



4th Asia Pacific Congress on Catalysis

APCAT 4
6 to 8 December 2006
Singapore

Organized by



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4th ASIA PACIFIC CONGRESS ON CATALYSIS (APCAT 4)

The Asia Pacific Congress on Catalysis (APCAT) is held once every three years. The first three events were held in Korea (1997), Australia (2000) and China (2003). The next congress, APCAT 4, will take place from 6 to 8 December 2006 in Singapore. The event is organized by the School of Chemical and Biomedical Engineering, Nanyang Technological University (NTU).

The key objective of the APCAT 4 is to provide opportunities for academics, researchers and industrialists, particularly from the Asia Pacific region, to interact, exchange ideas, discuss current developments and chart possible collaborations. Through these close interactions, it is aimed to bring the participants up to date with latest technological trends in catalysis.

CONFERENCE TOPICS

Catalysis plays an important role in the chemical and biomedical industries. The demands for new catalysts, new processes, new products and new ideas are growing at an exponential rate in the Asia Pacific region where the industries are growing rapidly. The below areas have been identified as key topics in the Congress:

- **Nanotechnology in catalysis**
Novel materials
Catalyst synthesis & characterization
Surface science
- **Catalytic reaction engineering**
Novel reactor design
Reaction kinetics
Solventless reaction
- **Biocatalysis**
Biotransformation
Bio-fuel cell
Biocatalysis in fermentation
Biocatalyst design
- **Theoretical catalysis**
Molecular simulation
Computational studies
- **Catalysis for fine chemicals & pharmaceuticals**
- **Catalysis for energy, fuels & environment**
Desulfurization & denitrogenation
Environmental catalysis
Gas to liquid (Fischer-Tropsch)
Selective catalytic oxidation
Hydrogenation / dehydrogenation
Biomass conversion
Alternative sources of hydrogen
Petroleum processing & fuel reforming
Fuel cell
Photocatalysis
Electrocatalysis

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Program at a Glance

6 December 2006 (Wednesday)		7 December 2006 (Thursday)		8 December 2006 (Friday)		
Time		Time		Time		
8:00	8:30	Registration				
8:30	9:00	Welcome				
9:00	9:45	PL1 Plenary presentation by Professor Aleix T. Bell		PL5 Plenary presentation by Professor Yasuhiro Iwasawa		
9:45	10:30	PL2 Plenary presentation by Professor Wayne Goodman		PL6 Plenary presentation by Professor Can Li		
10:30	11:00	Tea Break				Tea Break
11:00	11:30	Auditorium	LT 1	LT 2	LT 6	
11:30	12:40	A6 - K1	A1 - K1	A2 Oral Session 1	A5 Oral Session 1	
12:40	12:50	A6 Oral Session 1	A1 Oral Session 1	A2 Oral Session 1	A5 Oral Session 1	
12:50	14:10	Lunch @ Function Hall 1 / Function Hall 2 / Staff Club Function Hall				Lunch @ Function Hall 1 / Function Hall 2 / Staff Club Function Hall
14:10	14:40	A6 - K2	A1 Oral Session 2	A2 Oral Session 2	A5 - K1	
14:40	15:50	A6 Oral Session 2	A1 Oral Session 2	A2 Oral Session 2	A5 Oral Session 2	
15:50	16:00	A6 Oral Session 2	A5 - K1	A5 Oral Session 2	A5 Oral Session 2	
16:00	16:20	Tea Break				Tea Break
16:20	16:50	A6 Oral Session 3	A1 - K2	A2 Oral Session 3	A5 Oral Session 3	
16:50	18:20	A6 Oral Session 3	A1 Oral Session 3	A2 Oral Session 3	A5 Oral Session 3	
18:20	18:30	Welcome Reception @ Auditorium Foyer				
18:30	20:30	Poster Session 1 (A1, A2, A3 and A4)				
A1 - K1: Keynote presentation by Professor Miguel A. Banares A1 - K2: Keynote presentation by Professor Jason Qiu A5 - K1: Keynote presentation by Professor Andy Hor A6 - K1: Keynote presentation by Professor Chung-Yuan Mou A6 - K2: Keynote presentation by Professor Frits Dautzenberg		A1 - K3: Keynote presentation by Professor Piyasan Praserttham A2 - K1: Keynote presentation by Professor Jacob A. Moulijn A3 - K1: Keynote presentation by Professor Roger A. Sheldon A3 - K2: Keynote presentation by Professor Ikuo Fujii A7 - K1: Keynote presentation by Professor Chunshan Song		A1 - K4: Keynote presentation by Dr Fethi Kooli A6 - K3: Keynote presentation by Dr Ryoji Asahi A7 - K2: Keynote presentation by Professor Kang Li		
A1: Nanotechnology in catalysis A2: Catalytic reaction engineering		A3: Biocatalysis A4: Theoretical catalysis		A5: Catalysis for fine chemicals & pharmaceuticals A6: Catalysis for energy & fuels A7: Catalysis for environment		

ORAL PRESENTATIONS

Plenary		6 December 2006, Wednesday	
PL1	9:00 to 9:45	Identification of active sites for the selective oxidation of hydrocarbons deduced from studies of single-site catalysts Alexis T. Bell, <i>University of California, Berkeley (U.S.)</i>	
PL2	9:45 to 10:30	Structure-function relationships in catalysis by Au and Au alloys: from single crystals to nanoparticles D. Wayne Goodman, <i>Texas A&M University (U.S.)</i>	
Nanotechnology in Catalysis Keynote 1		6 December 2006, Wednesday LT 1	
A1-K1	11:00 to 11:30	Operando Raman Methodology: the combination of kinetic and structural information in a single experiment to understand catalytic operation Miguel A. Banares, <i>Instituto de Catalisis Petroleoquimica (Spain)</i>	
Nanotechnology in Catalysis Oral Session 1		6 December 2006, Wednesday LT 1	
A1-O1	11:30 to 11:50	IR chemiluminescence probe of CO₂ formed during CO oxidations on noble metal single-crystal surfaces K. Nakao, O. Watanabe, T. Sasaki, <i>University of Tsukuba (Japan)</i>	
A1-O2	11:50 to 12:10	A new method to characterize surface free energy of adsorption of LDOs by IGC Z.M. Ni, C.P. Fang, L.G. Wang, <i>Zhejiang University of Technology (China)</i>	
A1-O3	12:10 to 12:30	Xanes study of the susceptibility of nano-sized cobalt crystallites to oxidation during realistic FTS conditions A.M. Saib, <i>Sasol Technology (South Africa)</i> ; A. Borgna, <i>ICES (Singapore)</i> ; J. van de Loosdrecht, P.J. van Berge, <i>Sasol Technology (South Africa)</i> ; J.W. Niemantsverdriet, <i>TU Eindhoven (The Netherlands)</i>	
A1-O4	12:30 to 12:50	Effect of particle size on the phase transformation of TiO₂ studied by UV raman spectroscopy J. Zhang, Q. Xu, Z.C. Feng, C. Li, <i>Dalian Institute of Chemical Physics (China)</i>	
Catalytic Reaction Engineering Oral Session 1		6 December 2006, Wednesday LT 2	
A2-O1	11:00 to 11:20	Copper-based efficient catalysts for propylene epoxidation by molecular oxygen Y. Wang, H. Chu, W.M. Zhu, Q.H. Zhang, <i>Xiamen University (China)</i>	
A2-O2	11:20 to 11:40	V₂O₅ supported on MgO-coated SBA-15: catalysts for the oxidative dehydrogenation of n-butane W. Liu, C.T. Au, S.Y. Lai, <i>Hong Kong Baptist University (Hong Kong)</i> ; H.X. Dai, <i>Beijing University of Technology (China)</i>	
A2-O3	11:40 to 12:00	Pd/SO₄-ZrO₂ as an efficient catalyst for the selective oxidation of ethylene to acetaldehyde and acetic acid in the vapour phase Y. Kamiya, T. Hamada, W. Chu, T. Okuhara, <i>Hokkaido University (Japan)</i>	
A2-O4	12:00 to 12:20	2-propanol formation by partial oxidation of propane on Cu-Ta mixed oxide Y. Kagota, M. Toyota, T. Aida, <i>Tokyo Institute of Technology (Japan)</i>	
A2-O5	12:20 to 12:40	Gas phase epoxidation of propylene over Ag/TS-1 R.P. Wang, X.W. Guo, X.S. Wang, <i>Dalian University of Technology (China)</i>	
Catalysis for Fine Chemicals & Pharmaceuticals Oral Session 1		6 December 2006, Wednesday LT 6	
A5-O1	11:00 to 11:20	Nanoporous materials for the catalytic transformation of 1-adamantanol S.P. Elangovan, K. Inoue, T. Okubo, <i>The University of Tokyo (Japan)</i>	
A5-O2	11:20 to 11:40	The shape-selective alkylation of biphenyl over large pore zeolites Y. Sugii, A. Ito, H. Maekawa, R.K. Ahedi, S. Watanabe, C. Asaoka, S.K. Saha, S.A.R. Mulla, K. Komura, Y. Kubota, <i>Gifu University (Japan)</i>	
A5-O3	11:40 to 12:00	Study on copper-based catalyst for synthesis N,N'-di-(1,4-dimethyl pentyl)-p-phenylene diamine (4030) Z.D. Pan, Y.J. Ding, L. Yan, X.M. Li, H.Y. Luo, <i>Dalian Institute of Chemical Physics (China)</i>	
A5-O4	12:00 to 12:20	A new one-step methoxycarbonylation of thiophene with dimethyl carbonate S.B. Fan, J.P. Li, N. Zhao, X.Z. Wang, W. Wei, Y.H. Sun, <i>Shanxi Institute of Coal Chemistry (China)</i>	

