C. Geantet, D. Laurenti, Y. Schuurman (France)

GROUND FLOOR - PALAZZO AFFARI

16.20 **SS29** (cont.)
18.40

SS29.8 Selective catalysts for higher alcohol synthesis
J. Schumann, P. Bothra, A.J. Medford, Y.-S. Yoo, Z.-J. Zhao, F. Abild-Pedersen, J.K. Nørskov (USA)

SS29.9 Water gas shift reaction over polymetallic iron-containig catalysts supported on alumina modified with rare-earth elements
S.S. Itkulova, G.S. Polymbetova, S.K. Kussanova, Y.A. Boleubayev (Kazakhstan)

SS29.10 Development of Ni based catalysts promoted by Mo for renewable diesel production
E. Kordouli, C. Kordulis, A. Lycourghiotis, K. Bourikas (Greece)

SS29.12 Novel tailored-made efficient catalysts for biofuel additives formation
A.M. Ruppert, N. Potrzebowska, O. Sneka-Platek, K. Kazimierczak, P. Sautet*, M. Jedrzejczyk, M. Brzezinska, C. Michel, J. Grams (Poland, *France)

SS29.13 Effect of the support acidity on decalin hydrocracking over Ir/beta zeolite catalyst
N. Suárez, J. Bustamante, A. Moreno (Colombia)

SS29.14 Catalytic filter production for tar reduction in biomass gasification product gas
A.Z. Turan, A. Sarıoglan, Y. Durak Çetin, A. Ersöz (Turkey)

SS29.15 Hydrodeoxygenation of guaiacol and biocrude oil through nickel-based catalysts
P.H. Yan, E. Kennedy, M. Stockenhuber (Australia)

FIRST FLOOR - PALAZZO AFFARI

09.40 **2H** (15'+5')
11.00 Chairs: **W. Grünert** (Germany), **E. Tronconi** (Italy)

2H.1 Discerning the nanometer scale Copper distribution in the deNO_x Catalyst Cu-SSZ-13 with atom probe tomography
J.E. Schmidt, R. Oord, W. Guo*, J.D. Poplawsky*, B.M. Weckhuysen (The Netherlands, *USA)

2H.2 Effect H_2O on Nature of NO_2 Adsorption on BaO - Functionalized $Al_2O_3/ZrO_2/TiO_2$ DeNO_x catalysis
Z. Say, E. Ozensoy (Turkey)

2H.3 Operando high energy XRD study of $Cu/La_{0.5}Sr_{0.5}CoO_3$ three-way catalyst under oscillating feed
A. Garbujo, D. Ferri*, G. Perin, G. Carollo, P. Cool, O. Kröcher*, A. Glisenti** (Italy, *Switzerland, **Belgium)

2H.4 Palladium, zeolite, ceria based passive NO_x adsorbers
O. Mihai, F.F. Torres, T. Wentworth, L. Olsson (Sweden)

FIRST FLOOR - PALAZZO AFFARI

14.30 **2M.1** (15'+5')
16.10 Chairs: **C. Ampelli** (Italy), **B. Gil** (Poland)

2M.1.1 Characterisation and modelling of a three-way catalyst exposed to the exhaust gas from an ethanol-fuelled spark-ignition engine
C. McAtee, G. McCullough, D. Sellick, A. Goguet (United Kingdom)

2M.1.2 Fast and clean. Structure and function of highly active and selective sites in $VO_y/Ce_{1-y}M_yO_2$ catalysts during low-temperature NH_3-SCR of NO_x
T.H. Vuong, J. Radnik, J. Rabeah, U. Bentrup, M. Schneider, U. Armbruster, W. Grünert, A. Brückner (Germany)

2M.1.3 Spatio-temporal reaction dynamics of automotive three-way catalyst studied by operando XAFS technique
T. Tanabe, Y. Nagai, K. Dohmae, M. Miura, R. Imoto (Japan)

2M.1.4 The effect of pt particle size on the oxidation of NH_3 over Pt/Al_2O_3 for Diesel exhaust after treatment
T.K. Hansen, T.G. Andersen, M. Høj, B.B. Hansen, T.V.W. Janssens, J.M. Christensen, A.D. Jensen (Denmark)

2M.1.5 Carrier-free Sr-Ti catalysts for NO_x storage and reduction
V. Alcalde-Santiago, A. Davó-Quiñonero, I. Such-Basáñez, D. Lozano-Castelló, A. Bueno-López (Spain)

Break

FIRST FLOOR - PALAZZO AFFARI

16.20 **2M.2** (15'+5')
18.40 Chairs: **M. Ronning** (Norway), **C.G. Visconti** (Italy)

2M.2.1 Impacts of oxygenated compounds concentration on sooting propensities and soot oxidative reactivity: application to Diesel and Biodiesel surrogates
J. Abboud, J. Schobing, G. Legros, J. Bonnety, V. Tchamber, A. Brillard, G. Leyssens, V. Lauga, E. Emil Iojoiu, P. Da Costa (France)

2M.2.2 Ceria-based catalysts for NO_x removal in NSR processes: a fundamental study of the catalyst modifications explored by in situ techniques
J.C. Martínez-Munuera, J. Giménez-Mañogil, R. Matarrese*, L. Castoldi*, L. Lietti*, A. García-García (Spain, *Italy)

2M.2.3 Supported mono- and bimetallic Au catalysts for three-way catalysis - Influence of support properties, water content in feed and metal ratio
V. Ulrich, B.L. Moroz*, P.A. Pyrjaev*, I. Sinev, B. Roldan Cuenya, V. Bukhtiyarov*, W. Grünert (Germany, *Russia)

2M.2.4 High-turnover TWC Reactions over novel metal honeycomb catalysts consisting of PGM overlayer structure
S. Misumi, A. Matsumoto, H. Yoshida, S. Hinokuma, T. Sato, M. Machida (Japan)

2M.2.5 Mechanistic analysis of ammonium nitrate decomposition in NO on Fe-zeolites using ^{15}N labeled species
J. Nováková, Z. Sobalik, I. Nova*, E. Tronconi* (Czech Republic, *Italy)

FIRST FLOOR - PALAZZO AFFARI

16.20 **2M.2** (cont.)
18.40

2M.2.6 Hydrothermal stability of combined NSR-SCR catalytic converters for NO_x removal in lean-burn diesel engine exhaust aftertreatment
U. De-La-Torre, B. Pereda-Ayo, J.R. González-Velasco (Spain)

2M.2.7 Comparison of base metal active oxide supports in synergy with Pd for TWC
A.E. Pascui, T. Eralp Erden, K. Simmace, D. Thompsett (United Kingdom)

ROOM ADUA 1 - PALAZZO AFFARI

09.40 **SS19** (7′)
11.00 Chairs: **C.M. Asmelash** (Italy), **S. Zaman** (Saudi Arabia)

SS19.1 Structure-activity relation of Fe based catalysts in CO_2 hydrogenation to CH_4
J. Kirchner, S. Kureti (Germany)

SS19.2 Effect of the colloidal additives on the structuration of $CuO/ZnO/Al_2O_3$ catalyst in monoliths for methanol synthesis
I. Pérez-Miqueo, O. Sanz, M. Montes (Spain)

SS19.3 Influence of particle size distribution on the stability of Cu/SiO_2 catalysts for methanol synthesis
C.E. Pompe, R. van den Berg, K.P. de Jong, P.E. de Jongh (The Netherlands)

SS19.4 Decreasing global warming while producing a fuel: N-decorated carbon nanomaterials for sustainable CO_2 chemical reduction to methanol
G. Tuci, L. Luconi, A. Rossin, C. Pham-Huu*, G. Giambastiani (Italy, *France)

SS19.5 Fe promoted Ni/Al_2O_3 nanosheets as highly active and stable catalyst for CO_2 methanation
C.M. Asmelash, C. Mebrahtu, S. Abate, S. Chen, A.F.S. Salazar*, S. Perathoner, G. Centi (Italy, *France)

SS19.6 In-situ FTIR study for CO methanation reaction on Co/SiO_2 catalyst
J.F. Castillo, Y. Beltrán, L.E. Arteaga-Pérez, A. Karelovic, R. Jiménez (Chile)

SS19.7 The Interplay of Cu and ZnO - TEM Investigation of Methanol Synthesis Catalysts
T. Lunkenbein, E. Frei, J. Schumann*, M. Behrens, M.G. Willinger, R. Schlögl (Germany, *USA)

SS19.8 CO2 reduction to methanol over commercial CuZn based catalyst: revealing the role of Zn through in-situ characterization
A. Gallo, D. Sokaras, D. Nordlund, T. Kroll, H. Ogasawara, J.L. Snider, S. Polierer*, F. Studt*, T.F. Jaramillo (USA, *Germany)

SS19.9 Ni-hydrotalcite derived materials as CO_2 methanation catalysts
K.V. Kaliappan, M.C. Bacariza, D. Wierzbickib*, C. Henriques, T. Grzybekb*, M.F. Ribeiro (Portugal, *Poland)

ROOM ADUA 1 - PALAZZO AFFARI

14.30 **SS23** (7')
16.10 Chairs: **A. Gervasini** (Italy), **R. Zanella** (Mexico)

SS23.1 Colloidal Mn, Fe, Co and Cu contained catalysts stabilized by starch for the water oxidation to dioxygen
A.S. Chikunov, O.P. Taran, V.V. Koval, V.N. Parmon (Russia)

SS23.2 Effect of the activation conditions in Au-Ir/TiO_2 catalysts in the oxidation of CO and the total oxidation of propene
R. Zanella, A. Aguilar-Tapia, C. Louis*, S. Collins, L. Delannoy*** (Mexico, *France, **Argentina)

SS23.3 Synthesis, characterization and catalytic performances of Co_3O_4-Cu_2O-CeO_2 mixed oxides for diesel soot oxidation: Co and Cu effects
L.F. Liotta, A. Westermann*, A. Serve*, F. Puleo, V. La Parola, A. Giroir-Fendler*, P. Vernoux* (Italy, *France)

SS23.4 Effect of water poisoning on solution combustion synthesized Pd/$Ce_xZr_{1-x}O_2$ catalysts for CH_4 abatement from NGVs
A. Toso, M. Danielis, S. Colussi, A. Trovarelli (Italy)

SS23.5 Effect of support on the structure and activity of supported silver catalyst for the low-temperature selective catalytic oxidation of ammonia
F. Wang, C. Zhang, Q. Feng, H. He (China)

SS23.6 Effect of platinum nanoparticle size on catalytic activity in propylene hydrogenation over supported platinum catalyst
A. Yamamoto, T. Watanabe, H. Yoshida (Japan)

SS23.7 Co-SBA-15 catalysts for the hydrolysis of ammonia borane: influences of Co precursor, oxidation state and recyclability
J. Sullivan, R. Herron, C. Marchant, E. Genty*, T. Visart de Bocarmé* (Ireland, *Belgium)

SS23.8 An advanced approach to produce catalysts with high stability for effective pyrolysis oil hydrotreatment into co-FCC feeds
M.V. Alekseeva, M.A. Rekhtina, A.A. Smirnov, S.A. Khromova, R.H. Hendrikus Venderbosch*, V.A. Yakovlev (Russia, *The Netherlands)

SS23.9 Support effect for Ni-Ru/Al_2O_3, TiO_2 and ZrO_2 catalysts in the hydrodeoxygenation of phenol
O.U. Valdes, V.A. Suarez, B. Pawelec*, J.A. de los Reyes*, J.L.G. Fierro* (Mexico, *Spain)

SS23.1 Ethanol and CO oxidation over Ag/SiO_2 catalysts: deep insight into formation of active surface
V.V. Dutov, G.V. Mamontov, V.I. Zaykovskii, T.I. Izaak, O.V. Vodyankina (Russia)

SS23.10 Activity optimization of Rh catalysts supported on ceria for propane oxidation
D. Lopez Gonzalez, S. Ntais, M. Klotz, C. Tardivat, P. Vernoux (France)

Break

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS27** (7')
18.40 Chairs: **N. Guilhaume** (France), **G. Tuci** (Italy)

SS27.1 The influence of metal cluster size and support reducibility on carbon accumulation during CH_4-CO_2 reforming over NiCo/$CeZrO_2$ catalysts
P. Djinović, A. Pintar (Slovenia)

SS27.2 Fluorescence microscopy-assisted fabrication of highly b-oriented aluminosilicate MFI films
D. Fu, J.E. Schmidt, F. Meirer, B.M. Weckhuysen (The Netherlands)

SS27.3 Acidic ultrathin inorganic molecular wire based on transition metal oxide for biomass conversion
Z. Zhang, M. Sadakane, N. Hiyoshi, A. Yoshida, M. Hara, W. Ueda (Japan)

SS27.4 Influence of synthesis on structure of Pd/CNT catalysts
W. Lamme, J. Zecevic, K. de Jong (The Netherlands)

SS27.5 Direct observation of MOF thin film nucleation by in-situ liquid phase AFM
M. Filez, L.D.B. Mandemaker, B.M. Weckhuysen (The Netherlands)

SS27.6 Development of approaches to the formation of platinum centers with desired properties with the use of layered structure supports
O.B. Belskaya, L.N. Stepanova, V.A. Likholobov (Russia)

SS27.7 Oxidative deposition of manganese oxide on functionalized carbon nanotubes for electrochemical oxygen evolution reaction
H. Antoni, W. Xia, M. Muhler (Germany)

SS27.8 Impact of the precipitant agent on the preparation of CuO/CeO_2 catalysts by the deposition-precipitation method for the CO-PROX reaction
A.R.L. Miranda, E.M. Assaf, J.F. Gomes, J.M. Assaf (Brazil)

SS27.9 Effect of crystalline structure of titania support on Ir-catalyzed synthesis of nitrogen-containing chemicals
K. Wada, T. Fukutake, Q. Feng (Japan)

SS27.10 From Pt nanoparticles in solution to tailored solids: development of a promising leaching resistant catalyst for alkene hydrosilylation
T. Galeandro-Diamant, M.-L. Zanota, R. Sayah, L. Veyre, S. Marrot, V. Meille, C. Thieuleux (France)

SS27.11 Development of γ-Al_2O_3 supported platinum-cobalt bimetallic catalysts for three-way catalytic reaction
K. Sato, A. Miyazawa, H. Tomonaga, K. Nagaoka (Japan)

SS27.12 Silicon-based lateral-gap test structures to mimic macro- and mesoporous catalyst supports
R.L. Puurunen, O.M.E. Ylivaara, K. Grigoras, M. Ylilammi (Finland)

SS27.13 Advanced approaches to the material synthesis using supercritical fluids for catalytic and separation application
N.S. Nesterov, A.S. Shalygin, A.L. Nuzhdin, A.M. Chibiryaev, G.A. Bukhtiyarova, O.N. Martyanov (Russia)

ROOM ADUA 1 - PALAZZO AFFARI

16.20 **SS27** (cont.)
18.40

SS27.14 Influence of preparation variables on structural, textural and functional properties of CeO_2-ZrO_2 catalytic supports
K. Dziadek, R. Gomez*, M. Fiuk, P. Legutko, G. Philippot*, M. Marzec, P. Indyka, K. Parkhomenko*, C. Aymonier, V. Sadykov, A.-C. Roger*, A. Adamski** (Poland, *France, **Russia)

SS27.16 Polyoxometalate-based hybrid materials with catalase-like reactivity
M. Carraro, M. Bonchio (Italy)

ROOM ADUA 2 - PALAZZO AFFARI

09.40 **SS22** (7')
11.00 Chairs: **E. Baráth** (Germany), **C. Bradu** (Romania)

SS22.1 Bifunctional catalysts Pd-Sn/ion exchange resin for potabilization of nitrates contaminated water
M.A. Ulla, G. Mendow, C. Querini, B. Sanchez (Argentina)

SS22.2 Local structures and catalytic ammonia combustion properties of $CuO_x/Ag/Al_2O_3$
S. Hinokuma, Y. Kawabata, S. Matsuki, S. Kiritoshi, M. Machida (Japan)

SS22.3 Dehydrochlorination of 1-chlorobutane over metal oxides: the role of electron-acceptor sites
E.I. Shuvarakova, A.F. Bedilo, V.V. Chesnokov (Russia)

SS22.4 Elimination reactions of substituted cyclohexanols on acidic zeolites
E. Baráth, P.H. Hintermeier, J.A. Lercher (Germany)

SS22.5 Incorporation of iron in hierarchical ZSM-5 coatings on open-cell foams for developing high-throughput catalytic wastewater treatment
X. Ou, X. Fan (United Kingdom)

SS22.6 From studies of pure and supported metal clusters to design of well-defined catalysts for environmentally friendly catalysis
V. Golovko, D. Anderson, D. Ovoshchnikov, B. Donoeva, J.-Y. Ruzicka, F. Abu Bakar, R. Adnan, G. Andersson*, G. Metha*, K. Kimoto, T. Nakayama**, A. Marshall, J. Steven, D. Padayachee, A. Yip** (New Zealand, *Australia, **Japan)

SS22.7 Geopolymers as novel catalytic materials for water purification
A. Heponiemi, J. Pesonen, S. Tuomikoski, A. Van Damme*, T. Hu, U. Lassi (Finland, *Belgium)

SS22.8 Integrated process for the removal of nitrates and organochlorine pollutants from natural water contaminated as result of agricultural practices
C. Bradu, C. Capat, E.-A. Olaru, F. Papa, L. Frunza, S.M. Avramescu, G. Crini*, I. Zgura, R. State (Romania, *France)

SS22.9 Temperature programmed plasma reaction: a way to compare plasma-catalysts
A. Parastaev, W.F.L.M. Hoeben, B.E.J.M. Heesch, N.A. Kosinov, E.J.M. Hensen (The Netherlands)

ROOM ADUA 2 - PALAZZO AFFARI

14.30 **SS24** (7′)
16.10 Chairs: **D. Gianolio** (United Kingdom), **O. Vozniuk** (Italy)

SS24.1 Inverse opal TiO_2 photocatalysts for environmental applications
R. Fiorenza, M. Bellardita, S. Sciré, L. Palmisano, B.-L. Su* (Italy, *Belgium)

SS24.2 Highly active and stable bimetallic catalysts on dual component supports for low temperature total methane oxidation
T.S. Nguyen°, A.I. Osman°,*, J.K. Abu-Dahrieh°, F. Laffir°, T. Curtin°, M. McLaren, M. Arredondo**, D.W. Rooney°, J. Thompson°** (°Ireland, *Egypt, **United Kingdom)

SS24.3 Catalytic partial oxidation of bioethanol to syngas on Ni(Pt)/$CeSiO_x$ samples
E. Kraleva, C.P. Rodrigues*, H. Ehrich, F.B. Noronha* (Germany, *Brazil)

SS24.4 Ru catalyzed hydrogenation-decarbonylation of amino acids to biobased primary amines
J. Verduyckt, R. Coeck, D. De Vos (Belgium)