A5-O5 12:20 to 12:40 **Synthesis of propylene oxide using in-situ hydrogen peroxide produced by H₂/O₂ non-equilibrium plasma**
J.L. Zhao, J.C. Zhou, J. Su, H.C. Guo, X.S. Wang, M.X. Guo, W. M. Gong, *Dalian University of Technology (China)*

**Catalysis for Energy & Fuels
Keynote 1**

**6 December 2006, Wednesday
Auditorium**

A6-K1 11:00 to 11:30 **Alkane isomerization over promoted Zirconia-based catalysts**
C.Y. Mou, *National Taiwan University (Taiwan)*

**Catalysis for Energy & Fuels
Oral Session 1**

**6 December 2006, Wednesday
Auditorium**

A6-O1 11:30 to 11:50 **Efficient new route for light olefins production from chloromethane over alkali cations exchanged Faujasite zeolites**
D. Jaumain, B.L. Su, *University of Namur (Belgium)*

A6-O2 11:50 to 12:10 **Shape selectivity of MWW-type aluminosilicate zeolites in the alkylation of toluene with methanol**
M. Matsukata, S. Inagaki, K. Kamino, Y. Sekine, E. Kikuchi, *Waseda University (Japan)*

A6-O3 12:10 to 12:30 **Reaction study of selective oxidation of propane to acrylic acid on MoVTenb mixed oxide catalyst**
R.K. Widi, *University of Surabaya (Indonesia)*; S. B. Abdul Hamid, *University of Malaya (Malaysia)*; R. Schlogl, *Max-Planck Institute (Germany)*

A6-O4 12:30 to 12:50 **Oxidative dehydrogenation of ethylbenzene to styrene with CO₂ over SnO₂-ZrO₂ mixed oxide nanocomposites**
D.R. Burri, K.M. Choi, A. Burri, S.E. Park, *Inha University (Korea)*

**Nanotechnology in Catalysis
Oral Session 2**

**6 December 2006, Wednesday
LT 1**

A1-O5 14:10 to 14:30 **Preparation and catalysis of nano-sized Pd metal catalyst deposited on Ti-containing zeolite by a photo-assisted deposition (PAD) method**
H. Yamashita, Y. Miura, N. Mimura, M. Tomonari, Y. Masui, K. Mori, *Osaka University (Japan)*

A1-O6 14:30 to 14:50 **Synthesis of visible light active nanocrystalline Bismuth oxide based photocatalysts**
K.K. Akurati, A. Vital, F. Reifler, A. Ritter, T. Graule, *EMPA (Switzerland)*

A1-O7 14:50 to 15:10 **Preparation of GaN: ZnO from ZnGa₂O₄ and investigation on effects of properties & ratio in starting material on the photocatalytic activity**
X.J. Sun, *Harbin University of Science & Technology (China)*; K. Maeda, K. Domen, *The University of Tokyo (Japan)*

A1-O8 15:10 to 15:30 **Preparation and photocatalytic properties of nanotubes obtained from titanium dioxide**
M. Qamar, C.R. Yoon, H.J. Oh, A. Czoska, *Sejong University (Korea)*; D.H. Kim, K.S. Lee, W.J. Lee, S.J. Kim, *Korea Electrotechnology Research Institute (Korea)*

A1-O9 15:30 to 15:50 **Low temperature synthesis and visible-light photocatalytic activities of nanocrystalline Bi₂WO₆**
L. Wu, C.X. Wu, J.H. Bi, X.X. Wang, X.Z. Fu, *Fuzhou University (China)*

**Catalytic Reaction Engineering
Oral Session 2**

**6 December 2006, Wednesday
LT 2**

A2-O6 14:10 to 14:30 **CO oxidation and oxygen-assisted CO adsorption/desorption on Ag/MnO_x catalysts**
R.R. Hu, *Tsinghua University (China)*; L.Y. Xie, *Changde Cigarette Manufacture Company (China)*; S. Ding, J. Hou, Y. Cheng, D.Z. Wang, *Tsinghua University (China)*

A2-O7 14:30 to 14:50 **Preferential oxidation of CO over CuO/CeO₂ and Pt-Co/Al₂O₃ catalysts in micro-channel reactors**
K.Y. Kim, S.H. Kim, H.I. Lee, *Seoul National University (Korea)*; J. Han, S.P. Yoon, S.W. Nam, T.H. Lim, S.A. Hong, *Korea Institute of Science & Technology (Korea)*

A2-O8 14:50 to 15:10 **Re-investigating the CO oxidation mechanism over unsupported MnO, Mn₂O₃ and MnO₂ catalysts**
K. Ramesh, Y.F. Han, Z.Y. Zhong, L.W. Chen, E. Widjaja, F.X. Chen, Y. Liu, *ICES (Singapore)*

A2-O9 15:10 to 15:30 **K/Ni/β-Mo₂C: a highly active and selective catalyst for higher alcohols synthesis from CO hydrogenation**
M.L. Xiang, D.B. Li, H.J. Qi, W.H. Li, B. Zhong, Y.H. Sun, *Shanxi Institute of Coal Chemistry (China)*

A2-O10 15:30 to 15:50 **The influence of conductivity on the catalytic activity of bismuth molybdate catalysts**
L.M. Thang, L.H. Bac, *Hanoi University of Technology (Vietnam)*; I.V. Driessche, S. Hoste, *Ghent University (Belgium)*; W.J.M. V. Well, *Aalborg University Esbjerg (Denmark)*

**Catalysis for Fine Chemicals & Pharmaceuticals
Keynote 1**

**6 December 2006, Wednesday
LT 6**

A5-K1 14:10 to 14:40 **Benzothiazolin-2-ylidene ligand in Pd (II): from structural design to molecular catalysis**
Tzi Sum Andy Hor, *National University of Singapore (Singapore)*

**Catalysis for Fine Chemicals & Pharmaceuticals
Oral Session 2**

**6 December 2006, Wednesday
LT 6**

A5-O6 14:40 to 15:00 **Dehydration of butanediols over rare earth oxides**
S. Sato, R. Takahashi, T. Sodesawa, A. Igarashi, *Chiba University (Japan)*

A5-O7 15:00 to 15:20 **Direct conversion of cellulose to sugar alcohols by supported metal catalysts**
A. Fukuoka, P.L. Dhepe, *Hokkaido University (Japan)*