SS24.5 Kinetics of propene oxide production via hydrogen peroxide with TS-1
V. Russo, R. Tesser, R. Vitiello, R. Turco, M. Di Serio (Italy)

SS24.6 Assembly and disassembly of mesostructured perovskite catalyst
Y. Wang, H. Arandiyan, J. Scott, R. Amal (Australia)

SS24.7 Structural changes of binary/ternary spinel oxides during ethanol anaerobic decomposition
O. Vozniuk°,*, J.-M. Millet*, F. Di Renzo*, F. Cavani° (°Italy, *France)

SS24.8 Functionalized carbon catalyzed hydrolysis of cellulose in a continuous slurry process
A. Shrotri, H. Kobayashi, A. Fukuoka (Japan)

SS24.9 Characteristics of Ru/Pr_2O_3 as an active catalyst for ammonia synthesis
K. Nagaoka, K. Sato, K. Imamura, Y. Kawano, S.-I. Miyahara (Japan)

SS24.10 Ethanol conversion on $ZnAl_2O_4$ and $Cu/ZnAl_2O_4$ based catalysts
G. Garbarino, P. Riani, E. Finocchio, V. Sanchez Escribano*, G. Busca (Italy, *Spain)

SS24.11 3D and 2D MFI zeolites as acid catalysts: a comparative study
M. Shamzhy, M. Opanasenko, J.-C. Kim*, H.S. Shin*, R. Ryoo*, J. Cejka
(Czech Republic, *Korea)

Break

ROOM ADUA 2 - PALAZZO AFFARI

16.20 **SS28** (7′)
18.40 Chairs: **H. Miura** (Japan), **A. Piovano** (Italy)

SS28.1 Multi-Scale revelations into how shaped catalyst body formulations unintentionally impact their performance
G. Whiting, A. Dutta Chowdury, S.-H. Chung, B.M. Weckhuysen (The Netherlands)

SS28.2 Synthesis of Plasmonic MoO_{3-x} with high surface area: enhancing ammonia borane dehydrogenation activity
H. Yin, Y. Kuwahara, H. Cheng, K. Mori, H. Yamashita (Japan)

ROOM ADUA 2 - PALAZZO AFFARI

16.20 **SS28** (cont.)
18.40

SS28.3 Encapsulation of platinum nanoparticles in CHA through interzeolite transformation
K.H. Rasmussen, J. Mielby, S. Kegnæs (Denmark)

SS28.4 Electron donors and $TiCl_4$ at the surface of Ziegler-Natta catalysts: observation of homogeneous-like complexes through a surface science approach
A. Piovano, K.S. Thushara, M. D'Amore, S. Bordiga, E. Groppo (Italy)

SS28.5 Remarkable synergistic effect between {001} facets and surface F ions promoting hole migration on anatase TiO_2
M. Chen, J. Ma, F. Wang, C. Zhang, H. He (China)

SS28.6 Soluble gold nanoparticles exhibiting different shapes on aqueous-phase reduction of p-nitrophenol
F.M. de Oliveira, L.R.B. de A. Nascimento, C.M.S. Calado, M.R. Meneghetti, M.G. da Silva, (Brazil)

SS28.7 Hydrosilylation of Alkynes and α,β-unsaturated ketones by supported PdAu catalysts
H. Miura, K. Endo, R. Ogawa, T. Shishido (Japan)

SS28.8 Towards structured tungsten-based zeotypes and their activity on sugar upgrading
J. Wiesfeld, N.A.J.M. Sommerdijk, E.J.M. Hensen (The Netherlands)

SS28.9 Degradation mechanisms study of a SCR on a Diesel particulate filter (SCRF) commercial catalyst
K. Mehsein, G. Delahay, N. Villainb, N. Moral (France)

SS28.10 Associative versus dissociative mechanism of O_2 activation on nanoporous gold
Y. Li, W. Dononelli, L.V. Moskaleva (Germany)

SS28.11 A novel synthesis method and application of γ-Al_2O_3 from aluminium solid waste
A.I. Osman, J.K. Abu Dahrieh, M. McLaren, F. Laffir*, P. Nockemann (United Kingdom, *Ireland)

SS28.12 Catalysis of carbon gasification by oxygen using V and Cu
A. Saqib, M.A.N.D.A. Lemos, S.A.C. Carabineiro, F. Lemos, L.S. Lobo (Portugal)

SS28.13 Perovskite and Brownmillerite type of oxygen ion conductors as catalyst support materials
P.-A. Repecaud, H. Kaper, B. Penkala, W. Paulus (France)

SS28.14 Production of L-rhamnose using acid solid catalysts
R. Pezoa-Conte, A. Baccini*, P. Mäki-Arvela, H. Grénman, A. Smeds, J. Hemming, S. Willför, P. Canu*, J.-P. Mikkola** (Finland, *Italy, **Sweden)

SS28.15 The direct conversion of phenol to cyclohexylamines - A new and sustainable pathway to aliphatic polyurethanes?
P. Tomkins, C. Valgaeren, K. Adriaensen, T. Cuypers, D.E. De Vos (Belgium)

P1.1 Development of high-performance catalytic reactors
S. Shabunya, V. Martynenko, V. Kalinin, A. Al-Musa* (Belarus, *Saudi Arabia)

P1.2 Ni-Sr/Al_2O_3-ZrO_2 catalysts for hydrogen production by steam reforming of ethanol
J.H. Song, M.Y. Gim, S.J. Han, J. Yoo, S. Park, I.K. Song (Korea)

P1.3 BTX production by co-aromatization of methane and propane over gallium oxide catalyst supported on mesoporous HZSM-5
M.Y. Gim, J.H. Song, S.J. Han, C. Song, D.H. Kim, K.-Y. Lee, I.K. Song (Korea)

P1.4 Improved catalytic performance for 1-butene epoxidation over the titanium silicalite-1 extrudates by using SBA-15 or carborundum as additives
Y. Zuo, M. Liu, X. Guo (China)

P1.5 Copper(II) hydroxide nanoparticles with high superoxide dismutase activity protect human cells against superoxide radicals from cigarette smoke
K. Korschelt, M. Kluenker, C. Metzger, M. Mondeshki, M.N. Tahir, J. Brieger, W. Tremel (Germany)

P1.6 Lifting the thermodynamics limitation of dehydrogenation by trans-hydrogenation
M.D. Garba, S.D. Jackson (United Kingdom)

P1.7 The effect of the alkali metal base in the hydrothermal preparation of IrO_2 for the oxygen evolution reaction
J. Ruiz Esquius, S.J. Freakley, I. Spanos*, G.J. Hutchings (United Kingdom, *Germany)

P1.8 Industrial research on catalysis at diamond light source
A. Kroner, E. Shotton, M. Agote Aran, A. Beale, P. Webb, P. Collier (United Kingdom)

P1.9 Novel NiCeZr alumina-supported catalysts as powder and structured forms applied to ethylene production through oxidative dehydrogenation
J.P. Bortolozzi, R. Portela*, P. Ávila*, M.A. Ulla, V.G. Milt, E.E. Miró (Argentina, *Spain)

P1.10 Photo corrosion of TNT within water splitting and dye de colorization reactions
S. Khameneh Asl, D. Unar* (Iran, *Turkey)

P1.11 A study of the hydrodeoxygenation of anisole over Re-MoO_x/TiO_2 catalyst
I.T. Ghampson, G. Pecchi, R. Canales, J.L.G. Fierro*, N. Escalona (Chile, *Spain)

P1.12 The oxidative coupling of methane over lanthanum-based perovskite catalyst
I. Kim, G. Lee, J.C. Jung (Korea)

P1.13 Ammonia synthesis over Co-Mo alloy catalyst prepared via sodium naphthalenide-driven reduction
Y. Tsuji, M. Kitano, K. Kishida, M. Sasase, T. Yokoyama, M. Hara, H. Hosono (Japan)

P1.14 Au-Cu_2O heteronanocrystals with desired configurations for plasmonic photocatalysis
J.W. Hong (Korea)

P1.15 Influence of the acidic, thermal, and water vapour treatment on the catalytic performance of acidic hierarchical structured clinoptilolite
M. Riaz, H. Kosslick, R. Al-Otabi*, M.F. Ibada, F. Alotaibi*, A. Schulz, C. Jaeger (Germany, *Saudi Arabia)

P1.16 Electrophoretic deposition of boehmite on periodic open cell structures for catalytic applications
T. Stiegler, G. Do, A. Bösmann, P. Wasserscheid, J. Albert (Germany)

P1.17 Unravelling the initial coke formation in zeolite ZSM-5 in the methanol to hydrocarbons reaction at atomic length scales
J.E. Schmidt, J.D. Poplawsky*, B. Mazumder*, Ö. Attila, D. Fu, D.A.M. de Winter, F. Meirer, S.R. Bare*, B.M. Weckhuysen (The Netherlands, *USA)

P1.18 Synthesis, characterization and OER activity of α-MnO_2
J. Heese, S. Hoffmann, M. Behrens (Germany)

P1.19 Room temperature synthesis of reduced TiO_2 and its application as support for catalytic hydrogenation
Q. Pei, M. Zhang, W. Chen, L. Liu, T. He, P. Chen (China)

P1.20 Platinum free anode catalyst for Gencell' commercial product
N. Borchtchoukova, M. Gabrovska*, V. Feldman, D. Nikolova*, G. Finkelshtain, S. Rakovsky* (Israel, *Bulgaria)

P1.21 Catalytic hydrogenation of 4,4'methylenedianiline (MDA) to produce 4,4'-methylene bis-cyclohexylamine (PACM)
C.-H. Chen, H.Y. Hsu, C.H. Lee (Taiwan)

P1.22 FTS activity and selectivity as function of Co crystallite size and water partial pressure
N. Fischer, B. Claphem, T. Feltes, M. Claeys (South Africa)

P1.23 Design of functionally graded nanocomposite catalysts for reforming reactions
S. Pavlova, M. Arapova, V. Sadykov, A. Bobin, V. Rogov, T. Krieger, A. Ishchenko, T. Larina (Russia)

P1.24 Unlock your catalyst space
S. Eller (Switzerland)

P1.25 Co_3O_4 morphology in the CO-PrOx reaction
M. Khasu, M. Claeys, N. Fischer (South Africa)

P1.26 The interconnectivity of heat conductive component as the feature of Fisher-Tropsch composite catalyst
E.V. Kulchakovskaya, I.S. Ermolaev, I.G. Solomonic, K.O. Gryaznov, V.Z. Mordkovich, L.V. Sineva (Russia)

P1.27 Synergy of heat-conductive and acidic additives for intensification of Fischer-Tropsch catalysis over skeletal cobalt
L.V. Sineva, E.V. Kulchakovskaya, E.Yu. Asalieva, V.Z. Mordkovich (Russia)

P1.28 Innovative Sabatier reaction with water sorption for green methane production
I. Agirre, E. Acha, E. Aldalur, A. Gómez, S. Sendino, J.F. Cambra, V.L. Barrio (Spain)

P1.29 Xylenes oxidation in the presence of transition metals salts mixture
S.E. Shulyaka, T.V. Bukharkina, S.A. Sinitsin, S.V. Verzhichinskaya (Russia)

P1.30 Non-conventional approach to wastewater treatment and electricity generation
T.I. Parvanova-Mancheva, V. Beschkov, E. Razkazova-Velkova, M. Martinov, S. Stefanov (Bulgaria)

P1.31 Activity correlation of manganese oxides for different catalytic reactions
S. Hoffmann, J. Heese, M. Behrens (Germany)

P1.32 Hybrid membrane-catalytic reactor for syngas and ultrapure hydrogen co-production from biomass products and synthetic fuel
A. Fedotov, D. Antonov, V. Uvarov, M. Tsodikov (Russia)

P1.33 Reactivity studies of Fe-based model catalysts for ammonia synthesis for the investigation of structure-activity relations
K. Kähler, J. Folke, H. Fan, X. Huang, E. Frei, K.F. Ortega, D. Rein, M. Behrens, R. Schlögl (Germany)

P1.34 Fluorination of hydrotalicte-like compounds: its effect on catalytic activity for methanol cyanoethylation
M. Diaz, A. Guzman, E. Lima (Mexico)

P1.35 MSE-type zeolites: a promising catalyst for the conversion of ethene to propene
K. Lee, S.H. Cha, I.-S. Nam, S.B. Hong (Korea)

P1.36 Pt single atom catalysts for formic acid electro-oxidation with high activity and durability
J. Kim, C.-W. Roh, Y. Kwon, C. Kim, H. Lee (Korea)

P1.37 Effect of promoters on Cu/SiO_2 catalyst for vapor-phase hydrogenation of dimethyl malonate to 1,3-propanediol
S. Zheng, W. Li, Y. Ji (China)

P1.38 The support effect for methanol steam reforming over supported Ru-Rh and Cu-Ni bimetallic catalysts
A.A. Lytkina, N.V. Orekhova, M.M. Ermilova, A.B. Yaroslavtsev (Russia)

P1.39 Energy storage by hydrogenation of carbon dioxide in structured reactors
M. Sebek, E. Kraleva, A. Martin, H. Ehrich (Germany)

P1.40 Zeolite encapsulated metal nanoparticles: recent progress and future challenges
J. Mielby, K.H. Rasmussen, F. Goodarzi, R.P. Thumbayil, S. Kegnæs (Denmark)

P1.41 Sulphated zirconia - Strong superacid catalyst for fine chemical synthesis
I. Chepurna, E. Dvininov, H. Stephenson, K. Wilson, A. Osatiashtiani (United Kingdom)

P1.42 Extra-framework aluminum in proximity to Brønsted acid sites in H-ZSM-5 increases the rates in pentane cracking and dehydrogenation
Y. Zhang, R. Zhao, Y. Liu, M. Sanchez-Sanchez, R. Bermejo-Deval, J.A. Lercher (Germany)

P1.43 Si_3N_4 supported anion exchange membrane for alkaline fuel cells
M. Pilaski, S.-H. Sun, B. Funke, J. Wartmann, G. Dura, F. Letzkus, A. Heinzel (Germany)

P1.44 Soft-chemical synthesis of visible-light driven pyrite (FeS_2) with enhanced properties in photocatalysis
J. Yao, X. Liu (China)

P1.45 Reactants induced dynamic responses of heterogeneous catalysts monitored by adsorption microcalorimetry
S. Wrabetz, Th. Lunkenbein, V. Pfeifer, T. Jones, A. Knop-Gericke, A. Trunschke, R. Schlögl (Germany)

P1.46 New phosphine ligands: synthesis and application in alkoxycarbonylation reactions
A. Pews-Davtyan, X. Fang, R. Jackstell, A. Spannenberg, W. Baumann, R. Franke, M. Beller (Germany)

P1.47 Hydrolytic dehydrogenation of ammonia borane over MOF derived cobalt nanoparticles catalysts
S.L. Zacho, J. Mielby, S. Kegnæs (Denmark)

P1.48 Washcoated steam reforming catalysts for heat exchanger reactors part I: laboratory scale experiments
M.-L. Koskinen-Soivi, J. Kihlman, N. Kaisalo, P. Jokimies (Finland)

P1.49 Influence of lanthanum oxide on activity and stability of Ni/CeO_2 and Ni/ZrO_2 catalysts for hydrogen production
C. Pizzolitto, M. Signoretto, F. Menegazzo, G. Cruciani, A. Di Michele (Italy)

P1.50 CO dissociation on Pt-Sn nanoparticles as the unexpected trigger for alloy oxidation and segregation under O_2-free conditions.
F.C. Meunier, A. Moscu, C. Theodoridi, L. Cardenas, Y. Schuurman, C. Thieuleux, D. Motta-Meira, G. Agostini (France)

P1.51 Identification of a main surface intermediate of CO hydrogenation over cobalt by operando DRIFTS and SSITKA studies through geometric poisoning by tin
F. Meunier, A. Paredes-Nunez, D. Lorito, L. Burel, N. Guilhaume, Y. Schuurman (France)

P1.52 Calcined cobalt-based metal organic framework (MOF) as catalysts for syngas to higher oxygenates conversion
J. Spivey, Z. Wang, G. Laddha*, S. Kanitkar (USA, *India)

P1.53 On the effect on nickel introduction method into hydrotalcite structure on the catalytic activity in CO_2-CH_4 reforming
R. Debek, M.E. Galvez*, M. Motak, P. Da Costa*, T. Grzybek (Poland, *France)

P1.54 Hydrocracking reaction of naphthalene on mesoporous zeolite Y prepared by fluorine-alkaline treatment
S. Ren, X. Sui, P. Zeng, B. Shen, Q. Guo (China)

P1.55 Hydroformylation of post-metathesis olefins
N.C.C. Breckwoldt, P. Van der Gryp (South Africa)

P1.56 Ni based catalysts for carbon dioxide reforming of methane: effect of calcination temperature on coke formation and mechanical strength
H.G. Park, G. Kwak, Y. Lee, K. Jun (Korea)

P1.57 Preparation of Ni cermet for proton conducting solid oxide fuel cell anode
M. Gabrovska, D. Nikolova, E. Mladenova, D. Vladikova, S. Rakovsky, Z. Stoyno (Bulgaria)

P1.58 Novel Ni/CeO_2 and Ni/ZrO_2 catalysts for bio-CO_2 methanation
W. Gac, W. Zawadzki, M. Greluk, G. Slowik, S. Turczyniak (Poland)

P1.59 Effects of nickel loading and activation conditions on the properties of Ni/Al_2O_3 catalysts for CO_2 methanation reaction
W. Gac, M. Rotko, W. Zawadzki, M. Greluk, G. Slowik (Poland)

P1.60 Silica microspheres and nano-CeO_2 as supports for nickel catalysts of CO_2 methanation
W. Gac, A. Sienkiewicz, A. Kierys, G. Slowik, W. Zawadzki (Poland)

P1.61 CO_2 methanation over bimetallic f- block element oxide catalysts
A.C. Ferreira, J.B. Branco (Portugal)

P1.62 Dehydrogenation of ethanol to acetaldehyde on supported metal-oxide catalysts
Y. Hitata, M. Sano, T. Suzuki, T. Miyake (Japan)

P1.63 Thermo-catalytic hydrogenation of organic components of coal over Mo-based catalyst for direct coal liquefaction
G.B. Han, J.H. Jang, W.J. Shin, H.Y. Choi (Korea)

P1.64 The preparation and characterization of Ca and Sr co-doped rare earth oxides
W. Xia, L. Dong, Y. Yang, M. Zhao, H. Wan (China)

P1.65 Anchoring effect and redox property over Co/perovskite oxide catalyst during steam reforming of aromatic hydrocarbons
K. Takise, S. Manabe, K. Muraguchi, T. Higo, S. Ogo, Y. Sekine (Japan)

P1.66 The role of tungsten and molybdenum on hydrotreatment reactions over unsupported Ni-Mo-W sulfide catalysts
F. Vogelgsang, O.Y. Gutiérrez, J.A. Lercher (Germany)

P1.67 The significant influence of sodium on the activity of copper aluminate spinel catalysts
C. Dörfelt, M. Pfanzelt, F. Grossmann, K. Köhler (Germany)

P1.68 Kinetic, microscopic and spectroscopic studies of carbon supported palladium and platinum nanoparticles
K. Dobrezberger, K. Föttinger, G. Rupprechter (Austria)

P1.69 Synthesis of transportation grade fuels using light alkenes derived from bioethanol
H.-J. Chae, M.-H. Kwon, S. Moon, T.-W. Kim, J.-R. Kim, J.S. Yoon, M. Lee, D.W. Hwang, M.B. Park (Korea)

P1.70 Ethylene oligomerization depending on different Si/Al ratio using Ni/silica-alumina
J.S. Yoon, M. Kwon, M. Lee, H.-J. Chae, D.W. Hwang (Korea)

P1.71 Production of light hydrocarbons from syngas using a hybrid catalyst
D. Nieskens, A. Ciftci, P. Groenendijk, M. Wielemaker, A. Malek* (The Netherlands, *USA)

P1.72 Effect of synthesis temperature and acidity on the properties of MoS_2 hydro-cracking catalysts prepared in-situ from Mo-octoate and amorphous Si-Al
J. Sanchez, A. Moreno, F. Mondragon, K.J. Smith (Canada)

P1.73 Catalytic dehydrogenation of formic acid on Pd/templated carbon
M. Mihet, M.D. Lazar, G. Blanita (Romania)

P1.74 UiO-66 supported metal catalysts for CO_2 methanation
M. Mihet, G. Blanita, M.D. Lazar (Romania)

P1.75 Magnetically separable biocatalyst on the basis of glucose oxidase
E.M. Sulman, E.P. Golikova, N.V. Lakina, A.I. Sidorov, A.M. Sulman, V.G. Matveeva (Russia)

P1.76 Thermocatalytic destruction of volatile tars fast pyrolysis of waste plant biomass
E.M. Sulman, Yu.V. Lugovoy, K.V. Chalov, Yu.Yu. Kosivtsov (Russia)

P1.77 The synthesis of magnetic biocatalyst and its physico-chemical analysis
E.M. Sulman, O.V. Grebennikova, V.Yu. Doluda, M.G. Sulman (Russia)

P1.78 The magnetic catalyst for cellulose conversion
O.V. Manaenkov, E.M. Sulman, V.G. Matveeva, O.V. Kislitza, E.A. Ratkevich, M.G. Sulman (Russia)

P1.79 Methanol to gasoline transformation process over Co modified H-ZSM-5
V.Yu. Doluda, M.G. Sulman, V.G. Matveeva, E.M. Sulman (Russia)

P1.80 Liquid-phase Fischer-Tropsch synthesis in the presence of catalysts synthesized in subcritical conditions
A.V. Gavrilenko, A.A. Stepacheva, M.E. Markova, V.P. Molchanov, M.G. Sulman, E.M. Sulman (Russia)

P1.81 Sol-immobilised Pd NPs supported on TiO_2 and their catalytic properties on selective hydrogenation reactions
N. Abdullah, P.P. Wells, C.R.A. Catlow (United Kingdom)

P1.82 Solvothermal conversion of technical lignins over NiMo catalysts
S.G. Parto, J. Munkholt Christensen, L. Saaby Pedersen, E. Taarning, F. Tjosås*, A. Degn Jensen (Denmark, *Norway)

P1.84 Single-step conversion of methane to methanol over a tailored polymer-Ag(I) coordination complex
R. Shavi, J.G. Seo (Korea)

P1.85 Hydrotreatment of Kraft lignin to valuable biobased chemicals using economically viable Fe-based catalysts
S. Agarwal, R.K. Chowdari, I. Hita, H.J. Heeres (The Netherlands)

P1.86 Structural investigation of porous composite catalysts with components prone to amalgamation
I.G. Solomonik, V.Z. Mordkovich, L.A. Ivanov, A.P. Kharitonov, E.B. Kulchakovskaya (Russia)

P1.87 Study of the photocatalytic activity of Keggin and Wells Dawson heteropolyacids: role of the acidity and of the pseudo-liquid phase regime
L.F. Liotta, G. Marcì, E. García-López, F.R. Pomilla, L. Palmisano (Italy)

P1.88 Fatty acid conversion into the higher alcohols in the presence of polymer-based catalysts
A.A. Stepacheva, E.S. Migunova, V.G. Matveeva, E.M. Sulman, M.G. Sulman (Russia)

P1.89 Fatty acid conversion using HPS supported Pd catalysts
A.A. Stepacheva, E.S. Migunova, V.G. Matveeva, E.M. Sulman, M.G. Sulman (Russia)

P1.90 Selective catalytic hydrogenation of furfural to furfural alcohol
E.M. Sulman, K.E. Salnikova, V.A. Strigina, S.P. Mikhailov, A.M. Sulman, I.P. Shkileva, V.G. Matveeva (Russia)

P1.91 Effect of the support treatment in hydrogenolysis of glycerol on Cu/CGran activated carbon catalysts
C. Sepúlveda, J. Seguel, R. García, N. Escalona (Chile)

P1.92 Enhanced activity of a modified methanol synthesis catalyst in one-step conversion of syngas to dimehtyl ether
C. Jeong, J.H. Baik, Y.-W. Suh (Korea)

P1.93 New metal-free catalysts for the hydrogenation of multiple bonds based on graphitic carbon nitrides
D. Taghiyev, V. Akhmedov, F. Ahmadov, H. Nurullayev, V. Ahmadovn (Azerbaijan)

P1.94 Design of Fe-based metal-organic frameworks hybridized with reduced graphene oxides for visible-light-driven photocatalytic water oxidation reaction
Yu. Horiuchi, Z. Lionet, Y. Kamata, S. Nishijima, M. Matsuoka (Japan)

P1.95 ZnO-Cu_2O colloidal nanocatalysts for photocatalytic CO_2 conversion into methane by water with high selectivity and activity
J. Kim, K.-L. Bae, C.K. Lim, K.M. Nam, H. Song (Korea)

P1.96 Synthesis of metal-semiconductor double shell hollow nanocubes for stable hydrogen generation photocatalysts
W. Choi, G. Park, K.M. Nam, H. Song (Korea)

P1.97 In-situ pair distribution function (PDF) analysis on catalysts: CeO_2 promoted Co_3O_4 and supported bimetallic Au catalysts
A. Nagl, L. Lukashuk, K. Hradil, K. Föttinger (Austria)

P1.98 Carbon supported Rh nanoparticles for hydrogen and chemicals production from electrochemical reforming of biomass derived alcohols
M.V. Pagliaro, M. Bellini, M. Bevilacqua, J. Filippi, M. Folliero, A. Marchionni, H.A. Miller, W. Oberhauser, S. Caporali, M. Innocenti, F. Vizza (Italy)

P1.99 Impact of Cr on the methanation activity of Ni-Al layered double hydroxides
M. Gabrovska, M. Shopska, D. Nikolova, L. Bilyarska, D. Crisan*, M. Crisan*, R. Edreva-Kardjieva (Bulgaria, *Romania)

P1.100 Hydrophobic titania-silica mixed oxides for the epoxidation of cyclooctene with hydrogen peroxide
L.E. Manangon, E.M. Gaigneaux (Belgium)

P1.101 Catalytic oxidation conversion of SO_2 by $Fe_2(SO_4)_3$ in H_2SO_4 aqueous solution
W. Xu, D. Wang, B. Li, Y. Wang (China)

P1.102 Robust heterogeneous M@SiC/M@SiCN (M = Ni, Co, Pd, Ru, Ir) hydrogenation catalysts for sustainable synthesis and reversible hydrogen storage
G. Hahn, C. Denner, R. Kempe (Germany)

P1.103 Surface state of supported re-based sour water-gas shift catalysts
D. Nikolova, H. Kolev, R. Edreva-Kardjieva, M. Gabrovska (Bulgaria)

P1.104 Consequences of Au addition on the performance of TiO_2 as catalyst for ethanol condensation to 1-butanol
J. Quesada, R. Arreola-Sánchez*, L. Faba, E. Diaz, V.M. Rentería-Tapia*, S. Ordonez (Spain, *Mexico)

P1.105 Influence of reaction conditions on activity of Cs-Ru/MgO catalyst for ammonia synthesis
R. Javaid, T. Nanba (Japan)

P1.106 Sulfur tolerance of α-alumina supported noble metal for steam reforming of methane
N. Shimoda, F. Watanabe, I. Kaburaki, S. Satokawa (Japan)

P1.107 Hydrothermal stability of promoted Co/γ-Al_2O_3 Fischer-Tropsch catalysts: effect of surface modification of alumina with SiO_2
Y.-J. Lee, S.-J. Park, K.-W. Jun, G.J. Kwak, H.-G. Park (Korea)

P1.108 Ethylbenzene oxidation catalyzed by NHPI/IL/Co(II) system
G. Dobras, B. Orlinska (Poland)

P1.109 Non-noble metal catalysts for lignocellulose fractionation
S. Rautiainen, D. Di Francesco, D.N. Tungasmita*, J. Samec (Sweden, *Thailand)

P1.110 Zeolites-catalyzed conversion of oligosaccharides to fructose
I. Tosi, S. Shunmugavel, E. Taarning, S. Meier, A. Riisager (Denmark)

P1.111 Flow catalysis for chemoselective hydrogenation over transition metal nanoparticles grafted on resin
D. Gizinski, I. Goszewska, M. Zienkiewicz-Machnik, M. Zielinski, D. Lisovytskiy, K. Nikiforow, J. Masternak, A. Srebowata, J. Sa* (Poland, *Sweden)

P1.112 Investigation of the active phase of KW supported catalysts for the direct synthesis of methyl mercaptan from syngas and H_2S
H. Salembier, C. Lamonier, P. Blanchard, G. Frémy (France)

P1.113 Bio-ethanol a building block of the future
E. Santacesaria (Italy)

P1.114 Nanoreactor-type bimetallic Ru-Co@SiO_2: low temperature active and durable for CO_2 reforming of methane to syngas with a desirable H_2/CO ratio
Y. Pang, Y. Dou, W. Jiang, L. Gu, W. Ji, C.-T. Au* (China, *Hong Kong)

P1.115 Investigation of glycerolysis using Lewis acid complexes based on Sn(IV)
M.A. da Silva, T.V. dos Santos, A.S.S. dos Santos, M.R. Meneghetti, S.M.P. Meneghetti (Brazil)

P1.116 Direct conversion of cellulose to 5-hydromethylfurfural and levulinic acid combining heterogeneous and homogeneous acid catalysis
D. Garcés, E. Diaz, S. Ordonez (Spain)

P1.117 Study of nickel-based catalysts and the influence of barium content in dry reforming of methane
R.S. Gomes, D.S. Costa, C. Resini*, S.T. Brandao (Brazil, *Portugal)

P1.118 EPRES technology improvement for hydrotreating catalyst and process
Y. Gao, X. Fang, L. Xu (China)

P1.119 WGS kinetics over Pt-based trimetallic catalyst under realistic conditions
G. Yumru, M.S. Basar, B.S. Çaglayan, A.E. Aksoylu (Turkey)

P1.120 A study on bimetallic water-gas shift catalysts to be used in fuel processing
S. Güven, F. Gökaliler, B.M. Eropak, A.E. Aksoylu (Turkey)

P1.121 Preferential oxidation of CO in excess H_2 over $CeO_2/CuMn_2O_4$ catalysts
A. Elmhamdi, L. Pascual*, K. Nahdi, A. Martínez-Arias* (Tunisia, *Spain)

P1.122 The upgrading of bio-alcohols: gas-phase (oxi)dehydration of 1-butanol over V/P/O catalyst
F. Puzzo, G. Pavarelli, C. Lucarelli, F. Cavani (Italy)

P1.123 Mesoporous anodes based on rare earths doped ceria for fuel cells applications
L. Navarrete, M. Florea*, J.M. Serra, S. Somacescu* (Spain, *Romania)

P1.124 Development and characterization of novel Ni/GDC catalysts for hydrogen production
A. Caravaca, S. Picart, B. Arab-Chapelet, P. Vernoux, T. Delahaye (France)

P1.125 FeO_x-NiO/Al_2O_3 catalysts for dry reforming of methane: role of Fe-Ni alloy formation
A. Longo, F. Puleo, G. Pantaleo, D. Banerjee, V. La Parola, L.F. Liotta (France)

P1.126 Investigation of factors affecting activity of bare ZrO_2 in non-oxidative propane dehydrogenation
Y. Zhang, T. Otroshchenko*, U. Rodemerck*, D. Linke*, G. Jiang, E.V. Kondratenko* (China, *Germany)

P1.127 Unraveling the nature of rhodium catalysts doped with ceria trough multi-techniques coupled experiments for deNO_x processes
D.M. Meira, G. Agostini* (France, *Germany)

P1.128 Novel IMP-ODECAT® catalyst for ethylene production via ODH of ethane: investigation of the propane content in the ethane stream
J.S. Valente, H. Armendáriz-Herrera, R. Quintana-Solórzano, E. López-Salinas (Mexico)

P1.129 The construction of Au-Pt octahedral architectures with high efficiency of hot-electron transfer and photocatalytic activity for hydrogen generation
Z. Wang, X. Xu, Z. Si, L. Liu, D. Weng (China)

P1.130 Effect of Pd addition to PtAu/C catalyst on formic acid electrooxidation
H. Demir Kivrak, B. Ulas, N. Aktas (Turkey)

P1.131 Supported ionic liquid-like phases based on polystyrene/divinylbenzene matrix as catalysts for disproportionation of trichlorosilane
A.N. Petukhov, A.V. Vorotyntsev, A.I. Akhmetshina, V.M. Vorotyntsev, A.Yu. Silantyeva (Russia)

P1.132 NaOH modified WO_3/SiO_2 catalysts for propylene production from ethylene and trans-2-butene metathesis
P. Praserthdam, S. Maksasithorn, D.P. Debecker*, J. Panpranot, K. Suriye, S.K.N. Ayudhya (Thailand, *Belgium)

P1.133 A new approach for the synthesis of composite materials based on polyethylene and multi-walled carbon nanotubes modified by Co nanoparticles
M. Kazakova, N. Semikolenova, V. Kuznetsov, A. Ischenko, V. Suslyaev, E. Korovin, M. Matsko, V. Zakharov (Russia)

P1.134 Design of a multi-well plate for high-throughput characterization of heterogeneous catalysts by XRD, FT-IR, Raman, and XRF spectroscopy
J. Thuriot, S. Heyte, M. Bennis, E. Heuson, P. Roussel, F. Dumeignil, S. Paul (France)

P1.135 Base-free oxidation of HMF with nanosized NiO supported catalysts
D. Bonincontro, A. Lolli, A. Villa, L. Prati, F. Cavani, S. Albonetti (Italy)

P1.136 The upgrading of bio-alcohols to chemicals: the Valsovit Project
J. Velasquez Ochoa, T. Tabanelli, C. Cesari, F. Puzzo, G. Innocenti, C. Lucarelli, R. Mazzoni, V. Zanotti, F. Cavani (Italy)

P1.137 In-situ time-resolved XAS studies for determining the redox and catalytic properties of supported NiO catalysts for the ODH of ethane
B. Solsona, D. Delgado, R. Sanchis, J.A. Cecilia, A. Caballero, E. Rodríguez-Castellón, J.M. López Nieto (Spain)

P1.138 The interplay of balance and intimacy between metal and acid sites in hydroisomerization catalysts
P.S.F. Mendes, J.M. Silva, M.F. Ribeiro, A. Daudin*, C. Bouchy* (Portugal, *France)

P1.139 Performance of catalysts supported on metal foams designed for multi-fuel processor integrated with fuel cell power generation units
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P1.140 SiO_2 modified Pt/Al_2O_3 catalyst for oxidative dehydrogenation of ethane: improvements in ethylene selectivity and catalytic stability
X. Lin, J. Xiao, Y. Xi, W. Yan (China)

P1.141 Fabrication of Ag_3PO_4/biotite photocatalyst with enhanced visible-light photocatalytic activity
Y. Hua, X. Liu (China)

P1.142 Datamining for catalytic and photocatalytic energy production processes from historical data in literature
R. Yildirim (Turkey)

P1.143 Analysis of heat transport and pressure drops inside foam catalysts through experimental and modeling data
G. Leonzio (Italy)

P1.144 A facile synthesis of monodisperse Cu_xPt_{1-x} alloy nanoparticles and their superb catalysis in the dehydrogenation of B-N based chemical hydrogen storage materials
T. Karaca, M. Sevim, Ö. Metin (Turkey)

P1.145 Kinetic study of low-temperature catalytic steam reforming of light hydrocarbons over the Ni-based catalyst
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P1.146 Hydrogenation/hydrodesulfurization of model substrates using bimetallic catalysts based on mesoporous Al-HMS in H_2O/CO and $H_2O/CO+H_2$ systems
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P1.147 Kinetic analysis and reactor design of ethanol steam reforming
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P1.148 Hydrogen-containing generation on bimetallic low percentage catalysts
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P1.149 Role of water on the activity of magnesium silicate for transesterification reaction
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P1.150 In-situ grazing incidence small- and wide-angle X-ray scattering analysis of the catalytically active supported Au nanoparticles
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P1.151 Hydrogen production via ammonia decomposition on metal oxide-supported nickel catalysts: support effect or metal nanoparticle size effect?
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P1.152 $MgAl_2O_4$ spinel based catalysts applied to methane tri-reforming
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P1.153 Catalysts development for ADN-based monopropellants decomposition
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P1.154 Nano-crystalline Ni-aegirine pyroxenes as nanocatalysts for catalytic hydrogenation of organic compounds
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P1.157 Polymerization of β-alkyl substituted α,β-unsaturated carboxylates using organic acid catalyst
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P1.158 Inverse hysteresis and self-sustained oscillations of CO oxidation reaction rate over Pd foil
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P1.159 Spherical CuO-Fe_2O_3-Al_2O_3 catalysts for fuel combustion in a fluidized bed
A. Fedorov, D. Ermakov, N. Yazykov, V. Yakovlev (Russia)

P1.160 Highly selective photocatalytic reduction of carbon dioxide with water over silver-modified calcium titanate
A. Anzai, N. Fukuo, A. Yamamoto, H. Yoshida (Japan)

P1.161 Influences of the metal ion addition to Ga_2O_3 to the photocatalytic property of overall H_2O splitting
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A. Uzun, B. Selen Çaglayan, A.E. Aksoylu (Turkey)

P1.166 Catalytic partial oxidation of i-C_8H_{18} over Rh/α-Al_2O_3 and Rh/$MgAl_2O_4$ in adiabatic reactor
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P1.167 Valorization of CO_2 for the production of ethylene from ethane with high yields over Ni-promoted FeO_x based catalysts
C. Loizidis, E. Heracleous, A.A. Lemonidou (Greece)