A5-O8 15:20 to 15:40 **Pd (II) and Pt (II) -BINAP catalyzed enantioselective carbonyl-ene reactions of arylglyoxals**
H.K. Luo, H.Y. Yang, X.J. Tan, S.C. Ong, *ICES (Singapore)*; H. Schumann, *TU Berlin (Germany)*; B.K. Lim, C. Lim, *ICES (Singapore)*

A5-O9 15:40 to 16:00 **PdCl₂ (bipyridine) complex - an efficient catalyst for HECK reaction in glycol-organic biphasic medium**
S.V. Jagtap, R.M. Deshpande, *National Chemical Laboratory, Pune (India)*

**Catalysis for Energy & Fuels
Keynote 2**

**6 December 2006, Wednesday
Auditorium**

A6-K2 14:10 to 14:40 **Technologies for greener automotive fuels**
F. M. Dautzenberg, *Serenix LLC (U.S.)*

**Catalysis for Energy & Fuels
Oral Session 2**

**6 December 2006, Wednesday
Auditorium**

A6-O5 14:40 to 15:00 **Fuel oil quality improvement by etherifying FCC light gasoline with ethanol**
W. Kiatkittipong, *Silpakorn University (Thailand)*; P. Thipsunet, S. Assbumrungrat, *Chulalongkorn University (Thailand)*; S. Goto, *Nagoya University (Japan)*; P. Praserttham, *Chulalongkorn University (Thailand)*

A6-O6 15:00 to 15:20 **Effect of boron addition and presulfidation temperature on the active sites of Co-Mo/Al₂O₃ catalysts**
Usman, T. Kubota, Y. Okamoto, *Shimane University (Japan)*

A6-O7 15:20 to 15:40 **The production of oxygenated products from acetylene and methanol over a ZnO/SiO₂ catalyst**
D. Trimm, *CSIRO Petroleum (Australia)*; N. Cant, Y. Lei, *University of New South Wales (Australia)*

A6-O8 15:40 to 16:00 **Effect of Mg modification on catalytic performance of NiMo/HZSM-5 FCC gasoline hydro-upgrading catalysts**
X.Y. Lin, Y. Fan, G. Shi, X.J. Bao, *China University of Petroleum (China)*

**Nanotechnology in Catalysis
Keynote 2**

**6 December 2006, Wednesday
LT 1**

A1-K2 16:20 to 16:50 **Carbon nanomaterials: controllable synthesis, potential uses in DMFCs and oil desulfurization**
J. (Jason) Qiu, *Dalian University of Technology (China)*

**Nanotechnology in Catalysis
Oral Session 3**

**6 December 2006, Wednesday
LT 1**

A1-O10 16:50 to 17:10 **Ru nanocrystals sandwiched in the pore walls of templated porous carbon as a highly efficient catalyst for benzene hydrogenation**
George X.S. Zhao, F.B. Su, *National University of Singapore (Singapore)*

A1-O11 17:10 to 17:30 **Controlled synthesis of metal nanoparticles on carbon nanotubes for catalytic application by organometallic chemical vapor deposition**
C.H. Liang, J.S. Qiu, H.Z. Zhang, *Dalian University of Technology (China)*; M. Muhler, *Ruhr-University Bochum (Germany)*

A1-O12	17:30 to 17:50	Single-walled carbon nanotubes growth on Ni incorporated MCM-41 <u>Y. Chen</u> , B. Wang, Y.H. Yang, <i>Nanyang Technological University (Singapore)</i>
A1-O13	17:50 to 18:10	The effect of Rh-CeO₂ interface on carbon deposition over Rh-CeO₂/Al₂O₃ during CH₄/CO₂ reforming R. Wang, <u>H.Y. Xu</u> , W.Z. Li, <i>Dalian Institute of Chemical Physics (China)</i>
A1-O14	18:10 to 18:30	Effects of iron oxide (Fe₂O₃) catalyst particle size on the diameter of carbon nanotubes <u>N. Yahya</u> , S.B. Waje, I. Ramli, <i>Universiti Putra Malaysia (Malaysia)</i>

**Catalytic Reaction Engineering
Oral Session 3**

**6 December 2006, Wednesday
LT 2**

A2-O11	16:20 to 16:40	The role of carbon support in catalytic oxidation of organic substrates by the hydrogen peroxide in aqueous solutions <u>O.P. Pestunova</u> , O.L. Ogorodnikova, V.L. Kuznetsov, V.N. Parmon, <i>Borekov Institute of Catalysis (Russia)</i>
A2-O12	16:40 to 17:00	Effect of the Ni/Mo ratio on the structure of Ni-Mo nitride catalysts and their catalytic performances for propane ammoxidation H.M. Zhang, <u>Z. Zhao</u> , C.M. Xu, A.J. Duan, <i>China University of Petroleum (China)</i>
A2-O13	17:00 to 17:20	Ammoxidation of methyl ethyl ketone into methyl ethyl ketoxime over TS-1 modified by TPAOH P. Li, X.X. Guo, J.B. Mao, <u>X.W. Guo</u> , X.S. Wang, <i>Dalian University of Technology (China)</i>
A2-O14	17:20 to 17:40	Promotion effect of cerium and lanthanum on Ni/SBA-15 catalyst for NH₃ decomposition H.C. Liu, H. Wang, J.H. Shen, Y. Sun, <u>Z.M. Liu</u> , <i>Dalian Institute of Chemical Physics (China)</i>
A2-O15	17:40 to 18:00	Methanol oxidation on La-Co mixed oxide supported onto molecular sieve MCM-41 type E.V. Makshina, N.S. Nesterenko, <i>Lomonosov Moscow State University (Russia)</i> ; S. Siffert, E.A. Zhilinskaya, <u>A. Aboukais</u> , <i>University of Littoral (France)</i> ; B.V. Romanovsky, <i>Lomonosov Moscow State University (Russia)</i>
A2-O16	18:00 to 18:20	Novel route for oxidative conversion of ethane to formaldehyde Y.C. Lou, Q.H. Zhang, H.C. Wang, <u>Y. Wang</u> , <i>Xiamen University (China)</i>

**Catalysis for Fine Chemicals & Pharmaceuticals
Oral Session 3**

**6 December 2006, Wednesday
LT 6**

A5-O10	16:20 to 16:40	The selective liquid-phase oxidation of 4-tert-butyltoluene to 4-tert-butyl benzaldehyde <u>S.G. Yan</u> , S. Jiang, N. Zhang, W.D. Yan, <i>Dalian Maritime University (China)</i>
A5-O11	16:40 to 17:00	Palladium catalyzed oxidative coupling of benzene to biphenyl X.M. Li, <u>Y.J. Ding</u> , Z.D. Pan, D.H. Jiang, J.W. Li, <i>Dalian Institute of Chemical Physics (China)</i>
A5-O12	14:05 to 14:25	Influence of Bi-Fe additive on properties of vanadium phosphate catalysts for n-butane oxidation to maleic anhydride <u>C.K. Goh</u> , <i>Republic Polytechnic (Singapore)</i> ; Y.H. Taufiq-Yap, <i>Universiti Putra Malaysia (Malaysia)</i>
A5-O13	17:20 to 17:40	Ag-CsOH/SiO₂ - CsOH/Zr-SiO₂ combined catalysts for production of methyl methacrylate from methyl propionate and methanol <u>M. Ai</u> , <i>Niigata Institute of Technology (Japan)</i>
A5-O14	17:40 to 18:00	Selective oxidation of alcohols over Zr(OH)₄ - supported ruthenium catalysts W.H. Zhou, S. Jaenicke, <u>G.K. Chuah</u> , <i>National University of Singapore (Singapore)</i>
A5-O15	18:00 to 18:20	A new expedient variant of Heck reaction of alkenyl nonaflates: homogeneous ligand- and additive-free Pd-catalysis at room temperature <u>M.A.K. Vogel</u> , I.M. Lyapkalo, <i>ICES (Singapore)</i>