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P1.169 Understanding exothermic catalytic decomposition of ionic liquids under anaerobic conditions: new structure functionality relationships
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P1.170 Efficient and selective hydrogenation of amides to amines and alcohols using a well-defined manganese-PNN pincer complex
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P1.171 Partial oxidation of the mixture of natural gas and liquid fuels into syngas on structured catalysts
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P1.174 Microwave-assisted synthesis of La-Ce-Ni-O catalysts for the dry reforming of methane (DRM)
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P1.175 Pathways of hydrogen transfer in conversion of methanol to olefins over ZSM-5
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P1.178 Tayloring ceria-zirconia based materials for biogas reforming at intermediate temperatures
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P1.180 Poly(iminopyridinium) salts as heterogeneous catalysts for esterification of fatty acids
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P1.181 Effect of the support on the slab morphology of (Co)Mo catalysts: toward the determination of specific site TOF
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P1.182 Enhanced oxidase mimetic activity by incorporation of Pr in ceria nanocubes
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P1.183 Efficiency of highly-organized PdAg single-atom catalyst in liquid phase C≡C hydrogenation
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P1.184 Coherently synchronized oxidation of cyclohexane by hydrogen peroxide on biomimetic catalyst per-FTPhPFe(III)OH/Al_2O_3
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P1.185 Indium - Lanthanum interaction into HZSM-5 matrix and its effect on the catalytic activity and stability
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P1.186 Ultra-small Pt nanoparticles assembled on reduced graphene oxide based hybrid materials as highly efficient electrocatalysts for polymer electrolyte membrane fuel cells
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P1.188 Structure sensitivity stems from coverage: the hydrogenation of butenes over palladium
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P1.191 In-situ generated palladium nanoparticles supported on mesoporous graphitic carbon nitride: a highly efficient and reusable nanocatalysts for the transfer hydrogenation of nitroarenes
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P1.192 Supported intermetallic PdIn nanoparticles for liquid-phase alkyne hydrogenation
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P1.193 Reductive amination of ethyl levulinate with amines over Ru/Al_2O_3 structured catalyst
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P1.199 Study on hydrolysis activity of $NaBH_4$ with Co-B catalysts supported on different activated carbons
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P1.200 Ethylene and acetylene adsorption on δ-MoC(001), TiC(001), and ZrC(001) surfaces: a periodic DFT study
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P1.203 Structural properties of supported Ni species active in dry reforming of methane
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P1.206 Dealloyed PtCu nanoparticles on carbon aerogel and carbon black using supercritical deposition as electrocatalysts for the oxygen reduction reaction
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P1.211 Preformed bimetallic nanoparticles in ordered mesoporous carbon coatings as highly active electrocatalysts for the hydrogen evolution reaction
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P1.223 Investigations of Pt-doped titanium dioxide photocatalysts by light-pulse synchronizing multitechnique XAS/DRIFTS/MS analysis
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P1.227 Novel Ni/Al_2O_3-CeO_2 catalysts from $NiAl_2O_4$ precursor for the partial oxidation of methane: tuning the catalytic properties by varying Ni loading
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P1.228 Multicomponent Co-based sol-gel made catalysts for producing syngas with controlled ratio of H_2/CO by biogas reforming
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P1.229 Ternary metal nitride/carbon nanotube hybrids for high-performance oxygen electrocatalysers
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S. Slyemi, A. Barama, J. Blanchard*, H. Messaoudi, S. Casale*, S. Barama (Algeria, *France)

P1.231 Catalysts for the direct synthesis of the dimethyl ether from synthesis gas
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P1.237 Differentiation of copper sulfide catalysts used in the removal of mercury from natural gas
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P1.238 Effect of Mg incorporation sequence on performance of mesoporous alumina supported Ni catalyst in dry reforming of methane
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P1.240 Selective hydrogenation of acetylene to ethylene over alumina-supported Ni-Co nanocatalysts
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P1.244 Graphene aerogel supported platinum nanoparticles by supercritical deposition as electrocatalysts for oxygen reduction reaction
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S. Taghavi, A. Asghari, A. Tavasoli, M. Signoretto* (Iran, *Italy)

P1.246 Study of catalysts CoMoW/Al_2O_3-TiO_2 to Hydrodesulphurization of dibenzothiophene
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P1.247 Systematic approach for relating catalytic properties and activity in complex systems: application to polystyrene hydrocracking on Pt/zeolite
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P1.248 Assessment of the properties of MCM-22 zeolite for biomass catalytic pyrolysis
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P1.249 Kinetic investigations on the co-methanation of CO and CO_2
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D. Ishutenko, P. Minaev, Y. Anashkin, M. Nikulshina, A. Mozhaev, P. Nikulshin (Russia)

P1.252 Ethanol to ethylene: effect of lanthanum addition on products distribution
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R.C.R. Neto, E.B. Silveira, F.B. Noronha (Brazil)

P1.254 Local heterogeneities in a macroscopic homogeneous catalysts - Quantifying defects in orthorhombic $(Mo,V)O_x$ mixed metal oxide
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P1.257 Specification of conditions in impregnation method of Fe/γ-Al_2O_3 catalyst for ethanol dehydration reaction in gas phase
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P1.259 $NaWMn/SiO_2$ mixed oxide catalyst: thermochemistry of lattice oxygen
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P1.260 Sintering of alumina and effects of rare earth metal addition
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P1.261 Carbon-enhanced nickel catalyst for the CO_2 methanation reaction prepared in a fluidized bed
C. Schüler, M. Wolf, O. Hinrichsen (Germany)

P1.262 Selective ex-situ poisoning of co-precipitated $Ni/Al(O)_x$ catalysts
M. Wolf, L. Schönfeld, O. Hinrichsen (Germany)

P1.263 Ni substituted in $La_2Ce_2O_7$ pyrochlores catalysts for dry reforming of methane
A.P. Ramon, E.M. Assaf, J.M. Assaf (Brazil)

P1.264 Development of an improved base metal catalyst for the selective dehydrogenation of cyclohexanol to cyclohexanone at low temperature
M. Martin, J. Januscak, P. Kukula (Czech Republic)

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P1.266 Effect of resonance interactions upon the spectra of adsorbed molecules
O. Pestsov, A. Dobrotvorskaia, A. Tsyganenko (Russia)

P1.267 Au/SiO_2 outperforms Au/TiO_2 for the selective hydrogenation of butadiene
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P1.268 Improved performance of Ni/SBA-15 catalysts with EDTA in the hydrogenation of naphthalene
H. Vargas, D. Ramírez, T.E. Klimova (Mexico)

P1.269 Bimetallic CoXFeY/HMS Fischer-Tropsch catalysts
M.J. Martínez-Carreón, A. Martínez-Hernández, B. Pawelec, J.N. Díaz de Leon, S. Fuentes, G. Alonso, T.A. Zepeda (Mexico)

P1.270 Catalytic reduction of nitroarenes using copper-PVP nanoparticles
C.C. Torres, V. Jiménez, K. Marrugo, T. Bustamante, C.H. Campos, J.B. Alderete (Chile)

P1.271 Study of the niobium addition in MCM-41 supported NiMo catalysts and their use in the dibenzothiophene hydrodesulfurization
O.E. Franco-López, F.J. Méndez, T.E. Klimova (Mexico)

P1.272 Perovskite $LaNi_{1-x}Co_xO_3$ as catalyst precursors in the partial oxidation of methane
M. de Santana Santos, R.C. Rabelo Neto, F.B. Noronha, C. Resini*, R. Frety, S.T. Brandao (Brazil, *Portugal)

P1.273 Effect of the support preparation in the gold catalyzed aerobic oxidation of primary (benzyl alcohol) and secondary (hydroxymatairesinol) alcohols
E. Smolentseva, V.V. Costa*, O. Simakova, M. Lopez Cisneros, E. Gusevskaya*, S. Beloshapkin***, D.Yu. Murzin**, A. Simakov** (Mexico, *Brazil, **Finland, ***Ireland)

P1.274 Transport limitations of oxygen exchange processes: an experimental study on Pt/Co_3O_4
A. Calisan, C. Ates, S. Kincal, D. Uner (Turkey)

P1.275 Novel layered double hydroxide (LDH) precursors of catalysts for the depolymerisation of lignin model molecules
I.Z. Awan*, N. Tanchoux, F. Quignard, S. Albonetti*, F. Cavani*, F. Di Renzo (France, *Bologna)

P1.276 Structural insights into silica-magnesia catalysts for the Lebedev process: on the role of magnesium silicates and Cu promotion
S.-H. Chung, C. Angelici, F. Meirer, M. Baldus, K. Houben, B.M. Weckhuysen, P.C.A. Bruijnincx (The Netherlands)

P1.277 Investigation of the potential of nickel-iron oxyhydroxide / copper tungstate photoanode for photoelectrochemical water oxidation
A.S.M. Ismail, I.G. Torregrosa, B.M. Weckhuysen, F.M.F. de Groot (The Netherlands)

P1.278 Preparation and utilization of Ni modified bifunctional catalyst based on hydrotalcites for benzylacetone preparation
I. Paterová, P. Svacina, L. Tumová, L. Cerveny, F. Kovanda (Czech Republic)

P1.279 Effect of the support of KCoMoS catalysts in selective hydrotreating of model FCC gasoline
Yu.V. Anashkin, D.I. Ishutenko, P.A. Nikulshin (Russia)

P1.280 Ultra-low Pt stabilises Fe-N-C PEM fuel cell cathode catalysts
N. Ranjbar Sahraie, M. Sougrati, D.J. Jones, F. Jaouen (France)

P1.281 Ammonia decomposition reaction over zeolite Y supported iron catalysts: effect of hydrothermal dealumination
A. Sarioglan, Y. Durak Çetin, H. Okutan (Turkey)

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W. Tu, P. Lachkov, Y.-H. Chin (Canada)

P1.284 Promoting effects of manganese on Ni/Al_2O_3 for catalytic hydrogenation of CO_x in presence of light hydrocarbons
V. Shadravan, E. Kennedy, M. Stockenhuber (Australia)

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J.S. Park, J.S. Choi, B. Kim, J.-H. Yim, B.-T. Lee (Korea)

P1.287 The role of La3+ in the Cu-Mg-Al amorphous mixed oxides as catalyst for C_6 and C_8 Guerbet alcohols synthesis from hydrous bioethanol
O.M. Perrone, M.R. Siqueira, A. Dibenedetto*, M. Boscolo (Brazil, *Italy)

P1.288 Bifunctional MCM-41 aluminosilicate supported Ir with adjusted metal and acid functionality for catalytic ring opening of 1,2-dimethylcyclohexane
H. Ziaei-Azad, A. Sayari (Canada)

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J.W. Jang, J.H. Yim (Korea)

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A. Abou-Hamdan, M. Schneider, S. Eller (Switzerland)

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K.C. Pájaro, A. Martínez-Arias*, A.L. Barbosa, V. Cortés Corberán* (Colombia, *Spain)

P1.292 Synthesis of propargylamines catalyzed by transition-metal nanoparticles
A. Berrichi, R. Bachir, S. Bedrane, M. Benabdellah, N. Choukchou-Braham (Algeria)

P1.293 Porous silicon carbide as a support for Mn-Na_2WO_4 catalyst in the oxidative coupling of methane
H. Wang, R. Schmack, B. Paul, E. Kondratenko, R. Kraehnert (Germany)

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S. Gross, M. Carraro, P. Dolcet (Italy)

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V.D.B.C. Dasireddy, M. Hus, N. Strah, B. Likozar (Slovenia)

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M. Mureseanu, G. Carja, R.-D. Andrei*, G. Ceoana, F. Papa, V. Parvulescu (Romania, *France)

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W. Bendeddouche, S. Bedrane, R. Bachir, C. Louis* (Algeria, *France)

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V. Kogan, V. Dorokhov, E. Permyakov, P.A. Nikulshin, V.V. Maximov (Russia)

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Q. Han, Z. Yang, X. Liu (China)

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M.A. Ronge, K.R. Ehmann, M. Hölscher, W. Leitner (Germany)

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P2.6 Metal-free transfer hydrogenation of azobenzene with BH_3.NH3 as an alternative H_2 source using a $P(8\text{-}OQuin)_3$ as catalyst
M.A. Chacon Teran, R. Wolf*, R.E. Rodriguez Lugo, V.R. Landaeta (Venezuela, *Germany)

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E. Morais, J. Sullivan, R. Thampi (Ireland)

P2.8 A highly efficient synthesis of organic carbonates on a multigram scale from CO_2 using a synergistic chitin-supported catalyst
H. Díaz Velázquez, J. Guzmán Pantoja, E. Meneses Ruiz, R. García De León, R. Martinez Palou (Mexico)

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S.G. Aspromonte, A. Romero*, A. Boix, E. Alonso* (Argentina, *Spain)

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A. Tavella, M. Mariño, A. Boix, S.G. Aspromonte (Argentina)

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C.A. Jaramillo-Páez, J.A. Navío, M.C. Hidalgo, M. Macías (Spain)

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C.A. Jaramillo-Páez, J.A. Navío, M.C. Hidalgo, M. Macías (Spain)

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M.C. Zaragoza-Islas, P. Pérez-Romo, C. Aguilar-Barrera, G.C. Laredo (Mexico)

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M. Díaz, E. Epelde, A. Ateka, A.T. Aguayo, J. Bilbao (Spain)

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A. Pedlow, D. Sellick, O. Garcia-Afonso, A. Goguet, G. McCullough (United Kingdom)

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D. Salinas, G. Pecchi (Chile)

P2.23 Catalysts based on Ag nanoparticles for low-temperature CO oxidation and liquid phase selective oxidation of n-octanol
E. Kolobova, A. Pestryakov, E. Pakrieva, N. Bogdanchikova*, V. Cortés Corberán, Y. Kotolevich*** (Russia, *Mexico, **Spain)

P2.24 Nanosized platinum-on-isolated WO_4-doped SBA-15 for glycerol catalytic hydrogenolysis to 1,3-propanediol
Y. Fan, M. Qiao (China)

P2.25 Efficient ozonation of reverse osmosis concentrates from petroleum refinery wastewater using composite metal oxide loaded alumina
Y. Xu, Z. Yi, Q. Wang, G. Wang, C. Chen (China)

P2.26 Metal phosphates and phosphonates: green catalysts for esterification reactions
G. Rocha, T. Santos, L. Costa, A. Francisco (Portugal)

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J. Albert, D. Voß, K. Lakhe, H. Pickel (Germany)

P2.28 Influence of temperature and space velocity (WHSV) on the hydrotreatment of Light Cycle Oil (LCO) on a NiMo supported catalyst
R. Palos, A. Gutiérrez, E. Rodríguez, J. Bilbao, J.M. Arandes (Spain)

P2.29 Methanol synthesis from industrial CO_2 sources
H. Ruland, M.V. Bukhtiyarova, K. Kähler, R. Schlögl (Germany)

P2.30 Acetic acid removal from bio-oil on alumina-supported CaO and/or Ag catalysts
M. Montaña, M.B. Navas, H.P. Bideberripe, G.J. Siri, M.I. Casella, I.D. Lick (Argentina)

P2.31 Synthesis and characterization of mesostructured materials composition SiO_2 - Application in the adsorption of heavy metals
H. Douba, S. Sabour, K. Azzouni, N. Bouchenafa-Saib, O. Mohammedi (Algeria)

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M. Navlani-García, K. Mori, Y. Kuwahara, H. Yamashita (Japan)

P2.33 Oxygen storage properties of rare earth-doped CeO_2-ZrO_2 estimated by adsorption of methanol as an IR molecular probe
M. Haneda, S. Yamada, K. Iwashina, R. Oshima, Y. Nakahara (Japan)

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M.G. Al-Shaal, C.M. Pichler, D. Gu, F. Schüth (Germany)

P2.35 Oxidation of cycloalkenes using a new family of heterometallic MOFs 3d-4f, using friendly environmental conditions
P. Cancino, L. Santibañez, A. Vega, V. Paredes-García, E. Spodine (Chile)

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C. Takayama, T. Miyao, K. Higashiyama, A. Iiyama, H. Uchida (Japan)

P2.37 Behaviour of hydroxyapatite supported palladium catalysts in gas-phase chlorinated VOC abatement
Z. Boukha, J. González-Prior, B. de Rivas, J.R. González-Velasco, R. López-Fonseca, J.I. Gutiérrez-Ortiz (Spain)

P2.38 Impact of co-catalysts on the photocatalytic oxygen evolution reaction
M. Heimann, K. Friedel Ortega, A. Borutta, M. Behrens (Germany)

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T. Batakliev, V. Georgiev, M. Gabrovska, D. Nikolova, M. Anachkov, S. Rakovsky (Bulgaria)

P2.40 Enhancement of photocatalytic oxidation of 2,4-dichlorophenoxyacetic acid by gold-modified WO_3/TiO_2/RGO photocatalysts under UV light irradiation
V. Iliev, D. Tomova, S. Rakovsky (Bulgaria)

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E. Ghedini, M. Signoretto, A. Olivo, G. Cruciani, M. Manzoli, A. Di Michele (Italy)

P2.42 Catalyst for the elimination of methane emissions from the exhaust of lean burn natural gas engines
G. Caravaggio, L. Nossova (Canada)

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G. Zerjav, M.S. Arshad, P. Djinovic, A. Pintar (Slovenia)

P2.44 Tuning graphitic oxide for initiator- and metal-free aerobic epoxidation of linear alkenes
S. Pattisson, E. Nowicka, U. Gupta, G. Shaw, R. Jenkins, D. Morgan, D. Knight, G. Hutchings (United Kingdom)

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M. Manzoli, F. Menegazzo, S. Tabasso, G. Cravotto, M. Signoretto (Italy)

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C. Pérez-Zúñiga, C. Negrete-Vergara, S.A. Moya P. Aguirre (Chile)

P2.47 Hydrothermal stability of alumina supports: mechanism of hydroxide formation, stabilization by inorganic dopants and identification of reactive sites
J. Abi Aad, F. Diehl, M. Michau, Ph. Courty, D. Decottignies, X. Carrier, E. Marceau (France)

P2.48 Highly selective copper-based Ce@Ti core-shell catalysts for the reduction of nitric oxide with carbon monoxide
N. López, G. Aguila, P. Araya, S. Guerrero (Chile)

P2.49 Hydrodechlorination of trichloromethane on Pd supported on chemically activated carbons from lignin
J. Bedia, C. Fernandez-Ruiz, P. Bonal, J.J. Rodriguez, L.M. Goméz-Sainero (Spain)

P2.50 A supported catalytic system for the hydrogenolysis of glycerol
E.B. Hemming, A. Perosa*, M. Selva*, T. Maschmeyer, A.F. Masters (Australia, *Italy)

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A.C. Lim, H. Jadhav, G. Thorat, J.G. Seo (Korea)