**Catalysis for Energy & Fuels
Oral Session 3**

**6 December 2006, Wednesday
Auditorium**

A6-O9	16:20 to 16:40	Thermal decomposition study over Li-B-N-H quaternary hydrogen storage system <u>J.Z. Luo</u> , Z.Y. Zhong, Y.S. Loo, J.Y. Lin, <i>ICES (Singapore)</i>
A6-O10	16:40 to 17:00	Rapid reforming of biomass-derived tar over activated carbon <u>S. Hosokai</u> , N. Sonoyama, K. Norinaga, J.I. Hayashi, <i>Hokkaido University (Japan)</i>

A6-O11	17:00 to 17:20	Effect of Rh loading on the performance of Rh/Al₂O₃ for methane partial oxidation to syngas: an in situ Raman study <i>W.Z. Weng, X.Q. Pei, J.M. Li, C.J. Huang, H.L. Wan, Xiamen University (China)</i>
A6-O12	17:20 to 17:40	Sr-promoted Ni/La₂O₃ catalyst: an active and selective catalyst for hydrogen production from ethanol <i>G. Sun, K. Hidajat, S. Kawi, National University of Singapore (Singapore)</i>
A6-O13	17:40 to 18:00	VPO catalysts supported on H₃PO₄ - treated ZrO₂ highly active for n-butane oxidation <i>R.M. Feng, W.J. Ji, Y. Chen, Nanjing University (China); C.T. Au, Hong Kong Baptist University (Hong Kong)</i>
A6-O14	18:00 to 18:20	In situ FTIR study of adsorption and catalytic reaction of methanol on Cu-Zn-Mn spinel-lattice catalyst <i>S.T. Yong, K. Hidajat, S. Kawi, National University of Singapore (Singapore)</i>

Plenary	7 December 2006, Thursday
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PL3	8:45 to 9:30	Heterogeneous catalysis from first principles <i>Jens K. Norskov, Technical University of Denmark (Denmark)</i>
PL4	9:30 to 10:15	Nanostructure processing of advanced catalytic materials <i>Jackie Y. Ying, Institute of Bioengineering and Nanotechnology (Singapore)</i>

Nanotechnology in Catalysis Keynote 3	7 December 2006, Thursday LT 1
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A1-K3	10:35 to 11:05	Some applications of nanomaterials for catalyst and catalyst support <i>Piyasan Praserttham, Chulalongkorn University (Thailand)</i>
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Nanotechnology in Catalysis Oral Session 4	7 December 2006, Thursday LT 1
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A1-O15	11:05 to 11:25	Montmorillonite-entrapped Pd nanoclusters as a heterogeneous catalyst for allylic substitution reactions <i>T. Mitsudome, K. Nose, K. Mori, T. Mizugaki, K. Ebitani, Osaka University (Japan); K. Jitsukawa, K. Kaneda, Nagoya Institute of Technology (Japan)</i>
A1-O16	11:25 to 11:45	Nanostructured catalysts for hydrogen production by liquid phase reforming of sugars <i>A. Tanksale, J.N. Beltramini, G.Q. Lu, The University of Queensland (Australia)</i>
A1-O17	11:45 to 12:05	Wilkinson's catalyst supported on PAMAM dendrimer/SBA-15: a novel hybrid catalyst for hydroformylation of styrene <i>P. Li, S. Kawi, National University of Singapore (Singapore)</i>
A1-O18	12:05 to 12:25	Nanofabrication of stacked AITS-1 by microwave and its application in Beckmann rearrangement <i>K.M. Choi, D.R. Burri, S.C. Han, S.E. Park, Inha University (Korea)</i>
A1-O19	12:25 to 12:45	Synthesis of framework-substituted La-MCM-48 and their catalytic performance in the oxidation of styrene <i>W.C. Zhan, Y.L. Guo, Y.Q. Wang, Y. Guo, Z.G. Zhang, G.Z. Lu, East China University of Science & Technology (China)</i>

Catalytic Reaction Engineering Keynote 1	7 December 2006, Thursday LT 2
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A2-K1	10:35 to 11:05	Smart reactors in catalytic multiphase applications – structured reactors in general and monolithic reactors in particular <i>Jacob Moulijn, Delft University of Technology (The Netherlands)</i>
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Catalytic Reaction Engineering Oral Session 4	7 December 2006, Thursday LT 2
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A2-O17	11:05 to 11:25	Rate enhancement of the water gas shift reaction in silica membrane reactors <i>S. Battersby, V. Rudolph, M.C. Duke, J.C. Diniz da Costa, The University of Queensland (Australia)</i>
A2-O18	11:25 to 11:45	Fluidized bed photocatalytic degradation of airborne styrene <i>M. Lim, M. Lu, V. Rudolph, The University of Queensland (Australia)</i>
A2-O19	11:45 to 12:05	Catalyst deactivation in a four reactor fixed bed residual oil hydrotreating unit: A case study <i>K. Al-Dalama, A. Stanislaus, Kuwait Institute for Scientific Research (Kuwait)</i>

A2-O20	12:05 to 12:25	Hydrodynamics and gas-liquid mass transfer characteristics of a multistage dual-flow spinning basket impeller catalytic distillation column <i>T. Safinski, A. A. Adesina, University of New South Wales (Australia)</i>
A2-O21	12:25 to 12:45	Accurate kinetic parameters for isobutane oxidation over phosphomolybdic acid and phosphomolybdates <i>S.M. Kendell, T.C. Brown, The University of New England (Australia); R.C. Burns, The University of Newcastle (Australia)</i>

**Theoretical Catalysis
Oral Session 1**

**7 December 2006, Thursday
LT 6**

A4-O1	10:35 to 10:55	Modeling Fischer-Tropsch synthesis using density functional theory: elementary steps on Fe(100) <i>D. Curulla Ferre, A. Goverder, Technical University of Eindhoven (The Netherlands); T.C. Bromfield, Sasol Technology R&D (South Africa); J.W. Niemantsverdriet, Technical University of Eindhoven (The Netherlands)</i>
A4-O2	10:55 to 11:15	DFT study for mechanisms of (am)oxidation of propane: understanding the roles of V, Mo and Te <i>G. Fu, R.M. Yuan, X. Xu, H.L. Wan, Xiamen University (China)</i>
A4-O3	11:15 to 11:35	Characterization of adsorption site of hydrogen atom on Pt₁₀/Graphene by first-principles calculations <i>K. Okazaki-Maeda, AIST (Japan); Y. Morikawa, Osaka University (Japan); T. Akita, S. Tanaka, M. Kohyama, National Institute of Advanced Industrial Science & Technology (Japan)</i>
A4-O4	11:35 to 11:55	First principle based promoter design to improve the coking resistance of Ni and Co catalysts <i>J. Xu, K.F. Tan, A. Borgna, M. Saeys, National University of Singapore (Singapore)</i>
A4-O5	11:55 to 12:15	Ab initio reaction path analysis for cyclohexane dehydrogenation <i>M. Saeys, National University of Singapore (Singapore); M.F. Reyniers, G.B. Marin, Ghent University (Belgium)</i>
A4-O6	12:15 to 12:35	Theoretical prediction of band-gap narrowing in anatase by S, Se and Te anion dopants: sensitizers for TiO₂ photocatalyst <i>A. Bhattacharayya, Nanyang Technological University (Singapore); J.W. Zheng, P. Wu, IHPC (Singapore); J. Highfield, ICES (Singapore); R. Xu, Z.L. Dong, Z. Chen, Nanyang Technological University (Singapore)</i>

**Catalysis for Environment
Oral Session 1**

**7 December 2006, Thursday
Auditorium**

A7-O1	10:35 to 10:55	Alkylation of hydroquinone with tert-butanol over micro and mesoporous molecular sieves <i>B.J. Xu, W.M. Hua, Y.H. Yue, Z. Gao, Fudan University (China)</i>
A7-O2	10:55 to 11:15	The promotional effect on SCR of NO over Ag-based catalysts with TiO₂ doped Al₂O₃ support <i>J.H. Li, Y.Q. Zhu, R. Ke, J.M. Hao, Tsinghua University (China)</i>
A7-O3	11:15 to 11:35	On the mechanism and structure-activity relationships of the selective catalytic reduction of NO by propane over CoO_x/Al₂O₃ <i>C.H. He, Degussa (SEA) Pte Ltd (Singapore); K. Kohler, TU Munich (Germany)</i>
A7-O4	11:35 to 11:55	Hierarchical mesoporous TiO₂ supported catalysts for chlorobenzene deep oxidation <i>J.M. Giraudon, T.B. Nguyen, R. Bechara, G. Leclercq, Universite des Sciences et Technologies de Lille (France); A. Vantomme, B.L. Su, University of Namur (Belgium); H.L. Tidahy, S. Siffert, J.F. Lamonier, A. Aboukais, Universite du Littoral Cote D'Opale (France); X. Canet, G.De Weireld, M. Frere, Laboratoire de Thermodynamique Physique-Mathematique (Belgium)</i>
A7-O5	11:55 to 12:15	Reverse temperature dependent swelling pathway of cellulose in trifluoroacetic acid <i>H.B. Zhao, J. Holladay, J.M. White, Y. Wang, Z.C. Zhang, Pacific Northwest National Laboratory (U.S.)</i>
A7-O6	12:15 to 12:35	Dehydrogenation of ethylbenzene in the presence of CO₂ over Fe₂O₃/Al₂O₃ catalyst <i>D.S. Qiao, S.W. Chen, J.F. Li, Z.F. Qin, J.G. Wang, Shanxi Institute of Coal Chemistry (China)</i>

Nanotechnology in Catalysis Oral Session 5		7 December 2006, Thursday LT 1
A1-O20	14:00 to 14:20	ZSM-5 zeolite membrane: a promising candidate for membrane reactor <u>M. Matsukata</u> , K. Sawamura, T. Izumi, T. Shirai, M. Takada, Y. Sekine, E. Kikuchi, <i>Waseda University (Japan)</i>
A1-O21	14:20 to 14:40	Nanostructured mesoporous titania impregnated by noble metals for catalytic oxidation of VOCs H.L. Tidahy, <u>S. Siffert</u> , M. Hosseini, J.F. Lamonier, R. Cousin, E.A. Zhilinskaya, A. Aboukais, <i>Universite du Littoral Cote d'Opale (France)</i> ; B.L. Su, <i>Universite de Namur (Belgium)</i> ; G. Deweyre, <i>Faculte Polytechnique de Mons (Belgium)</i> ; M. Frere, J.M. Giraudon, G. Leclercq, <i>Universite de Lille (France)</i>
A1-O22	14:40 to 15:00	Functionalized zeolite membrane as a catalyst and separator for xylene isomerization process <u>Y.Y. Fong</u> , A.Z. bin Abdullah, A.L. bin Ahmad, S. Bhatia, <i>Universiti Sains Malaysia (Malaysia)</i>
A1-O23	15:00 to 15:20	Ni/CeO₂ catalysts prepared by aqueous hydrazine reduction R. Wojcieszak, S. Monteverdi, <u>M.M. Bettahar</u> , <i>Universite Henri Poincare (France)</i>
A1-O24	15:20 to 15:40	Bimetallic catalysts prepared by replacement reactions S.R. Wang, W. Lin, <u>Y.X. Zhu</u> , Y.C. Xie, <i>Peking University (China)</i>
A1-O25	15:40 to 16:00	Characterization and catalytic properties of Ti-ZSM-5 synthesized by low temperature crystallization J. Gao, M. Liu, <u>X.W. Guo</u> , X.S. Wang, <i>Dalian University of Technology (China)</i>
A1-O26	16:00 to 16:20	Novel Ni catalyst with fibrous shapes for methane decomposition to carbon nanofiber and hydrogen Y. Li, X.W. Xie, J.L. Liu, B.C. Zhang, Q.Y. Liu, Y.D. Xu, <u>W.J. Shen</u> , <i>Dalian Institute of Chemical Physics (China)</i>
Biocatalysis Keynote 1		7 December 2006, Thursday LT 6
A3 - K1	14:00 to 14:30	Combining bio- and chemocatalysis in catalytic cascade processes Roger A. Sheldon, <i>Delft University of Technology (The Netherlands)</i>
Biocatalysis Keynote 2		7 December 2006, Thursday LT 6
A3 - K2	14:30 to 15:00	Directed evolution of tailor-made biocatalysts, catalytic antibodies in phage-displayed combinatorial libraries Ikuo Fujii, <i>Osaka Prefecture University (Japan)</i>
Biocatalysis Oral Session 1		7 December 2006, Thursday LT 6
A3-O1	15:20 to 15:40	Cyanohydrin acetates: bio-catalytic synthesis and chemo-catalytic reduction cascades <u>U. Hanefeld</u> , <i>Delft University of Technology (The Netherlands)</i>
A3-O2	15:40 to 16:00	Robust enzymes for biocatalysis: Cross linked lipase crystals <u>T.E. Abraham</u> , A. Rajan, <i>Regional Research Laboratory (CSIR) (India)</i>
A3-O3	16:00 to 16:20	Immobilization of alpha-chymotrypsin into mesoporous silicate and its activity in aqueous and organic media <u>J.M. Jamal</u> , K. Hidajat, S. Kawi, <i>National University of Singapore (Singapore)</i>
A3-O4	16:20 to 16:40	Aminopropyl-functionalized silica synthesized by one-step method for immobilization of penicillin G acylase B.F. Shi, Y.S. Wang, <u>Y.L. Guo</u> , Y.Q. Wang, Y. Guo, G.Z. Lu, <i>East China University of Science & Technology (China)</i>
A3-O5	16:40 to 17:00	Promoting effect of the interaction between Ni and CeO₂ on steam gasification of biomass <u>T. Miyazawa</u> , T. Kimura, J. Nishikawa, K. Kunimori, K. Tomishige, <i>University of Tsukuba (Japan)</i>
Catalysis for Fine Chemicals & Pharmaceuticals Oral Session 4		7 December 2006, Thursday LT 2
A5-O16	14:00 to 14:20	Chiral self-dimerized vanadium catalysts designed on a SiO₂ surface for highly enantioselective oxidative coupling of 2-naphthol <u>M. Tada</u> , Y. Iwasawa, <i>The University of Tokyo (Japan)</i>

A5-O17	14:20 to 14:40	Chiral periodic mesoporous organosilicas for asymmetric catalysis D.M. Jiang, <u>Q.H. Yang</u> , J.S. Gao, J. Yang, L. Zhang, G.R. Zhu, C. Li, <i>Dalian Institute of Chemical Physics (China)</i>
A5-O18	14:40 to 15:00	The shape-selective ethylation of biphenyl over H-mordenite. Reactivity of the intermediates on the catalysis <u>Y. Sugi</u> , S. Watanabe, Y. Imada, K. Komura, Y. Kubota, <i>Gifu University (Japan)</i>
A5-O19	15:00 to 15:20	Synthesis and release of curcumin-intercalated Mg-Al layered double hydroxide F.F. Xing, <u>Z. M. Ni</u> , J. Yu, G.X. Pan, X. P. Shang-guan, <i>Zhe Jiang University of Technology (China)</i>
A5-O20	15:20 to 15:40	Dependence of catalytic activity of mesoporous silica for Diels-Alder reaction on the Al content and the array of mesopores <u>H. Ishitani</u> , H. Tsukiji, T. Yamamura, M. Iwamoto, <i>Tokyo Institute of Technology (Japan)</i>
A5-O21	15:40 to 16:00	A new route to sulphonato-salen-chromium (III) hydrotalcites: highly selective catalyst for the oxidation of benzyl alcohol to benzaldehyde G.D. Wu, X.L. Wang, J.P. Li, N. Zhao, <u>W. Wei</u> , Y.H. Sun, <i>Shanxi Institute of Coal Chemistry (China)</i>