P2.52 Direct reductive amination of aldehydes with nitroarenes over Ag/Al_2O_3 catalyst in a continuous flow reactor
E.A. Artiukha, A.I. Nuzhdin, G.A. Bukhtiyarova, V.I. Bukhtiyarov (Russia)

P2.53 Photocatalytic conversion of CO_2 by H_2O as an electron donor over Ag-loaded rare-earth elements-modified Ga_2O_3
Y. Nakatani, S. Kikkawa, K. Teramura, H. Asakura, S. Hosokawa, T. Tanaka (Japan)

P2.54 Activation of Pd/Al_2O_3 spent catalyst of ethylene synthesis process using supercritical carbon dioxide
F. Esmaeilzadeh, A. Bolhasani, V. Khorshidi* (Iran, *Italy)

P2.55 Bimodal surface of Pt nanocubes-$Ni(OH)_2$ for the hydrogen evolution reaction in an alkaline electrolyte
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P2.56 Clean adipic acid synthesis from liquid-phase cyclohexanone oxidation using $Ag_3PMo_{12}O_{40}$ heteropolysalt. Effect of silver salt precursor
S. Benadj, T. Mazari, L. Dermeche, N. Salhi, C. Rabia (Algeria)

P2.57 Origin of NSR NOx spike: nitrate or nitrite - An IR operando study
H.P. Nguyen, S. Palma Del Valle*, O. Marie* (Belgium, *France)

P2.58 New process for gas phase acetylation of glycerol towards triacetin over Ti-modified silica catalysts
U. Armbruster, S. Kale, A. Martin (Germany)

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F. Parveen, M. Jaiswal, S. Upadhyayula (India)

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S. Kramer, J. Mielby, K. Buss, T. Kasama, S. Kegnæs (Denmark)

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M. Dogan, O. Özcan, A.N. Akin (Turkey)

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H. Ayadi, L. Bois, C. Descorme (France)

P2.63 CO_2 capture by hierarchical porous chabazite type zeolites
L. Hillen, J. Fernandez, V. Degirmenci (United Kingdom)

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P. Nevalainen, N. Kinnunen, K. Kallinen, T. Maunula, M. Suvanto (Finland)

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Z. Lian, W. Shan, H. He (China)

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J. Garcia-Aguilar, D. Cazorla-Amoros, Á. Berenguer-Murcia (Spain)

P2.67 Ti-ferrosilicates for the propylene epoxidation with O_2
J. Garcia-Aguilar, D. Cazorla-Amoros, A. Berenguer-Murcia (Spain)

P2.68 Magnesium-promoted Na-zeolites as catalysts for the glucose isomerisation into fructose
I. Graca, D. Chadwick (United Kingdom)

P2.69 Highly active CaO from waste shells of egg, oyster and clam for biodiesel production
R. Risso, P. Ferraz, S. Meireles, I. Fonseca, J. Vital (Portugal)

P2.70 Cobalt oxides obtained by plasma-aided and electrochemical deposition on stainless steel sieves as catalysts for ethanol total oxidation
F. Kovanda, K. Jirátová, J. Balabánová, M. Brunclíková, P. Kšírová (Czech Republic)

P2.71 Ruthenium complexes containing phosphorus nitrogen ligands, high activities in hydrogenation benzylideneaniline
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I. Yahiaoui, C. Belver*, J. Bedia*, J.J. Rodriguez* (Algeria, *Spain)

P2.73 Photocatalytic conversion of CO_2 by H_2O as an electron donor over Rh-doped Ga_2O_3 photocatalysts
S. Kikkawa, K. Teramura, H. Asakura, S. Hosokawa, T. Tanaka (Japan)

P2.74 Ni-based catalysts modified with ceria for hydrogen production
B. Pawelec, R. Palcheva*, Y. Karakirova*, G. Tyuliev*, J.L. Fierro, S. Damyanova* (Spain, *Bulgaria)

P2.75 Access to versatile ortho-fluoroanilies via Pd-catalyzed site-selective azobenzene C-H bond fluorination
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P2.76 Gold catalysts on Y-doped CeO_2 supports for hydrogen purification via preferential CO oxidation in H_2 reach steam
L. Ilieva, P. Petrova, G. Pantaleo*, R. Zanella, L.F. Liotta*, Z. Kaszkur***, J.W. Sobczak***, W. Lisowski***, A.M. Venezia*, T. Tabakova** (Bulgaria, *Italy, **Mexico, ***Poland)

P2.77 Kinetics of CO_2 hydrogenation to methane over Ru/SiO_2
K. Carnevalli de Almeida, F. Bellot Noronha, F. Toniolo, L. Veiga Mattos (Brazil)

P2.78 Direct dehydrogenation of ethylbenzene over nanodiamonds @ nitrogen-doped mesoporous carbon hybrid composites
Y. Liu, H. Ba, D.S. Su, C. Pham-Huu* (China, *France)

P2.79 Aqueous-phase hydrogenation of mono- and disaccharides over ruthenium based catalysts: influence of the support
J.J. Musci, M. Montaña, I.D. Lick, A.B. Merlo, M.L. Casella (Argentina)

P2.80 Reaction characteristics for non-catalytic decomposition for production of thermal degradation oil using bitumen-like heavy oil from Indonesian local area
G.B. Han, J.H. Jang, W.J. Shin, H.Y. Choi (Korea)

P2.81 Characterization of copper species in solid-state ion-exchanged Cu-SSZ-13 for NH_3-SCR
A. Clemens, A. Shishkin, P.-A. Carlsson, M. Skoglundh, H. Härelind (Sweden)

P2.82 Pre-turbo SCR catalyst for NO_x removal on Ships
S.M. Christensen, B.B. Hansena, K. Johansenb, A.D. Jensen (Denmark)

P2.83 Size controlled palladium nanoparticles for the transfer dehydrogenation of 1-phenylethanol under mild conditions
R. Albilali, N. Dimitratos* (Saudi Arabia, *United Kingdom)

P2.84 Applications of ordered mesoporous mixed metal oxides for direct syngas conversion to chemicals
J.W. Bae, H. Koo, H. Ham, J. Kim, J.-M. Jo, Y.M. Park (Korea)

P2.85 Low-T interaction of $NH_3/NO/NO_2 + O_2$ with Fe-ZSM-5 or Cu-CHA + BaO/Al_2O_3: influence of phase separation and relevance for NH_3-SCR
T. Selleri, I. Nova, E. Tronconi (Italy)

P2.86 Highly efficient, selective and low-temperature catalytic hydrodechlorination of tetrachloromethane with silica-supported Ir and Ir-M (M=Pt, Pd, Au) catalysts
M. Bonarowska, M. Zielinski, J. Sa, G. Słowik, D. Gizinski (Poland)

P2.87 Ni-loaded hierarchical zeolite Y as the catalyst in TCE and PCE removal from drinking water
K.A. Tarach, E. Kowalewski, A. Srebowata, K. Gołabek, K. Góra-Marek (Poland)

P2.88 The role of corners and edges of platinum nanocluster in methanol dehydrogenation: a DFT study
S.S. Laletina, E.A. Shor, M. Mamatkulov, I.V. Yudanov, V.V. Kaichev, V.I. Bukhtiyarov (Russia)

P2.89 Key catalytic features of Nb-based magnetic nanoparticles for selective cellulose degradation to lactic acid
I. Podolean, N. Candu, M. Tudorache, V.I. Parvulescu, S.M. Coman (Romania)

P2.90 Palladium hydrogenation catalysts based on porous carbon materials derived from poly(vinyl chloride)
R.M. Mironenko, O.B. Belskaya, Yu.G. Kryazhev, V.A. Likholobov (Russia)

P2.91 Up-scaled supercritical flow synthesis of $PtPdFe/Al_2O_3$ catalysts for Diesel oxidation
H. Silva, A.K. Baden, P. Hernández-Fernández, L.H. Christensen, C. Kallesøe (Denmark)

P2.92 Influence of perovskite preparation on catalytic activity of N_2O decomposition at high temperatures
G. Sadovska, P. Belina, A. Vondrova, P. Sazama (Czech Republic)

P2.93 Evolution of coke deposited on a Cu-Zn-Zr/SAPO-11 core-shell catalyst during the direct synthesis of dimethyl ether
M. Sanchez-Contador, M. Ibáñez, P. Rodriguez-Vega, A.T. Aguayo, J. Bilbao, P. Castaño (Spain)

P2.94 Reusable ionic liquids as solvents as well as support for peptide manufacture
T. Patra, S. Upadhyayula (India)

P2.95 Sputtered films of Ir, IrOx, IrNi and IrNiOx on Ti substrates as model catalysts for highly efficient electrochemical water oxidation (OER)
C. Spöri, P. Briois*, T. Reier, D. Teschner, A. Billard*, P. Strasser (Germany, *France)

P2.96 Effect of cation substitution on the catalytic activity of $La_{1-x}SrxFe_{1-y}CoyO_3$ perovskites for NO reduction by CO
A. Margellou, T. Vaimakis, D. Petrakis, P. Pomonis (Greece)

P2.97 Bio-adipic acid production by trans,trans muconic acid hydrogenation with a Pt/C catalyst
S. Capelli, A. Villa, L. Prati, C.L. Bianchi, C. Pirola (Italy)

P2.98 H_2 production by catalytic oxidative decomposition of H_2S at high temperature
V. Palma, D. Barba, V. Vaiano, M. Colozzi, E. Palo, L. Barbato, S. Cortese (Italy)

P2.99 OSC materials - Impact of preparation method on PGM compatibility
D. Scapens (United Kingdom)

P2.100 Materials for filter applications in emissions control
D. Scapens (United Kingdom)

P2.101 H_2O and NH_3 coordination capacity at Cu^{II}-SSZ-13: a DFT study
B. Kerkeni, D. Berthout*, D. Berthomieu*, C. Chizallet* (Tunisia, *France)

P2.102 Aqueous phase electrocatalytic hydrogenation of benzaldehyde: a mechanistic study
Y. Song, U. Sanyal, G. Cheng, A. Jentys, O.Y. Gutiérrez, J.A. Lercher (Germany)

P2.103 Catalysis to the rescue: advancing medical diagnostics for the sustainable future

V.V. Zhivonitko, K.V. Kovtunov, I.V. Koptyug (Russia)

P2.104 Role of dopant and support in CO_2 conversion into C_3-C_4 alcohols with H_2 and C_2-C_3 olefins over Au catalysts: a catalytic and in situ spectroscopic study
D. Heyl, S.J. Ahlers, U. Bentrup, A. Brückner, E.V. Kondratenko (Germany)

P2.105 Experimental and theoretical studies on a sulfur-poisoned and regenerated Pd/Al_2O_3 natural gas oxidation catalyst
M. Honkanen, J. Wang, M. Kärkkäinen, M. Huuhtanen, K. Kallinen, R.L. Keiski, J. Akola, M. Vippola (Finland)

P2.106 Characterization and evaluation of mixed oxides of Zn/Al/La in the degradation of diclofenac
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P2.107 Vapor-assisted ozone functionalized carbon nanotubes as efficient carbocatalyst
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P2.108 Immobilization of TiO_2 photocatalyst on PVDF coated iron mesh using electrospraying and hot-pressing technique
S. Ramasundaram, M. Seid, S.W. Hong (Korea)

P2.109 Cobalt oxide/ceria-zirconia/cordierite monoliths as catalysts for deep oxidation of ethanol and N_2O decomposition
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P2.110 Data mining for CO_2 capture from flue gas streams over amine-functionalized mesoporous silica
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P2.111 Cu-Fe based catalysts for the urea decomposition at low temperature to SCR applications
E. Genty, P. Dulgheru, F. Dorge, T. Visart De Bocarmé (Belgium)

P2.112 The effect of CH_4 on NH_3-SCR catalysts for lean-burn NG vehicles
R. Villamania, I. Nova, E. Tronconi, T. Maunula*, M. Keenan** (Italy, *Finland, **United Kingdom)

P2.113 Impact of synthesis parameters on the solid state properties and the CO oxidation performance of ceria nanoparticles
M. Lykaki, E. Pachatouridou, E.F. Iliopoulou, S.A.C. Carabineiro*, M. Konsolakis (Greece, *Portugal)

P2.114 Continuous flow, catalytic partial hydrogenation reactions by Pd@sulfonated silica monoliths
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P2.115 SO_2 tolerance and stability of $Ba_{0.9}A_{0.1}Ti_{0.8}Cu_{0.2}O_3$ (A = Sr, Ca, Mg) LNT catalysts
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P2.116 One-step hydrothermal synthesis of TiO_2 with variable HCl concentration and test in the photocatalytic oxidation of propene at low concentration
L. Cano Casanova, A. Amorós Pérez, M. Ouzzine*, M.A. Lillo Ródenas, M.C. Román Martínez (Spain, *Japan)

P2.117 Deactivation study of CuZnZr-ferrierite hybrid catalysts in the direct hydrogenation of CO_2-to-DME
F. Frusteri, M. Migliori, A. Mezzapica, C. Cannilla, E. Catizzone, G. Giordano, G. Bonura (Italy)

P2.118 Pt nanocubes directly on carbon supports for methanol oxidation reaction
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P2.119 Copper doped $BaMnO_3$ perovskite catalysts for NO oxidation and NO_2-assisted diesel soot removal
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P2.120 Critical raw materials (CRMs)-free catalysts for automotive sector: dream or reality?
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P2.123 Selective C-O bond hydrogenolysis of erythritol over supported Rh-ReOx catalysts in aqueous phase
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P2.126 Influence of HCO_3- with various counter ion in aqueous phase against photocatalysis
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T. Raabe, H. Krause, S. Kureti (Germany)

P2.129 Influence of sodium loading on the deactivation of Cu/FER exchanged zeolites for SCR of NO_x with NH_3. Effect of copper loading
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P2.130 Plasma-Ni/Ceria-Zirconia catalytic hybrid process for CO_2 methanation
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P2.131 Co_3O_4 supported on ZrO_2-Al_2O_3 catalysts for propane and naphthalene total oxidation

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P2.134 Can low loaded Rh-doped PGM three-way-catalysts be promising substitutes of commercial TWC?
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B. Gumina, C. Espro, F. Mauriello, R. Pietropaolo, S. Galvagno (Italy)

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A. Garbujo, M. Natile, P. Canu, A. Glisenti (Italy)

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B. Acar, M.S. Basar, B.M. Eropak, B. Selen Çaglayan, A.E. Aksoylu (Turkey)

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J. Navas, A. Corma, M.J. Sabater (Spain)

P2.146 Selective conversion of 5-hydroxymethylfurfural to cyclopentanone derivatives over $Cu\text{-}Al_2O_3$ and $Co\text{-}Al_2O_3$ catalysts in water
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P2.149 Biorefinery of the hazelnut shells (Tonda Gentile Romana). Acid-catalysed hydrothermal treatment for the production of levulinic acid and hydrochar
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P2.152 Effect of cold Ar plasma treatment on the catalytic performance of Pt/CeO_2 in the Water-Gas Shift reaction (WGS)
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P2.153 Acetalisation of glycerol with acetone over heterogeneous catalysts
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P2.154 NO_x storage and reduction over ceria-containing catalysts: effect of copper presence and barium content
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P2.155 Ceria-praseodymia supported Pt nanoparticles for CO, NO, soot and NO_x-assisted soot oxidation reactions
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P2.156 Platinum nanoparticles onto pegylated poly(lactic acid) stereocomplex for highly selective hydrogenation of aromatic nitrocompounds to anilines
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P2.157 Reaction mechanism of oxide materials with reversible exsolution and incorporation: case study of $BaCeO_3$ and $(La,Ca)TiO_3$
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A. Comés, L. Fusaro, C. Aprile (Belgium)

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N. Petrea, S.A. Nicolae, M. Trandafir, S. Somacescu, S. Neatu, F. Neatu, V. Somoghi, M. Florea (Romania)

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M. Hornacek, P. Hudec (Slovakia)

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M. Kim, J. Park, C.-H. Shin, Y.-W. Suh (Korea)

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P2.169 The performance of Co-CeO_2 catalysts in steam reforming of ethanol
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N. Schiaroli, C. Lucarelli, A. Vaccari (Italy)

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P2.174 Highly active and selective Ru nanoparticles as catalysts for the CO and CO_2 methanation
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A. Matayeva, F. Basile, F. Cavani, D. Bianchi, S. Chiaberge (Italy)

P2.176 In-situ near ambient pressure XPS characterization of the catalytically active phase of Pt/

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S.L. Bergman, J. Granestrand*, F. Tao, Y. Tang, R. Suarez Paris*, M. Nilsson*, L.J. Pettersson**, S.L. Bernasek*** (Singapore, *Sweden, **USA)

P2.177 Photodegradation of diclofenac using Al_2O_3-Ga_2O_3 doped with silver oxide prepared by the co-precipitation method
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P2.180 NH_3-SCR over [Cu/Al_2O_3 + H-beta] combined catalyst: the nature of synergistic effect between Cu/Al_2O_3 and H-beta components
A.I. Mytareva, G.N. Baeva, A.V. Kucherov, D.A. Bokarev, A.Yu. Belyankin, A.Yu. Stakheev, A.L. Kustov* (Russia, *Denmark)

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P2.182 Performance of $NiAl_2O_4$ catalyst for OSR of bio-oil in reaction-regeneration cycles: effect of regeneration conditions
A. Arandia, A. Remiro, B. Valle, J. Bilbao, A.G. Gayubo (Spain)

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E. Mokrane, S. Barama, F.H. Alhassan*, A. Barama, Y.H. Taufiq-Yap** (Algeria, *Saudi Arabia, **Malaysia)

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M. Abou Hamdan, N. Perret, M. Jahjah*, C. Pinel (France, *Lebanon)

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G. Landi, A. Di Benedetto, L. Lisi (Italy)

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P2.195 Olefins from biomass: green propene production via glycerol hydro-deoxygenation, over Fe-Mo catalysts
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P2.197 Acetalisation of glycerol to solketal using biomass based sulfonated porous carbons
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P2.198 Synthesis of butyl levulinate from furfuryl alcohol and 1-butanol over ion-exchange resins
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P2.199 Selective oxidation of polycyclic aromatic hydrocarbons
N. Markham, R. Underhill, E. Nowicka*, S. Taylor (United Kingdom, *Germany)

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R. Juhola, A. Heponiemi, S. Tuomikoski, T. Hu, U. Lassi (Finland)

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P2.202 Synergetic interplay of Co and TiO_2 in continuous CO_2 photoreduction to CH_4
M. Borges, A. Urakawa (Spain)

P2.203 Highly active Pd-based three-way catalysts through assisted impregnation technique
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P2.204 Low temperature $DeNO_x$ activity of Ag/CeO_2-ZrO_2 catalysts: effects of thermal ageing and Ag/support modifications
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P2.206 Valorization of diluted bioethanol streams catalyzed by ZrO_2- and HCBZ zeolite-based materials
G. Ramis, I. Rossetti, C. Resini*, Y.V. Kolen'ko*, M. Cortés Reyes, M.A. Larrubia Vargas**** (Italy, *Portugal, **Spain)

P2.207 Effect of H_2O on NO reduction and 1,2-dichlorobenzene oxidation over VO_x/TiO_2 in Municipal Solid Waste incinerators
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P2.208 Effect of cobalt addition on bulk and surface properties of Diesel soot combustion catalysts - Cryptomelane and birnessite
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P2.209 Assessment of acidic ion-exchange resins as potential catalysts for the hydroxyalkylation/alkylation of Sylvan with butanal
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P2.210 Activated Carbon from biomass, a sustainable acid catalyst for flavor synthesis
I. Matos, M. Bernardo, R. Pereiro, H. Vasconcelos, I. Fonseca, J. Vital (Portugal)

P2.211 Catalytic activity of Ca-containing hydrotalcite like structures for biodiesel production from waste cooking oil
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P2.213 Surface properties of NiO_x/CeO_2-ZrO_2 systems applied as catalysts for dry methane reforming
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P2.214 Catalytic hydrodefluorination of polycyclic α,α-difluoroketones
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E. Santos, J.S. Ramos, F. Lemos, M.A.N.D.A. Lemos (Portugal)

P2.216 Mechanocatalytic pretreatment of willow and birch saw dust to reducing sugars
H. Lempiäinen, J. Haverinen, M. Jaakkola, U. Lassi (Finland)

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A. Di Michele, C. Pirola, A. Comazzi, C.L. Bianchi (Italy)

P2.220 Mechanism of SAPO-34 catalyst deactivation in the course of MTO conversion in slurry

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S.V. Konnov, V.S. Pavlov, P.A. Kots, I.I. Ivanova (Russia)

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M.V. Grabchenko, G.V. Mamontov, V.I. Zaikovskii, O.V. Vodyankina (Russia)

P2.222 Catalytic upgrading of biorenewables: the hydroformylation of terpenes
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P2.223 Complete methane oxidation with Ba promoted Pd/Al_2O_3 in the presence of water
I. Friberg, N. Sadokhina, L. Olsson (Sweden)

P2.224 Supported Ni@MnOx core shell particles for dry reforming of methane
A. Sagaltchik, C. Guan, P. Ebert, R. Naumann d'Alnoncourt, R. Schomäcker, F. Rosowski, A. Thomas (Germany)

P2.225 Photocatalytic hydrogen production over Ni_2P-promoted CdS-ZnS composites
A. Petala, D.I. Kondarides (Greece)

P2.226 Ti-doped Fe_2O_3 nanoparticles synthesized by hydrothermal treatment and their photocatalytic activity in organic compounds degradation
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P2.227 Multi-criteria approach to optimal mixed reforming of biogas
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P2.228 Electrocatalytic upgrading of itaconic acid to methylsuccinic acid using fermentation broth as substrate solution
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P2.232 Rare earth-free perovskitic catalysts for ethanol steam reforming: a feasible perspective?
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P2.233 Silica-supported molybdenum phosphide catalysts for green diesel synthesis by hydrotreating of methyl laurate. Influence of mesostructuring and aluminum incorporation in the support
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P2.234 Biphasic catalysis with mononuclear ruthenium complexes
A. Salvini, A. Papacchini, W. Oberhauser (Italy)

P2.235 Rational design of novel alloy catalysts for the NH_3 decomposition reaction
L.A. Parker, J.H. Carter, E. Nowicka, N.F. Dummer, S.E. Golunski, G.J. Hutchings (United Kingdom)

P2.236 Precious metal nanoparticles supported on nanocasted materials for the selective oxidation of glycerol
M. Douthwaite, A. Taylor, R.K. Albilalib, P.M. Shah, J.M. López*, T. Garcia*, S.H. Taylor (United Kingdom, *Spain)

P2.237 Glycerol-TPD on cobalt aluminate spinel catalysts
A. Reynoso, U. Iriarte-Velasco, M.A. Gutiérrez-Ortiz, J.L. Ayastuy (Spain)

P2.238 Production of selective range of fuel hydrocarbons over Fe-Co bimetallic catalyst from CO_2 containing syngas
Sonal, S. Upadyayula, K.K. Pant (India)

P2.239 Cobalt aluminate nanoparticles catalysts: Impact of hard-template removal method
A.J. Reynoso, J.L. Ayastuy, A. Morales-Marín, M.A. Gutiérrez-Ortiz (Spain)

P2.240 Catalytic partial oxidation of methane on Ni/ZrO_2 system for syngas production
M.C. Campa, D. Gazzoli, I. Pettiti, D. Pietrogiacomi (Italy)

P2.241 Enhanced HDS activity of palladium embedded to iron oxide nanoparticles
A. Mansouri, N. Semagina (Canada)

P2.242 Direct amination of alcohols catalyzed by aluminum triflate
P.-A. Payard, Q. Gu*, R. Wischert*, J. Lai*, M. Corbet*, C. Michel, P. Sautet, L. Grimaud, M. Pera-Titus* (France, *China)

P2.243 Steam reforming of butyric acid using Ni catalysts supported on γ-Al_2O_3 modified with Nb_2O_5 and ZnO
T. Moreira de Matosa, E. Moreira Assaf (Brazil)

P2.244 Ultrasound-assisted oxidative desulfurization of Jet-A1 and Diesel fuels using supported Pd-Ag/graphene oxide catalyst and AgY adsorbent
Y. Boukoberine, M.A. Kadi, F. Benaliouche (Algeria)

P2.245 Selective ring opening of decalin over robust bifunctional Pt-USY catalysts with reduced acidity and nearly monoatomic metal dispersion
L.W.O. Soares, M.A. Arribas, S.B.C. Pergher*, A. Martínez (Spain, *Brazil)

P2.246 The role of basic properties on the catalytic behaviour of Mg-Al, Zn-Al and Mg-Zn-Al mixed oxides
L. Smoláková, K. Frolich, J. Kocík, O. Kikhtyanin, L. Capek (Czech Republic)

P2.247 Porous glass supported Pd/MeO_x catalysts for low-temperature complete methane combustion
D. Liu, D. Seeburg, G. Georgi, S. Wohlrab (Germany)

P2.248 Preparation of Diesel NOx Trap catalysts by colloidal procedure
J.M. Garcia Vargas, R. Sayah, S. Gil, L. Retailleau, L. Veyre, C. Thieuleux, A. Giroir-Fendler (France)

P2.249 The correlation between surface basicity and H_2O adsorption: novel strategy for NO oxidation over metal oxides catalysts in the presence of H_2O
H. Chang, C. Shi, M. Li, J. Li (China)

P2.250 Ag-CeO_2 supported on SBA: Structural characteristics and activity in VOCs oxidation
N.N. Litvyakova, V.I. Zaikovskii, G. Mamontov (Russia)

P2.251 Highly active soft-templated NiO-CeO_2 catalysts for synthetic natural gas production by

CO_2 methanation
L. Atzori, M.G. Cutrufello, C. Cannas, D. Gazzoli, D. Meloni, R. Monaci, B. Onida, M.F. Sini, E. Rombi (Italy)

P2.252 Catalytic alkylation of biomass-derived phenolic compounds
G. Afreen, T. Patra, S. Upadhyayula (India)

P2.253 Cobalt oxide supported on open cell foam as deN_2O catalyst - Effect of support and oxide interlayer
K. Pacultová, A. Klegova, T. Kiška, L. Obalová (Czech Republic)

P2.254 Application of catalytic ozonation process for triclosan removal from aqueous solutions
S.-M. Avramescu, C. Bradu, E.-A. Olaru, R.C. Fierascu, I. Fierascu (Romania)

P2.255 Methanol production from CO_2 hydrogenation over Cu-Zn catalysts supported on mesoporous zirconia prepared by surfactant-assisted routes
F.C.F. Marcos, E.M. Assaf, J.M. Assaf (Brazil)

P2.256 Silica supported photocatalysts for wastewater treatment from textile industry
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P2.257 A multi-technique approach to disclose the reaction mechanism of dimethyl carbonate synthesis over amino-modified SBA-15 catalysts
V. Crocellà, T. Tabanelli, J.G. Vitillo, D. Costenaro, C. Bisio, F. Cavani, S. Bordiga (Italy)

P2.258 Support effect in the hydrodeoxygenation of guaiacol for NiW catalysts supported on Al_2O_3, TiO_2 and ZrO_2
C. García Mendoza, C.E. Santolalla-Vargas, J.A. de los Reyes (Mexico)

P2.259 Improved resistance to deactivation of coupled NH_3-SCR/DPF catalyst for Diesel exhaust emissions control
P. Peyrovi, P. Granger, C. Dujardin (France)

P2.260 Co and Ni mono- and bimetallic nanoparticles for catalysis applications
T. Cavattoni, G. Garbarino, R. Brescia, P. Riani, F. Canepa, G. Busca (Italy)

P2.261 Cobalt based active phase deposited on ceramic open-cell foam for N_2O decomposition.
A. Klegova, T. Kiška, K. Pacultová, L. Obalová (Czech Republic)

P2.262 Influence of composition, structure, physical and chemical properties of aluminium oxide-based sorbents on water absorption ability
A.V. Livanova, R.A. Zotov, E.P. Meshcheryakov, L.A. Isupova, I.A. Kurzina (Russia)

P2.263 SCR of N_2O by CH_4: the activity of Brønsted-acid sites in MOR
M.C. Campa, L.R. Carbone, M. Occhiuzzi, D. Pietrogiacomi (Italy)

P2.264 Regeneration of a CH_4 oxidation catalyst of natural gas fueled lean-burn engine: Simulated exhaust gas study
N.M. Kinnunen, K. Kallinen, T. Maunula, M. Keenan*, M. Suvanto (Finland, *United Kingdom)

P2.265 Dehydration of phenol catalyzed by supported rare earth oxychlorides
A. Chojecki*, B. Kilos, D.G. Barton (USA, *The Netherlands)

P2.266 Dehydration of glucose into HMF over zeolite-Y and mordenite type heterogeneous catalysts

R. Oozeerally, V. Degirmenci (United Kingdom)

P2.267 C-N bond formation by condensation between unactivated reagents at oxide surfaces: a lesson from prebiotic chemistry?
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P2.268 Synthesis of an acidic biomorphic carbon-based catalyst for simultaneous esterification and transesterification reactions
V. Dominguez-Barroso, C. Herrera, M.A. Larrubia, L.J. Alemany (Spain)

P2.269 Reducibilities and dehydrogenation activities of unsupported and γ-alumina supported nickelia-vanadia-based catalysts
I.Y. Petrov, O.V. Zolotaryov, B.G. Tryasunov (Russia)

P2.270 Alumina supported Ni and Ru catalysts for CO_2 hydrogenation to methane
A. Quindimil, B. Pereda-Ayo, J.A. González-Marcos, J.R. González-Velasco (Spain)

P2.271 Ni-substituted Ba-hexaaluminate as a new catalytic material in steam reforming of tars
C. Parsland, P. Benito*, J. Brandin, P.H. Ho*, G. Fornasari* (Sweden,* Italy)

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J. Englund, P. Moameni, S. Shwan, M. Skoglundh (Sweden)

P2.273 A synergetic effect of Mo-W in the polymetallic (Ni)WMo/Al_2O_3 hydrotreating catalysts based on mixed Mo-W heteropolyacids
M. Nikulshina, A. Mozhaev, P. Blanchard*, C. Lancelot*, M. Fournier*, A. Griboval-Constant*, E. Payen*, V. Briois*, P. Nikulshin, C. Lamonier* (Russia, *France)

P2.274 A new sustainable catalytic route to produce monoalkyl glyceryl ethers using glycidol as feedstock
M. Ricciardi, R. Cucciniello, M. Di Serio, C. Capacchione, A. Proto (Italy)

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S. Bedrane, S. El Korso, Z. Fandi, A. Choukchou-Braham, R. Bachir (Algeria)

P2.276 Hydroformylation with integrated SILP catalyst-membrane separation reaction system
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P2.277 Direct NO decomposition over K-promoted Co-Mn-Al mixed oxides
T. Bílková, L. Obalová, K. Pacultová (Czech Republic)

P2.278 Synthesis of dimethyl ether over hybrid catalysts
A. Kornas, R. Grabowski, M. Sliwa, M. Ruggiero-Mikołajczyk, D. Duraczynska, D. Rutkowska-Zbik (Poland)

P2.279 Low cost Fe-based catalysts from industrial wastes for CO methanation. Comparison with an FeCuZn/SiO_2 catalysts
P. Melo, A. Carvajal, C. Gaete, C. Ulloa, R. Jiménez, X. García (Chile)

P2.280 Enhancing acid-base properties of γ-alumina and introducing redox catalytic activity though doping by transition metal ions
A. Khaleel, R. Bu Jaber (United Arab Emirates)

P2.281 Monodisperse Au/Pd core/shell nanoparticles assembled on reduced graphene oxide: a highly efficient catalyst for the transfer hydrogenation of nitroarenes
H. Can, O. Metin (Turkey)

P2.282 Low-temperature V_2O_5/TiO_2 catalysts for SCR of NO with NH_3
R. Fehrmann, S.S.R. Putluru, L. Schill, A. Godiksen, R. Poreddy, S. Mossin, A.D. Jensen (Denmark)

P2.283 Low-temperature transformation of carbon dioxide through water-induced surface reconstruction on iron oxide magnetite
F. Ivars-Barceló, F. Mirabella, J. Paier, X. Li, J. Seifert, E. Zaki, S. Shaikhutdinov, S. Schauermann, J. Sauer, H.-J. Freund (Germany)

P2.284 Ceramic monolithic Mn-Ce catalysts for n-hexane combustion
C.C. Diaz*, M.P. Yeste, H. Vidal, J.M. Gatica, L.E. Cadus*, M.R. Morales* (Argentina, *Spain)

P2.285 Towards a noble metal-free TWC: CuO@perovskite nanocomposites
M.M. Natile, A. Garbujo, J. Fabro, G. Perin, Q. Xin*, P. Cool*, P. Canu, A. Glisenti (Italy, *Belgium)

P2.286 Study of catalytic removal of bromates using different $Pd\text{-}Al_2O_3$ catalysts
J.L. Cerrillo, C. Wittee, M. Alt, A.E. Palomares, G. Agostini*, F. Rey (Spain, *Germany)

P2.287 Zeolite-based catalysts for low-temperature NO_x removal from lean-burning engines exhausts
A. Porta, T. Pellegrinelli, S. Dzwigaj*, L. Castoldi, R. Matarrese, S. Morandi, L. Lietti (Italy,*France)

P2.288 Properties of catalysts derived from $LaFe_{1-x}Co_xO_3$ type oxides for partial oxidation of methane
H.C. Fonseca, N. Bion, F. Epron, M.d.C. Rangel (Brazil, *France)

P2.289 N-doped graphene in the catalytic reduction of 4-nitrophenol: the effect of reductant/catalyst ratio
M. Linhares, C. Freire, M.F.R. Pereira (Portugal)

P2.290 Advanced oxidation of toluene using Chilean natural zeolite: the key role of Brønsted and Lewis acid sites
S. Alejandro, H. Valdés, M.-H. Manero, C. Zaror (Chile)

P2.291 New ion-exchange catalysts for the esterification of fatty acids with methanol
C. Dalla Valle, P. Centomo, M. Zecca (Italy)

P2.292 Nickel nanoparticles supported on mesoporous ZSM-5 and its activity for 4-hydroxy-3-methoxy-benzaldehyde hydrodeoxygenation
M.A. Cortes, J.A. Toledo-Antonio, M.d.L. Mosqueira, C. Angeles-Chavez, E. Lopez-Salinas (Mexico)

P2.293 Catalytically active oxygen species in $CoFe_2O_4$ spinel for kinetic study of ethanol total oxidation
S. Barama, E. Mokrane, A. Davidson*, A. Barama, S. Slyemi (Algeria, *France)

P2.294 Multi-scale modeling of catalytic filters for automotive exhaust gas aftertreatment
M. Leskovjan, A. Arvajova, M. Plachá, M. Václavik, P. Koci, V. Novák*, D. Thompsett* (Czech Republic, *United Kingdom)

P2.295 Synthesis of Ni-Mo-W sulphide unsupported HDS catalysts: effect of preparation method
R. Huirache-Acuña, B. Pawelec, F. Paraguay-Delgado, E.M. Rivera-Muñoz, T.A. Zepeda, S. Fuentes, G. Alonso-Núñez (Mexico)

P2.296 Double CO light-off behavior on Pt/γ-Al_2O_3 catalyst in the presence of hydrocarbon and NO_x
J. Brezina, P. Boutikos, P. Koci (Czech Republic)

P2.297 A kinetic analysis of the effect of aromatics on ultra-deep HDS
E.M. Morales-Valencia, C.O. Castillo-Araiza*, V.G. Baldovino-Medrano (Colombia, *Mexico)

P2.298 Effect of cobalt on the activity and structure of wustite catalysts for ammonia synthesis
Z. Lendzion-Bielun, Ł. Czekajło (Poland)

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J. Mikulec, J. Blaško, R. Kubinec, L. Pokorná (Slovakia)

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M. Edelmannová, K.-Y. Lin*, J.C. Wu*, K. Kocí (Czech Republic, *Taiwan)

P2.301 Sonocatalytic oxidation of organic compounds in wastewaters: enhanced catalytic activity of non-noble metal catalysts
L. Parizot, T. Chave, M.E. Galvez, H. Dutilleul, P. Da Costa, S. Nikitenko (France)

P2.302 The use of carbon fibers containing palladium as catalysts for the bromate reduction in polluted waters
A.E. Palomares, J.L. Cerrillo, F. Rey, C. Wittee, G. Agostini*, L. Kiwi-Minsker** (Spain, *Germany, **Switzerland)

P2.303 Tracking selectivity in the aerobic oxidation of 5-Hydroxymethylfurfural: role of catalysts and reaction conditions
A. Dibenedetto, M. Ventura, F. Lobefaro, M. Aresta (Bari)

P2.304 Electrochemical promotion of CH_4 oxidation on Pd nanoparticles, Pd/Co_3O_4 and Pd/MnO_2 nanodispersed catalysts deposited on O^{2-} conductors (YSZ, CGO)
I. Kalaitzidou, D. Zagoraios, S. Ntais*, E. Baranova, S. Brosda, A. Katsaounis, P. Vernoux*, C. Vayenas** (Greece, *France, **Canada)

P2.305 Catalytic oxidation of trichloroethylene on copper-exchanged beta zeolite
N. Blanch, J. Martinez Triguero (Spain)

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P. Hudec, M. Hornácek, V. Jorík, J. Mikulec (Slovakia)

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D. Costenaro, C. Bisio, F. Carniato, A.M. Katsev*, S.L. Safroniuk*, N. Starodub, R. Psaro, M. Guidotti** (Italy, *Russia, **Ukraine)