**Catalysis for Environment
Keynote 1**

**7 December 2006, Thursday
Auditorium**

A7-K1	14:00 to 14:30	Global energy challenges and role of catalysis for clean fuels and hydrogen energy development C.S. Song, <i>The Pennsylvania State University (U.S.)</i>
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**Catalysis for Environment
Oral Session 2**

**7 December 2006, Thursday
Auditorium**

A7-O7	14:30 to 14:50	Ti-modified supports prepared by sol-gel method used for ultra deep HDS catalysts W.Q. Huang, A.J. Duan, <u>Z. Zhao</u> , G.F. Wan, T. Dou, <i>China University of Petroleum (China)</i>
A7-O8	14:50 to 15:10	Hydrodesulfurization of dibenzothiophenes on sulfided CoMoP/Al₂O₃ catalysts and their XPS study <u>M. Nagai</u> , Y. Nakamura, <i>Tokyo University of Agriculture & Technology (Japan)</i> ; S. Kkurate, <i>Metropolitan Police Department (Japan)</i>
A7-O9	15:10 to 15:30	Modeling of inhibition of deep hydrodesulfurization; competitive adsorption of nitrogen compounds <u>N. Kagami</u> , <i>Idemitsu Kosan Co. Ltd. (Japan)</i> ; B.M. Vogelaar, R.J. Berger, J.A. Moulijn, <i>Delft University of Technology (The Netherlands)</i>
A7-O10	15:30 to 15:50	New preparation method of fine manganese oxide crystals and those catalytic activities for ozone decomposition below room temperature S. Shironita, T. Shuto, A. Tominaga, J.W. Hu, Y. Mizukoshi, S. Tanabe, <i>Nagasaki University (Japan)</i>
A7-O11	15:50 to 16:10	High performance Ni/Er₂O₃ catalyst for H₂ production from ethanol reforming at medium temperature <u>G. Sun</u> , K. Hidajat, S. Kawi, <i>National University of Singapore (Singapore)</i>

**Nanotechnology in Catalysis
Oral Session 6**

**7 December 2006, Thursday
LT 1**

A1-O27	16:40 to 17:00	Temperature programmed desorption of toluene over zeolites having different cations and structures <u>R. Yoshimoto</u> , K. Okumura, N. Katada, M. Niwa, <i>Tottori University (Japan)</i>
A1-O28	17:00 to 17:20	Nano-scaled Ce_{1-x}Mn_xO_{2+δ} mixed oxides as robust catalysts for complete combustion of methane Z. Jiang, C.C. Liu, J.J. Yu, J.J. Li, <i>Research Centre for Eco-Environmental Sciences (China)</i> ; F. Alshahrani, Y.D. Qian, <i>University of Oxford (U.K.)</i> ; <u>Z. P. Hao</u> , <i>Research Centre for Eco-Environmental Sciences (China)</i> ; T.C. Xiao, <i>University of Oxford (U.K.)</i>
A1-O29	17:20 to 17:40	Preferential occupation of molybdenum on the thin alumina film: characterization by CO titration <u>Z.Q. Jiang</u> , H. Zhao, Z. Zhang, <i>Dalian Institute of Chemical Physics (China)</i> ; W.X. Huang, <i>University of Science & Technology of China (China)</i> ; X.H. Bao, <i>Dalian Institute of Chemical Physics (China)</i>
A1-O30	17:40 to 18:00	n-Octane aromatization over Pt-Sn/KL and Pt/MCM-41 catalysts T. Udom-piriyasak, S. Trakarnroek, <u>S. Jongpatiwut</u> , T. Rirksomboon, S. Osuwan, <i>Chulalongkorn University (Thailand)</i> ; D.E. Resasco, <i>The University of Oklahoma (U.S.)</i>

Plenary	8 December 2006, Friday
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| PL5 | 8:45 to 9:30 | Toward creation, control, and understanding of selective catalysis on surfaces based on in-situ characterization: what and how?
Yasuhiro Iwasawa, <i>The University of Tokyo (Japan)</i> |
| PL6 | 9:30 to 10:15 | Emulsion catalysis: an environmental benign and green chemistry approach
Can Li, <i>Dalian Institute of Chemical Physics (China)</i> |

Nanotechnology in Catalysis Oral Session 7	8 December 2006, Friday LT 1
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| A1-O31 | 10:35 to 10:55 | Design of surface-functionalized Cu-BOX catalysts supported on SiO₂ : effect of surface functionalization for asymmetric catalysis
<u>S. Tanaka</u> , M. Tada, Y. Iwasawa, <i>The University of Tokyo (Japan)</i> |
| A1-O32 | 10:55 to 11:15 | Effects of drying control chemical additives on the properties of Mo-Bi-Co-Fe-K-O catalysts for propylene oxidation
B.Y. Jo, E.J. Kim, <u>S.H. Moon</u> , <i>Seoul National University (Korea)</i> |
| A1-O33 | 11:15 to 11:35 | Applications of spontaneous monolayer dispersion principle to catalyst preparation
<u>Y.C. Xie</u> , Y.X. Zhu, B.Y. Zhao, Y.Q. Tang, <i>Peking University (China)</i> |
| A1-O34 | 11:35 to 11:55 | Nano-architecture of perovskite-type mixed metal oxides using templating methods
M. Sadakane, H. Ogihara, T. Asanuma, N. Kato, C. Takahashi, T. Horiuchi, J. Kubo, <u>W. Ueda</u> , <i>Hokkaido University (Japan)</i> |
| A1-O35 | 11:55 to 12:15 | Synthesis, characterization and catalytic properties of SAPO-34 molecular sieves using diethylamine as template
G.Y. Liu, P. Tian, <u>Z.M. Liu</u> , D.Z. Zhang, <i>Dalian Institute of Chemical Physics (China)</i> |
| A1-O36 | 12:15 to 12:35 | Synthesis and activity of magnetic nanoparticle supported Pd catalyst for Suzuki cross-coupling reactions
<u>Y.H. Zhu</u> , <i>ICES (Singapore)</i> ; C.P. Ship, A. Emi, Z.S. Su, Monalisa, <i>Singapore Polytechnic (Singapore)</i> |

Catalytic Reaction Engineering Oral Session 5	8 December 2006, Friday LT 6
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| A2-O22 | 10:35 to 10:55 | Compartmentalized nanoreactors and dynamic kinetic resolutions
A.F. Fois, A.F. Masters, <u>T. Maschmeyer</u> , <i>The University of Sydney (Australia)</i> |
| A2-O23 | 10:55 to 11:15 | Dehydration of glucose to 5-hydroxymethylfurfural using aluminum salts as novel lewis acid catalyst
B. Girisuta, L.P.B. M. Janssen, <u>H.J. Heeres</u> , <i>University of Groningen (The Netherlands)</i> |
| A2-O24 | 11:15 to 11:35 | Efficient C-C and C-N bond formations catalyzed by a proton-exchanged montmorillonite as a heterogeneous bronsted acid
<u>K. Motokura</u> , N. Nakagiri, K. Mori, T. Mizugaki, K. Ebitani, <i>Osaka University (Japan)</i> ; K. Jitsukawa, <i>Nagoya Institute of Technology (Japan)</i> ; K. Kaneda, <i>Osaka University (Japan)</i> |
| A2-O25 | 11:35 to 11:55 | Experimental verification of relationship between valence band structure and catalytic properties
<u>N. Endo</u> , S. Kameoka, A.P. Tsai, <i>Tohoku University (Japan)</i> ; H. Takakura, <i>Hokkaido University (Japan)</i> ; Y. Ishii, <i>Chuo University (Japan)</i> |
| A2-O26 | 11:55 to 12:15 | Kinetics of lactose oxidation over gold catalysts
A.V. Tokarev, E.V. Murzina, J.P. Mikkola, <u>D.Y. Murzin</u> , <i>Abo Akademi University (Finland)</i> |
| A2-O27 | 12:15 to 12:35 | Effect of solvents on catalytic behaviors of homogeneous and silica supported Et(Ind)₂ZrCl₂ catalysts during propylene polymerization
<u>R. Ediati</u> , <i>Institut Teknologi Sepuluh Nopember Surabaya (Indonesia)</i> ; P.J.T. Tait, <i>University of Manchester (U.K.)</i> |