P2.309 Influence of sulfur and phosphorus on automotive V_2O_5-WO_3/TiO_2 and Cu/SSZ-13 SCR catalysts
S. Dahlin, L. Schmalhorst*, F. Regali, L.J. Pettersson (Sweden, *Germany)

P2.310 Efficiency of nanomaterials based on titania and silver in the recognition and degradation of pollutants
M. Muniz-Miranda, C. Gellini, E. Giorgetti (Italy)

P2.311 Inhibition effect of oxygenated compounds on HDS and HYD reactions over NiCoMoS-supported catalysts: effect of the type of support
A. Mozhaev, A. Kokluhin, P. Nikulshin, A. Pimerzin (Russia)

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G. Ozsacmaci, C. Cakanyildirim, M. Guru (Turkey)

P2.313 Multifunctional Ni/HBEA catalysts for HDO/selective cracking
S. Abate, G. Giorgianni, P. Lanzafame, S. Perathoner, G. Centi (Italy)

P2.314 Biocatalytic asymmetric hydrogen-borrowing cascades for the sustainable manufacture of chemical products
T. Knaus, W. Böhmer, V. Tseliou, N.J. Turner*, N.S. Scrutton*, M. Breuer, L.D. Humphreys*, F.G. Mutti** (The Netherlands, *United Kingdom, ** Germany)

P3.1 Stable electride and nano-alloy as selectivity regulators for hydrogenation reactions of unsaturated aldehydes
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P3.2 Unique nanocages of $12CaO•7Al_2O_3$ boost heterolytic hydrogen activation and selective hydrogenation of heteroarenes over ruthenium catalyst
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M. Ammoury, B. Katryniok, S. Heyte, S. Paul, F. Dumeignil, M. Capron, G. Pomalaza, K. Shimizu* (France, *Japan)

P3.5 Deactivation of a microzeolite-based Mo/HZSM-5 catalyst by external coke formation in the non-oxidative methane deydroaromatization at 1073 K
Q. Zhang, Y. Song*, Y. Zhang, K. Matsuoka*, Z. Zhang* (China, *Japan)

P3.6 Lanthanum as a promoter in Ni/Al_2O_3 onto cordierite monoliths for the ODE reaction
P. Brussino, J.P. Bortolozzi, E.D. Banús, M.A. Ulla (Argentina)

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R. Wang, X. Xiang (China)

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P3.9 Fast, solvent-free and highly enantioselective fluorination of β-keto esters catalyzed by chiral copper complexes in a ball mill
Y. Wang, H. Wang, X. Du, A. Xia, Z. Xu, D. Xu (China)

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P. Verma, Y. Kuwahara, K. Mori, H. Yamashita (Japan)

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P3.12 Preparation of thickness-controlled TiO_2 photocatalysts for effective nitrogen doping to provide visible light response
T. Yoshida, S. Niimi, M. Yamamoto, A. Ozawa, S. Yagi (Japan)

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S. Khameneh Asl, A. Khademi, S. Asl (Iran)

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N.S. Genz, T. Ressler (Germany)

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T. Kojima, S. Kameoka, A.-P. Tsai (Japan)

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T. Toyao, S.M.A.H. Siddiki, K. Shimizu (Japan)

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D. Vogelsang, J. Dreimann, D. Wenzel, A.J. Vorholt (Germany)

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H. Ye, Y. Ji, Q. Wang, C. Chen, G. Wang (China)

P3.22 MoO_3-based plasmonic catalysts: exceptional localized surface plasmon resonance and visible light-enhanced catalytic reactions
H. Chen, M. Wen, Y. Kuwahara, K. Mori, H. Yamashita (Japan)

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P3.24 A novel technique for the recycling and recovery of lead from waste lead storage battery pastes
Y. Wang, D. Wang, W. Xu (China)

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W. Xu, X. Zhao, Y. Wang (China)

P3.26 Zeolites with controlled Al distribution. Synthetic approaches
V. Pashkova, K. Mlekodaj, P. Klein, M. Lemishka, J. Dedecek (Czech Republic)

P3.27 Asymmetric conjugate additions of 2-substituted benzofuran-3(2H)-ones to α, β-unsaturated ketones catalyzed by chiral copper complexes
D. Xu, Y. Wang, H. Wang, X. Du, A. Xia, Z. Xu (China)

P3.28 Following the Evolution of Supported PdO Nanoparticles using a Combined XAFS/DRIFTS method
E.K. Dann, E.K. Gibson, R.A. Catlow, P. Collier, T. Eralp, C. Hardacre, A. Kroner, A. Raj, A. Goguet, P. Wells (United Kingdom)

P3.29 Mechanistic study of the liquid phase conversion of ethanol to C_4-oxygenates over various supported Ir and Ru metal catalysts
S. Naito, S. Ishikawa, A. Yoshida, S. Hikichi (Japan)

P3.30 Synthesis of shape and size controlled nanoparticles using non-conventional approaches
M.P. Simplicio Grasina, S. Taylor, G. Hutchings, C. Hammond, M. Jones, N. Dimitratos (United Kingdom)

P3.31 Enhanced catalytic properties of titania nanotubular film
A.A. Rempel, I.A. Weinstein, A.A. Valeeva, A.S. Vokhmintsev, I.B. Dorosheva, E.A. Kozlova, D.S. Selishev (Russia)

P3.32 Cross-coupling reactions catalyzed by Pd and Cu nanoparticles
I.P. Beletskaya (Russia)

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A.S. Abel, A.D. Averin, M.V. Anokhin, S.P. Panchenko, M.N. Feofanov, I.P. Beletskaya (Russia)

P3.34 Isomerization of glucose to fructose over Ga-zeolite
D. Sutarma, M. Conte (United Kingdom)

P3.35 Immobilized chiral organocatalysts, Lewis and Brønstedt acids for enantioselective addition reactions
A.D. Averin, M.V. Anokhin, V.G. Desyatkin, A.A. Guryev, E.A. Tarasenko, I.P. Beletskaya (Russia)

P3.36 Study in SCR DeNO$_x$ performance of activated coke modified by MnO_x loading
J. Miao, W. Yu, J. Wang, J. Chen (China)

P3.37 Aggregation behavior of Pt nanoparticles supported on HOPG
K. Shiino, T. Miyao, H. Uchida, A. Iiyama, K. Higashiyama (Japan)

P3.38 Adding of Ag to CuO-ZrO_2 catalysts promotes CO_2 hydrogenation to methanol
S. Tada, K. Kiyota, R. Hayashi, F. Watanabe, N. Shimoda, A. Igarashi, S. Satokawa (Japan)

P3.39 Design of carbon-supported single-site Co catalyst using Co(salen) complex
K. Nakatsuka, T. Yoshii, Y. Kuwahara, K. Mori, H. Yamashita (Japan)

P3.40 Catalytic and structural studies of mixed silver-copper oxides
D.A. Svintsitskiy, E.M. Slavinskaya, T.Yu. Kardash, O.A. Stonkus, T.I. Izaak, S.V. Koscheev, A.I. Boronin (Russia)

P3.41 Development of a kinetic model for the steam reforming of propane over Ni/Co-MgAl@SiC
M. Park, M. Son, H. Hong, K.S. Park, J.W. Bae (Korea)

P3.42 Photocatalytic conversion of CO_2 using $A_2KTa_5O_{15}$ (A = Sr, Ba) fabricated by a flux method
S. Yoshizawa, K. Teramura, H. Asakura, S. Hosokawa, T. Tanaka (Japan)

P3.43 Catalytic activity for oxidation of thioanisole over copper(II)-terpy complexes encapsulated into supercages of zeolite
S. Yamaguchi, A. Suzuki, M. Togawa, H. Yahiro (Japan)

P3.44 Hydro-isomerization of n-hexane over fluoridation-route prepared hierarchical micro-mesoporous zeolites
D. Kaucky, J. Pastvova, P. Klein, J. Moravkova, J. Rathousky, E. Tabor, P. Sazama (Czech Republic)

P3.45 Hybrid NH_2-silica monolith as support for biocatalysis in flow: leveraging on a better control of the aminopropyl dispersion
L. van den Biggelaar, P. Soumillion, D. Debecker (Belgium)

P3.46 Metal nanoparticles incorporated in porous materials for selective catalysis
J. Mielby, F. Goodarzi, K. Hauberg Rasmussen, R. Pulikkal Thumbayil, S. Kegnaes (Denmark)

P3.47 Structure-activity relationships in ZrO_2 catalysts for Meerwein-Ponndorf-Verley reactions
F. Gonell, M. Boronat, A. Corma (Spain)

P3.48 Glycerol oxidation over Pt-Cu catalysts supported on H-ZSM-5
C. Detoni, B.A. Lima, A.R.P. da Silva, M.M.V.M. Souza (Brazil)

P3.49 MnO_x phase identification with temperature programmed reactions
N. Cibura, S. Ristig, J. Strunk (Germany)

P3.50 Mechanistic analysis of total CH_4 oxidation over Pd/CeO_2 materials by temporal analysis of products with isotopic tracers
V.A. Kondratenko, D. Seeburg, S. Kreft, S. Wohlrab, E.V. Kondratenko (Germany)

P3.51 Combined neutron and simulation studies of the dynamics of hydrocarbons confined in mesoporous materials
D. Dervin, C. Hardacre, C.R. Catlow (United Kingdom)

P3.52 Highly efficient NO_x purification in alternating lean/rich atmospheres over $Pt/BaO/CeO_2$ catalysts
Y. Zhang, Y. Yu, H. He (China)

P3.53 Highly selective one-step dehydration, decarboxylation and hydrogenation of citric acid to methylsuccinic acid
J. Verduyckt, D. De Vos (Belgium)

P3.54 In-situ observation of the formation and reactivity of nitrates on Cu(II) sites in copper substituted CHA zeolites
A. Godiksen, S.B. Rasmussen, P.N.R. Vennestrøm, S. Mossin (Denmark)

P3.55 Crystallite growth kinetics of nano-tungsten carbide catalysts
C. Wang, P. Bretzler, K. Köhler (Germany)

P3.56 Novel Ag supported metal nanoparticle catalysts for the oxidation of aryl hydrocarbons to aryl ketones
P. Singh, J. Bradley, N. Sano, P. Cumpson, J. Rabeah*, A. Brückner*, X. Liu, M. Conte** (United Kingdom, *Germany, **China)

P3.57 Synthesis of pharmaceuticals, fine and speciality chemicals using heterogeneous catalysts: effect of acidity, structures and metal modifications
N. Kumar, P. Mäki-Arvela, M. Stekrova, A. Torozova, K. Eränen, K.P. Volcho, N.F. Salakhutdinov, D.Yu. Murzin (Finland)

P3.58 Neural network analyses of literature on dry reforming of methane over Ni catalysts
A.N. Sener, M.E. Günay, R. Yıldırım (Turkey)

P3.59 Controllable reconstruction of sintered Au catalysts
X. Duan, Y. Zhao, Y. Yan, L. Ye, Y. Yuan (China)

P3.60 Asymmetric Michael-addition catalyzed by natural amino acids on the surface of inorganic oxides
G. Szollosi, D. Gombköto, A. Mogyorós, T. Gyori (Hungary)

P3.61 P-doped nanomesh graphene with high-surface-area as an efficient metal-free catalyst for aerobic oxidative coupling of amines
F. Yang, Y. Li (China)

P3.62 Soot oxidation on manganese oxide catalysts in gasoline exhaust
C. Singer, M. Nitzer-Noski, S. Kureti (Germany)

P3.63 Asymmetric Michael-additions using homogeneous and heterogenized chiral 1,2-diamine derivatives
V. Kozma, G. Szollosi (Hungary)

P3.64 Chitosan, a natural ligand for highly enantioselective Ru catalyzed transfer hydrogenation of ketones
V.J. Kolcsár, G. Szollosi (Hungary)

P3.65 Selective synthesis of fluorinated aromatic alcohol derivatives via six/seven-membered palladacycle assisted by removable directing group
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P3.66 Surface diffusion of benzene and cyclohexane on raney nickel measured by quasielastic neutron scattering
I. Silverwood, J. Armstrong (United Kingdom)

P3.68 Porous nanomaterials based on copper complexes with 1,10-phenanthrolines for sustainable catalysis
A. Lemeune, S. Brandès, A. Mitrofanov*, J. Michalak, I. Beletskaya* (France, *Russia)

P3.69 Photochemically switchable catalysts for surface relief generation on polyimides without development process
T. Yamashita, A. Kobayashi, F. Kodera (Japan)

P3.70 Optimization of melt infiltration parameters for the preparation of highly active Co/SBA-15 catalysts for the hydrogenation of cinnamaldehyde
C. Ciotonea°,*, B. Dragoi°, E. Marceau*, E. Dumitriu°, S. Petit*, A. Ungureanu°, S. Royerb* (°Romania, *France)

P3.71 Separation of p-xylene from C_8-aromatics with metal-organic framework
M. Okada, A. Yonezawa, M. Sano, T. Suzuki, T. Miyake (Japan)

P3.72 Hydrogen production from water using catalytic reaction in an electric field
K. Ogino, S. Ogo, W. Kondo, M. Takeyama, K. Kojima, Y. Sekine (Japan)

P3.73 Low temperature oxidative coupling of methane in electric field over Ce-W-O oxide catalysts
A. Sato, S. Ogo, K. Iwasaki, Y. Sekine (Japan)

P3.74 Operando analysis of methane steam reforming at low temperature in an electric field
R. Inagaki, S. Okada, R. Manabe, S. Ogo, Y. Sekine (Japan)

P3.75 Selectivity and lifetime effects in zeolite-catalysed Baeyer-Villiger oxidation
K. Yakabi, K. Milne, A. Buchard, C. Hammond (United Kingdom)

P3.76 Efficient catalysts for hydrogen borrowing C-C bond formation reaction
Y. Hori, M. Saito, T. Ishikawa, C. Suruga, Y. Akabayashi, T. Myoda, K. Toeda (Japan)

P3.77 Role of Lewis and Brönsted acid sites in the resorcinol tert-butylation catalyzed by heteropolyacid-based catalysts
C. Pezzotta, E.M. Gaigneaux (Belgium)

P3.78 Dry reforming of methane without coke formation over indium promoted Ni/SiO_2 catalysts
F. Somodi, J. Károlyi, M. Németh, A. Horváth (Hungary)

P3.79 Ni-Cu/γ-Al_2O_3 As non-PGM three-way catalysts with thermally stability
H. Yoshida, H. Oyama, S. Hinokuma, M. Machida (Japan)

P3.80 Synthesis of gamma-valerolactone using polymeric catalysts based on hypercrosslinked polystyrene
L.Zh. Nikoshvili, I.I. Protsenko, D.A. Abusuek, A.O. Zaykovskaya, A.V. Bykov, V.G. Matveeva, E.M. Sulman (Russia)

P3.81 Possibility of stabilization of catalytically active Pd clusters in hypercrosslinked polystyrene: influence of hydrogen adsorption
A.V. Bykov, L.Zh. Nikoshvili, V.G. Matveeva, E.M. Sulman, L. Kiwi-Minsker* (Russia, *Switzerland)

P3.82 Liquid-phase catalytic hydrogenation of nitrobenzene to aniline in the presence of Ru catalyst
E.M. Sulman, I.Yu. Tiamina, V.G. Matveeva, A.E. Filatova, V.Yu. Doluda, M.G. Sulman (Russia)

P3.83 Mono- and bimetallic palladium- and gold-containing nanoparticulate catalysts of Suzuki cross-coupling based on hypercrosslinked polystyrene
N.A. Nemygina, E.V. Semenova, L.Zh. Nikoshvili, V.G. Matveeva, M.G. Sulman, L. Kiwi-Minsker*, E.M. Sulman (Russia, *Switzerland)

P3.84 Protection of supported Pd catalyst by a mesoporous silica layer
T. Haynes, V. Dubois, S. Hermans (Belgium)

P3.85 New basic catalysts $LiAlO_x$ prepared by mechanochemical route for aldol condensation of furfural with acetone
L.N. Stepanova, O.B. Belskaya, A.V. Vasilevich, R.M. Mironenko, V.A. Likholobov (Russia)

P3.86 Selective synthesis of 2,5-diformylfuran by TEMPO/halogen mediated electrooxidation of 5-hydroxymethylfurfural
N. Smirnova, D. Leontyeva, V. Kashparova, V. Klushin, V. Chernyshev, V. Ananikov (Russia)

P3.87 Aqueous-phase reforming of short-chain alcohols over nickel-based catalysts
M. Stekrova, I. Coronado, M. Reinikainen, P. Simell, J. Lehtonen, R. Karinen (Finland)

P3.88 Water tolerance of precipitable silver compound catalysts for H_2-C_3H_6-SCR of NOx
G. Xu, Y. Yu, H. He (China)

P3.89 New route to fabricate defective nanocarbon catalysts with metal oxides for oxidative dehydrogenation of n-butane
Y Zhang, H. Liu, D. Su (China)

P3.90 On the Mn promoted synthesis of higher alcohols over Cu derived ternary catalysts
E. Liakakou, M. Isaacs*, K. Wilson*, A. Lee*, E. Heracleous (Greece, *United Kingdom)

P3.91 Novel V and Mo oxide shell / Fe_2O_3-core selective oxidation catalysts
P. Hellier, M. Bowker (United Kingdom)

P3.92 Ni-, Pd- catalyzed allylation of norbornadiene as a way for creating C-C bonds in the strained carbocyclic compounds
S. Durakov, V.R. Flid (Russia)

P3.93 MoVSbNb oxide catalysts prepared by the slurry method: effect of the pH on the catalytic properties for the ODH of ethane.
H. Armendariz-Herrera, R. Quintana-Solórzano, M.L. Guzmán-Castillo, A. Rodríguez-Hernández, J.M. López-Nieto*, E. Maya-Flores, J.S. Valente (Mexico, *Spain)

P3.94 $NiO-Ni(OH)_2$ composites for high performance supercapacitors and electrocatalysts
F. Wen, J. Zhu (China)

P3.95 Promotional role of noble metals on CO and VOCs oxidation activity of alumina supported Cu-Mn mixed oxide catalysts
T. Tabakova, K. Ivanov, E. Kolentsova, D. Dimitrov, Y. Karakirova, P. Petrova, M. Manzoli*, A.M. Venezia* (Bulgaria, *Italy)

P3.96 Investigating the effects of Mn content of Ce-Mn oxide catalysts for the total oxidation of propane and naphthalene
P.M. Shah, D.J. Morgan, S.H. Taylor (United Kingdom)

P3.97 On the mechanism of electrocatalytic CO_2 reduction by Ru complexes. The role of electron donation
B.M. Szyja (Poland)

P3.98 Understanding the role of the different phases in the performance of multi component BiMo based oxide materials for selective dehydrogenation
P. Gómez, P. Sancho, M.E. Rivas Velasco, E. Bilbé, S. Poulston, M. Gilhespy, X. Baucherel, P. McGuire (United Kingdom)

P3.99 Conductivity of Cu/ZnO catalysts studied contact-free and in situ in the reverse water-gas shift reaction
E.H. Wolf, M.-M. Millet, E. Frei, T. Risse, R. Schlögl, S. Cap (Germany)

P3.100 A new polystyrene-supported diphenylamine-linked bis(oxazoline) complex for asymmetric fluorination in continuous flow
Y. Wang, Y. Jiang, X. Du, A. Xia, Z. Xu, D. Xu (China)

P3.101 A mechanistic study of propane dehydrogenation over V_2O_5/TiO_2 catalysts
V. Kaichev, A.A. Saraev, Yu.A. Chesalov, O.A. Bulavchenko (Russia)

P3.102 Photocatalytic coupling of formaldehyde to ethylene glycol over bismuth vanadate with controllable facets and cocatalysts
S. Xie, Z. Shen, H. Zhang, J. Cheng, Q. Zhang, Y. Wang (China)

P3.103 Role of surface hydroxyl in copper catalyzed hydrogenation of carbonyl compounds
J. De Vrieze, J. Thybaut, M. Saeys (Belgium)

P3.104 Pt/TiO_2 hybrid catalysts for the sp^3C-sp^3C cross-coupling reaction between cyclohexane and tetrahydrofuran
A. Tyagi, A. Yamamoto, H. Yoshida (Japan)

P3.105 Microkinetic modeling of benzyl alcohol oxidation on carbon supported Pd and AuPd nanoparticles
A. Villa, I. Rossetti, L. Prati, A. Savara* (Italy, *USA)

P3.106 Revelation of low temperature catalyst-substrate interactions in the Beckmann rearrangement using neutron spectroscopy
S. Chapman, A.J. O'Malley, S.F. Parker, R. Raja (United Kingdom)

P3.107 Controlled dual release of bone morphogenic protein-2 and insulin-like growth factor-1 using catechol-functionalized adhesive polymer nanoparticles on microgrooved titanium enhances the osteogenic activity of human mesenchymal stem cells
S.W. Lee (Korea)

P3.108 Increasing the catalytic activity of Zn-Co double metal cyanides (DMCs) by dispersion onto SiO_2
C. Marquez, M. Rivera-Torrente*, P.P. Paalanen*, B.M. Weckhuysen*, F.G. Cirujano, D. De Vos, T. De Baerdemaeker (Belgium, *The Netherlands*)

P3.109 Mechanism of isopropanol dehydration on γ-Al_2O_3: experiments and DFT for a predictive kinetic model
K. Larmier, C. Chizallet, A. Nicolle, S. Maury, N. Cadran, J. Abboud, A.-F. Lamic-Humblot, E. Marceau, H. Lauron-Pernot (France)

P3.110 Quantum chemical simulation of CO oxidation on phosphine-protected gold clusters
M. Golosnaya, D. Pichugina, N. Kuz'menko (Russia)

P3.111 The redox properties of $Rh_xCe_{1-x}O_{2-\delta}$ solid solution in CO oxidation reaction
L.S. Kibis, T.Yu. Kardash, E.A. Derevyannikova, E.M. Slavinskaya, O.A. Stonkus, A.I. Boronin (Russia)

P3.112 Electrocarboxylation of dienes with CO_2: an extensive study of reaction mechanism and kinetics on Ni electrocatalysts
M. Wu, S. Steinmann*, C. Michel*, S. Streiff, A. Liebens, P. Sautet*, R. Schwiedernoch (China, *France)

P3.113 Regeneration of platinum dehydrogenation catalysts in oxygen-containing chlorine-free media
Yu.K. Gulyaeva, A.V. Romanenko, D.Yu. Ermakov, Yu.V. Dubinin, M.Yu. Lebedev, I.N. Voropaev, M.V. Nikulin, V.A. Yakovlev (Russia)

P3.114 The two faces of pseudo-bridging silanols: isopropanol catalytic dehydration on amorphous silica-alumina by Brønsted and Lewis acidic functions
K. Larmier, C. Chizallet, S. Maury, N. Cadran, J. Abboud, A.-F. Lamic-Humblot, E. Marceau, H. Lauron-Pernot (France)

P3.115 Low temperature dry reforming of methane over Ni/ZrO_2 catalysts: details of the beneficial sodium promotion
A. Horváth, F. Somodi, J. Károlyi, D. Srankó, M. Németh, G. Sáfrán (Hungary)

P3.116 FePt nanoparticles: with wet chemical preparation method towards ferromagnetic $L1_0$ phase as possible catalyst component
A. Horváth, F. Somodi, A. Deák, G. Sáfrán (Hungary)

P3.117 Study on reaction mechanism of benzene hydroxylation by heterogeneous metal complex catalysts
A. Okemoto, A. Utsunomiya, K. Taniya, Y. Ichihashi, N. Satoru (Japan)

P3.118 Synthesis and characterization of Ga-substituted magnesioferrites for the catalytic decomposition of ammonia
D. Rein, K. Friedel Ortega, E. Bill, C. Weidenthaler, M. Behrens (Germany)

P3.119 A new ultra-high vacuum system including a high pressure cell for in situ sum frequency generation spectroscopy
M. Roiaz, C. Rameshan, G. Rupprechter (Austria)

P3.120 NO oxidative activation on (Fe, Cu)-zeolite + BaO/Al_2O_3 combined systems: self-inhibition and free oxidation regimes
T. Selleri, F. Gramigni, I. Nova, E. Tronconi (Italy)

P3.121 Support effect on selective HDS of FCC gasoline: spectroscopic and kinetic approaches
F. Caron, A. Daundin, A.-S. Gay, M. Rivallan, P. Raybaud, S. Bordiga* (France, *Italy)

P3.122 Study of CO solubility for liquid phase methanol synthesis
A.A. Stepacheva, M.E. Markova, A.V. Gavrilenko, V.G. Matveeva, M.G. Sulman, A.I. Sidorov, E.M. Sulman (Russia)

P3.123 Preparation and characterization of sinter-resistant $Rh\text{-}ReO_x/SiO_2$ (Re = Ce and Sm) catalysts for catalytic partial oxidation of methane to syngas
W. Weng, F. Zheng, Q. Li, Y. Xie, Y. Zheng, C. Huang, H. Wan (China)

P3.124 Methane activation on Cu-modified ZSM-5 zeolites containing different Cu-sites
A.A. Gabrienko, S.S. Arzumanov, S.A. Yashnik, A.G. Stepanov (Russia)

P3.125 From homogeneous to heterogeneous: immobilization of Ir based complexes and their utilization in SABRE process
L.M. Kovtunova, V.I. Bukhtiyarov, B.M. Goodson, E.Y. Chekmenev, K.V. Kovtunov*, A.V. Bukhtiyarov (USA, *Russia)

P3.126 Selective heterogeneous hydrogenation investigations using parahydrogen
K. Kovtunov, O. Salnikov, D. Burueva, A. Romanov, V. Bukhtiyarov, A. Fedorov*, C. Copéret*, I. Koptyug (Russia, *Switzerland)

P3.127 Graphene film-supported oriented 2.0.0 and 1.1.1 nanoplatelets as very efficient catalysts for coupling reactions
A. Primo, I. Esteve-Adell, S.M. Coman*, N. Candu*, A. Dhakshinamoorthy, M. Alvaro, V.I. Parvulescu*, H. Garcia (Spain, Romania)

P3.128 Vapour phase carbonylation of dimethoxymethane to methylmethoxyacetate over solid acids: effect of acidity on catalytic activity
S.D. Badmaev, A.A. Pechenkin, E.A. Paukshtis, V.D. Belyaev, V.A. Sobyanin (Russia)

P3.129 Platinum catalysts for hydroaddition reactions to alkynes: from active species search to catalyst design
M.A. Rivero-Crespo, A. Leyva-Perez, A. Corma (Spain)

P3.130 Preparation of nanostructured catalysts by grafting metal alkoxides on the surface of oxides supports
E. Santacesaria (Italy)

P3.131 Dinuclear rhodium(I) pre-catalysts: improved synthesis and applications
S. Möller, A. Meißner, A. Koenig, J. Rueger, H.-J. Drexler, D. Heller (Germany)

P3.132 Supported crystalline monodisperse Ga_2O_3 nanoparticles with tunable size for the catalytic dehydrogenation of propane
P. Castro-Fernández, A. Fedorov, C.R. Müller (Switzerland)

P3.133 Organocatalytic Michael addition/I_2-mediated cyclization: synthesis of spiropyrazolones from 1, 3-dicarbonyl compounds and unsaturated pyrazolones
A.-B. Xia, X.-H. Du, Z.-Y. Xu, Y.-F. Wang, D.-Q. Xu (China)

P3.134 One-pot asymmetric synthesis of spiro[dihydrofurocoumarin/pyrozolone] scaffolds by Michael addition/I_2-mediated cyclization sequence
A.-B. Xia, X.-H. Du, Z.-Y. Xu, Y.-F. Wang, D.-Q. Xu (China)

P3.135 Looking at the essence of highly dispersed platinum hydrogenation catalysts: spectroscopic detection of hydride species
M. Carosso, A. Lazzarini, A. Piovano*, R. Pellegrini, S. Morandi, M. Manzoli, M. Jimenez Ruiz*, C. Lamberti, E. Groppo (Italy, *France)

P3.136 Operando Turbo-XAS study of Pt-based diesel oxidation catalysts during rapid transient temperature driving cycles
T.L. Sheppard, F. Benzi, D.E. Doronkin, A. Gänzler, J.-D. Grunwaldt (Germany)

P3.137 The origin of improved thermal stability of Pt/CeO_2 compared to CeO_2
J. Lee, Y.S. Ryou, X. Chan, T.J. Kim, D.H. Kim (Korea)

P3.138 Roles of platinum in catalytic activity of Ru-Pt-Sn ternary metallic catalysts for hydrogenation of acetic acid
H. Takado, Y. Matsumoto, A. Okemoto, K. Taniya, Y. Ichihashi, S. Nishiyama (Japan)

P3.139 Modeling promoter effects in iron-based Fischer-Tropsch catalysts
M.J. Louwerse, K.P. de Jong (The Netherlands)

P3.140 Steam reforming of dimethyl ether over bifunctional catalyst using hierarchical zeolite
Y. Tanaka, N. Shimoda, S. Satokawa (Japan)

P3.141 Pt/CeO_2 catalysts prepared by laser ablation
A.I. Stadnichenko, V.V. Muravyev, E.M. Slavinskaya, V.A. Svetlichniy, I.N. Lapin, O.A. Stonkus, T.Yu. Kardash, A.I. Boronin (Russia)

P3.142 NHPI-catalyzed cumene oxidation in ILs as solvents
G. Dobras, B. Orlinska (Poland)

P3.143 Exploring the reasons at a molecular level behind the peculiar performances of a Cr/Al_2O_3 Phillips catalyst
G.A. Martino, C. Barzan, A. Piovano, A.A. Damin, E. Groppo (Italy)

P3.144 UV-formed peroxide species - Key intermediates in photocatalytic gas-solid oxidation on TiO_2
I. Subbotina, D. Barsukov (Russia)

P3.145 Kinetic study of the dry reforming of methane using monolithic Ni-Ru structured catalysts
I. Reyero, V. Garcilaso, A. Álvarez, L.M. Martínez, F. Bimbela, M.A. Centeno, L.M. Gandía (Spain)

P3.146 Ceria-zirconia supported catalysts for air pollution control: gold vs. platinum
P. Topka (Czech Republic)

P3.147 Influence of operative parameters on the washcoating of open cell foams by spin-coating
R. Balzarotti, C. Cristiani, G. Groppi, E. Tronconi (Italy)

P3.148 Preferential oxidation of carbon monoxide on $Ag-Ce/SiO_2$ catalysts
S. Todorova, H. Kolev, R. Stoyanova, Y. Karakirova, J.P. Holgado*, A. Caballero* (Bulgaria, *Spain)

P3.149 Understanding the mechanism of partial oxidation of methane over Ni/CeO_2 catalysts
V. La Parola, G. Pantaleo, R. Bal*, A.M. Venezia (Italy, *India)

P3.150 Insights into the formation of Cr sites active in ethylene polymerization on Cr^{VI}/SiO_2 Phillips catalyst
C. Barzan, A. Piovano, L. Braglia, G. Martino, A. Damin, S. Bordiga, E. Groppo (Italy)

P3.152 Preparation of benzotriazines through a Co-catalysed C-H functionalization approach, using dioxazolones as the key coupling partner
P.C. Chirila, C.J. Whiteoak, A. Hamilton (United Kingdom)

P3.153 Space and time resolved investigation of reactions along the catalyst bed by operando X-ray absorption spectroscopy
D. Gianolio, S. Parry, G. Cibin, J.D. Holbrey, M.A. Newton, K.K. Hii, K. Hellgardt (United Kingdom)

P3.154 XAS study of CO_2-induced deactivation of nanostructure Cu_xO/CeO_2 catalysts for CO-PROX
M. Monte, D. Motta-Meira, G. Agostini, J.C. Conesa*, A. Martínez-Arias*** (France, *Spain, **Germany)

P3.155 Mesoporous silica-supported Pd complex for allylation reactions with allylic alcohol
K. Motokura, M. Ikeda, M. Nambo, W.-J. Chun, K. Nakajima, S. Tanaka (Japan)

P3.156 Concerted catalysis by immobilized Rh complex and tertiary amine on a same silica surface for efficient hydrosilylation of olefins
K. Motokura, K. Maeda, W.-J. Chun (Japan)

P3.157 Water gas shift reaction on ionic conductor modified platinum catalyst
N. García-Moncada, L. Jurado, A. Beretta*, F. Romero-Sarria, G. Groppi*, J.A. Odriozola (Spain, *Italy)

P3.158 Enhanced performances of platinum nanoparticles supported on tunable macroporous-mesoporous supports for the removal of nitrate in ground water
A. Zaki, S. Casale, G. Stoclet, C. Lancelot, J.P. Dacquin, P. Granger (France)

P3.159 Basic catalysts in ethanol upgrading to n-butanol
G. Innocenti, M. Siwek, J. Velasquez Ochoa, F. Cavani (Italy)

P3.160 A new catalyst obtained by utilization of a ferroalloy sludge
Zh. Shomanova, R. Safarov, Yu. Nosenko, A. Zharmagambetova, Zh. Tashmukhambetova (Kazakhstan)

P3.161 The effect of Co particle size and time on stream on the deactivation of $Co/\gamma\text{-}Al_2O_3$ in CO hydrogenation studied by SSITKA and DRIFTS techniques
K.C. Petallidou, A.M. Efstathiou (Cyprus)

P3.162 Sintering prevention of the Pt nanoparticles on SiO_2 modified Pt/Al_2O_3 catalyst
Y. Xi, J. Xiao, W. Yan, X. Lin (China)

P3.163 XPS study of palladium catalysts supported on N-doped carbon nanomaterials
D.A. Svintsitskiy, A.J. Boronin, A.S. Chichkan, V.V. Chesnokov, N.K. Eremenko, O.Yu. Podyacheva, Z.R. Ismagilov (Russia)

P3.164 Computational insight into initiation mechanisms for olefin metathesis over MoO_x/SiO_2 and WO_x/SiO_2 catalysts
J. Handzlik, K. Kurleto, M. Gierada (Poland)

P3.165 Effect of reactor configuration in synergy between DBD plasma and Pd/alumina catalyst for non-oxidative coupling of methane
M. Taheraslani, L. Lefferts (The Netherlands)

P3.166 Revealing Cu-speciation in the Cu-CHA catalyst under SCR conditions by operando X-ray absorption and emission spectroscopies
K.A. Lomachenko, E. Borfecchia*, G. Berlier*, C. Negri*, C. Lamberti, H. Falsig, P. Beato**, S. Bordiga*** (Russia, *Italy, **Denmark)

P3.167 Self-aldolization of n-butanal over ZrBEA zeolites
P.A. Kots, A.V. Zabilskaya, I.I. Ivanova (Russia)

P3.168 Substrate dependent reactivity of α,β-unsaturated carbonyl compounds in cobalt-catalysed C-H functionalization protocols with benzamides
C.J. Whiteoak, P. Chirila, A. Dirjal, J. Adams, A. Hamilton (United Kingdom)

P3.169 Enlightening and correcting mistakes currently made in heteropolyacid-based catalysis thanks to operando Raman
J. Schnee, E.M. Gaigneaux (Belgium)

P3.170 Self-encapsulation of heteropolyacids in a 3D-ordered coke framework for leaching-free catalysis
V.L. Sushkevich, P.A. Kots, I.I. Ivanova, M. Marinova, S. Moldovan*, O. Ersen*, V.V. Ordomsky** (Russia, *France, **China)

P3.171 Synthesis and characterization of Pd-M (Co, Mn, Zn) catalysts for formic acid electrooxidation
H. Demir Kivrak, B. Ulas, N. Aktas (Turkey)

P3.172 Bio-butanol dehydration via zeolites as a missing link between classic and bio-refineries
D. Gunst, K. Alexopoulos, M.F. Reyniers, A. Verberckmoes (Belgium)

P3.173 Catalytic deep oxidation on multicomponent thermostable catalysts
Z. Zheksenbaeva, S. Tungatarova, T. Baizhumanova, R. Sarsenova, K. Kassymkan, M. Zhumabek (Kazakhstan)

P3.174 Water adsorption on B-Nb2O5 (010) surface
H. De Abreu, M. Bastos, H. Duarte (Brazil)

P3.175 Structural factors controlling the partial hydrogenation selectivity on Ir/γ·Al_2O_3 coated with ionic liquids: support effect vs ligand effect
M. Babucci, A. Uzun (Turkey)

P3.176 Oxidation of hydrocarbons by hydrogen peroxide catalyzed by copper(II) coordination polymers
D. Mandelli, W.A. Carvalho, P.T. Paiva, A.M. Kirillov*, M.V. Kirillova* (Brazil, *Portugal)

P3.177 Direct cross-coupling between cyclohexane and pyridine over metal loaded titanium oxide photocatalyst
S. Naniwa, T. Ohara, A. Yamamoto, H. Yoshida (Japan)

P3.178 Conversion of ethanol to propene: preparation of long life In_2O_3 catalysts with adjusting pH values in the preparation of indium hydroxide
K. Shimano, M. Murakami, M. Tanaka, M. Iwamoto (Japan)

P3.179 Cu and Pd supported on carbon for hydrogen production from formic acid: effect of doping the support with nitrogen
D.A. Bulushev, V.I. Sobolev, A.L. Chuvilin*, S.G. Stolyarova, I.P. Asanov, M. Zacharska, A.V. Okotrub, L.G. Bulusheva** (Russia, *Spain, **Ireland)

P3.180 Promotion effect of a tiny amount of platinum on the activity of Ni/TiO_2 catalyst for the selective hydrogenation
K. Noguchi, H. Miura, T. Shishido (Japan)

P3.181 Mechanism study of gas-phase oxidation of benzene to phenol over Cu/HZSM-5 catalysts
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