Catalysis for Energy & Fuels Keynote 3	8 December 2006, Friday Auditorium
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| A6-K3 | 10:35 to 11:05 | Materials design and development of visible-light sensitized photocatalysts
R. Asahi, <i>Toyota Central R&D Labs, Inc. (Japan)</i> |
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Catalysis for Energy & Fuels Oral Session 4	8 December 2006, Friday Auditorium
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| A6-O15 | 11:05 to 11:25 | Photocatalytic oxidation of ethylene over gold deposited titanium dioxide nanoparticles
<u>A. Sirisuk</u> , P. Buakaew, P. Praserttham, <i>Chulalongkorn University (Thailand)</i> |
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A6-O16	11:25 to 11:45	Photophysical and photocatalytic properties of AgSbO₃ <i>T. Kako, J.H. Ye, NIMS (Japan)</i>
A6-O17	11:45 to 12:05	Photocatalytic preferential oxidation of CO in the presence of H₂ on Mo-oxide catalysts at 293K <i>M. Matsuoka, T. Kamegawa, R. Takeuchi, M. Anpo, Osaka Prefecture University (Japan)</i>
A6-O18	12:05 to 12:25	Photomineralisation study of non-volatile organic acids by doped TiO₂ photocatalysts under UV and visible light irradiation <i>T. Hudaya, T. Safinski, A.S. Qazaq, A.A. Adesina, University of New South Wales (Australia)</i>
A6-O19	12:25 to 12:45	Steam photo reforming of methane over metal doped titanium oxide photocatalysts <i>Y. Ichihashi, M. Yamaguchi, S. Tsuruya, S. Nishiyama, Kobe University (Japan)</i>

**Catalysis for Environment
Oral Session 3**

**8 December 2006, Friday
LT 2**

A7-O12	10:35 to 10:55	Catalytic reduction of NO by CO over Pd/Al₂O₃ and Pd/TiO₂/Al₂O₃ catalyst in the passive DeNO_x system <i>Y.C. Ko, Y.H. Li, Korea University (Korea); Y.S. Yoo, H.S. Han, Heesung Engelhard (Korea); K.Y. Lee, Korea University (Korea)</i>
A7-O13	10:55 to 11:15	Pt/Ba/Al₂O₃ NO_x storage reduction catalysts made by flame synthesis <i>R. Strobel, S.E. Pratsinis, M. Piacentini, M. Maciejewski, A. Baiker, ETH Zurich (Switzerland)</i>
A7-O14	11:15 to 11:35	Evidences for the necessity of nitrates in HC-SCR <i>R. Ke, J.H. Li, L.X. Fu, J.M. Hao, Tsinghua University (China)</i>
A7-O15	11:35 to 11:55	Investigation of Ag/Al₂O₃ reductant system in the selective catalytic reduction of NO_x <i>H. He, Q. Wu, Research Centre for Eco-Environmental Sciences (China)</i>
A7-O16	11:55 to 12:15	The various roles of water in the Pt-Ba/Alumina lean NO_x trap catalyst system <i>C.H.F. Peden, J. Szanyi, D.H. Kim, J.H. Kwak, X.Q. Wang, Pacific Northwest National Laboratory (U.S.); W.S. Epling, University of Waterloo (Canada); J.C. Hanson, Brookhaven National Laboratory (U.S.)</i>
A7-O17	12:15 to 12:35	CeO₂-Mn₂O₃ catalyst: a potential Pt replacement for NO_x assisted soot oxidation <i>A. Setiabudi, Universitas Pendidikan Indonesia (Indonesia); A. Hanafi, S.R. Wuryaningsih, Kawasan Puspipstek (Indonesia); M. Makkee, J.A. Moulijn, Delft University of Technology (The Netherlands)</i>

**Nanotechnology in Catalysis
Keynote 4**

**8 December 2006, Friday
LT 1**

A1-K4	14:00 to 14:30	Porous clay heterostructures and hydroconversion of heptane activities <i>Fethi Kooli, ICES (Singapore)</i>
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**Nanotechnology in Catalysis
Oral Session 8**

**8 December 2006, Friday
LT 1**

A1-O37	14:30 to 14:50	Template-synthesis of hierarchical porous zeolites <i>L.F. Wang, C.Y. Yin, F.S. Xiao, Jilin University (China)</i>
A1-O38	14:50 to 15:10	Ordered mesoporous supports as model systems for studying catalyst preparation <i>J.R.A. Sietsma, P.E. de Jongh, A.J. van Dillen, K.P. de Jong, Utrecht University (The Netherlands)</i>
A1-O39	15:10 to 15:30	Nanosized gold on Ti-mesocellular silica foams (Ti-MCF) as stable and efficient catalysts for gas-phase epoxidation of propylene <i>H.W. Yang, D.L. Tang, M.H. Dai, Y.Z. Yuan, Xiamen University (China)</i>
A1-O40	15:30 to 15:50	Preparation and characterization of nanodispersed early transition metal oxide catalysts on mesoporous silica <i>Y. Wang, J.E. Herrera, J.H. Kwak, J.Z. Hu, Charles H.F. Peden, Pacific Northwest National Laboratory (U.S.)</i>
A1-O41	15:50 to 16:10	Synthesis and characterization of mesoporous ceria-zirconia mixed oxide <i>C.L. Li, X. Gu, Y.Q. Wang, G.Z. Lu, East China University of Science & Technology (China)</i>

**Catalytic Reaction Engineering
Oral Session 6**

**8 December 2006, Friday
LT 6**

A2-O28	14:00 to 14:20	Effect of Ni-modified Al₂O₃ on the properties of Pd/α-Al₂O₃ catalysts in selective hydrogenation of acetylene <i>N. Wongwaranon, J. Panpranot, P. Praserttham, Chulalongkorn University (Thailand)</i>
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A2-O29	14:20 to 14:40	Tuning of activity and induction period of double metal cyanide catalyzed ring-opening polymerization of propylene oxide by ionic liquids S.T. Baek, Anas K, D.W. Park, C.S. Ha, <u>I. Kim</u> , <i>Pusan National University (Korea)</i>
A2-O30	14:40 to 15:00	Electrocatalytic reduction of nitrate by metal catalyst - H⁺ conducting polymer assembly <u>M.A. Hasnat</u> , K. Sato, I. Ishibashi, R. Agui, K. Ikeue, M. Machida, <i>Kumamoto University (Japan)</i>
A2-O31	15:00 to 15:20	Performance and attrition strength of spray dried iron catalysts for slurry phase Fischer-Tropsch synthesis <u>D.B. Bukur</u> , V. Carreto-Vazquez, <i>Texas A&M University at Qatar (Qatar)</i>
A2-O32	15:20 to 15:40	Intermediate shape selectivity of methanol to olefins over CHA and MTF zeolites <u>Q.J. Zhu</u> , J.N. Kondo, R. Ohnuma, S. Inagaki, T. Tatsumi, <i>Tokyo Institute of Technology (Japan)</i> ; K. Domen, <i>The University of Tokyo (Japan)</i>
A2-O33	15:40 to 16:00	Catalytic and sensing capabilities of SnO₂ in selective catalytic reduction of NO by propane <u>J. Yang</u> , K. Hidajat, S. Kawi, <i>National University of Singapore (Singapore)</i>

**Catalysis for Energy & Fuels
Oral Session 5**

**8 December 2006, Friday
LT 2**

A6-O20	14:00 to 14:20	Effect of Zirconia types on Ni/ZrO₂ catalyst for low temperature steam reforming methane <u>T.H. Nguyen</u> , S. Gallardo, L. Abella, <i>De La Salle University (Philippines)</i> ; H. Hinode, <i>Tokyo Institute of Technology (Japan)</i>
A6-O21	14:20 to 14:40	Mesoporous and nanostructured CeO₂ as supports of nano-sized gold catalysts for low temperature water-gas shift reaction Z.Y. Yuan, <i>Nankai University (China)</i> ; V. Idakiev, <i>Institute of Catalysis (Bulgaria)</i> ; A. Vantomme, <i>University of Namur (Belgium)</i> ; T.Z. Ren, <i>Stockholm University (Sweden)</i> ; <u>B.L. Su</u> , <i>University of Namur (Belgium)</i>
A6-O22	14:40 to 15:00	Partial oxidation of methane to synthesis gas over Co/Ca/Al₂O₃ catalysts X.X. Gao, <u>C.J. Huang</u> , N.W. Zhang, W.Z. Weng, H.L. Wan, <i>Xiamen University (China)</i>
A6-O23	15:00 to 15:20	Doping effect on the structure and catalytic activity of K₂NiF₄-type perovskite oxide La₂NiO₄ for H₂ production <u>L.W. Chen</u> , J.Z. Lou, J.Y. Lin, M. Tasrif, <i>ICES (Singapore)</i> ; Y. Yu, <i>Nanyang Technological University (Singapore)</i> ; H. Sun, <i>National University of Singapore (Singapore)</i> ; W.Q. Tan, <i>Temasek Polytechnic (Singapore)</i>
A6-O24	15:20 to 15:40	New catalysts for hydrogen production by steam reforming of dimethyl ether <u>K. Takeishi</u> , <i>Shizuoka University (Japan)</i>
A6-O25	15:40 to 16:00	Characterization of a quasicrystalline catalyst for steam reforming of methanol <u>T. Tanabe</u> , S. Kameoka, F. Sato, M. Terauchi, A.P. Tsai, <i>Tohoku University (Japan)</i>

**Catalysis for Environment
Keynote 2**

**8 December 2006, Friday
Auditorium**

A7-K2	14:00 to 14:30	Oxyfuel combustion using a catalytic ceramic membrane reactor K. Li, <i>Imperial College, London (U.K.)</i>
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**Catalysis for Environment
Oral Session 4**

**8 December 2006, Friday
Auditorium**

A7-O18	14:30 to 14:50	Selective catalytic reduction of NO by CH₄ in the presence of excess oxygen over Mn-exchanged H-Y/Beta composite J.Q. Zhang, Y. He, Y.Y. Liu, W.B. Fan, <u>R.F. Li</u> , <i>Taiyuan University of Technology (China)</i>
A7-O19	14:50 to 15:10	New Pd/hierarchical macro-mesoporous ZrO₂-TiO₂ catalysts for trichloroethylene total oxidation <u>J.M. Giraudon</u> , T.B. Nguyen, R. Bechara, G. Leclercq, <i>Universite des Sciences et Technologies de Lille (France)</i> ; A. Vantomme, B.L. Su, <i>University of Namur (Belgium)</i> ; H.L. Tidahy, S. Siffert, J.F. Lamonier, A. Aboukais, <i>Universite du Littoral Cote D'Opale (France)</i> ; X. Canet, G.De Weireld, M. Frere, <i>Laboratoire de Thermodynamique Physique-Mathematique (Belgium)</i>
A7-O20	15:10 to 15:30	Nanometric Co-Ce mixed oxides for soot combustion J. Liu, <u>Z. Zhao</u> , C.M. Xu, A.J. Duan, <i>China University of Petroleum (China)</i>
A7-O21	15:30 to 15:50	Moisture effect on CO oxidation over Pd/CeO₂-TiO₂ F.X. Liang, H.Q. Zhu, Z.F. Qin, H. Wang, G.F. Wang, <u>J.G. Wang</u> , <i>Shanxi Institute of Coal Chemistry (China)</i>

A7-O22	15:50 to 16:10	Effect of water on the oxidation reactions over commercial three-way catalyst H.J. Kwon, J.H. Baik, Y.T. Kwon, <u>I.S. Nam</u> , <i>Pohang University of Science & Technology (Korea)</i>
A7-O23	16:10 to 16:30	Selective catalytic reduction of NO_x with NH₃ over nano MnO_x catalysts at low temperature C.K. Luo, <u>J.H. Li</u> , X.L. Tang, J.J. Chen, J.M. Hao, <i>Tsinghua University (China)</i>

**Nanotechnology in Catalysis
Oral Session 9**

**8 December 2006, Friday
LT 1**

A1-O42	16:30 to 16:50	Structural information carried by desorbing products; active forms in thermal N₂O decomposition on Rh(100) and Rh(110) <u>T. Matsushima</u> , <i>Hokkaido University (Japan)</i>
A1-O43	16:50 to 17:10	Acylation of sulfonamides using silica grafted 1-butyl-3-(3-triethoxysilylpropyl)-4,5-dihydroimidazolium ionic liquids as catalysts C. Paun, C. Stere, S.M. Coman, <u>V.I. Parvulescu</u> , <i>University of Bucharest (Romania)</i> ; P. Goodrich, C. Hardacre, <i>Queen's University (U.K.)</i>
A1-O44	17:10 to 17:30	Design of fluorite-like oxide-containing active components of syngas generation catalysts <u>T. Kuznetsova</u> , V. Sadykov, L. Batuev, G. Zabolotnaya, G. Alikina, A. Lukashevich, <i>Boreskov Institute of Catalysis (Russia)</i>
A1-O45	17:30 to 17:50	The adsorption and reactivity of benzene, toluene & xylene on metal oxides supported on activated carbon <u>Susan M. Gallardo</u> , <i>De la Salle University (Philippines)</i> ; F. Zaera, <i>University of California-Riverside (U.S.)</i>
A1-O46	17:50 to 18:10	Design of low cost fluorite-perovskite nanocomposite cathodes for application in SOFC <u>L. A. Isupov</u> , <i>Boreskov Institute of Catalysis (Russia)</i> ; E.A. Obyskalova, V.A. Rogov, N.F. Uvarov, S.V. Tsybulya, G.M. Alikina, E.B. Burgina, L.S. Dovlitova, V.I. Zaikovskii, A.V. Ischenko, V.A. Sadykov
A1-O47	18:10 to 18:30	Catalytic combustion of methane on a honeycomb-like nanostructure α-Mn₂O₃ catalyst <u>Y.F. Han</u> , L.W. Chen, K. Ramesh, Z.Y. Zhong, J.H. Chin, H.W. Mook, <i>ICES (Singapore)</i>

**Catalytic Reaction Engineering
Oral Session 7**

**8 December 2006, Friday
LT 6**

A2-O34	16:30 to 16:50	Investigation on methane aromatization over 3% Mo/ZSM-5 catalyst under supersonic jet expansion condition B.S. Liu, J.W.H. Leung, L. Li, <u>A.S.C. Cheung</u> , <i>The University of Hong Kong (Hong Kong)</i> ; C.T. Au, <i>Hong Kong Baptist University (Hong Kong)</i>
A2-O35	16:50 to 17:10	Parallel screening experimentation in three-phase catalytic hydrogenation P. Maki-Arvela, K. Eranen, J. Warna, T. Salmi, <u>D.Y. Murzin</u> , <i>Abo Akademi University (Finland)</i>
A2-O36	17:10 to 17:30	Highly efficient acylation of aliphatic and aromatic amines in the presence of IL/MS41 materials S.M. Coman, <u>V.I. Parvulescu</u> , <i>University of Bucharest (Romania)</i> ; P. Grange, <i>Universite Catholique de Louvain (Belgium)</i> ; D.E. Vos, P. Jacobs, <i>Katholieke Universiteit Leuven (Belgium)</i>
A2-O37	17:30 to 17:50	Kinetic modelling for photosynthesis of hydrogen and methane through catalytic reduction of carbon dioxide with water vapour <u>S.S. Tan</u> , <i>Deakin University (Australia)</i> ; L. Zou, <i>Victoria University (Australia)</i> ; E. Hu, <i>Deakin University (Australia)</i>
A2-O38	17:50 to 18:10	Direct synthesis of hydrogen peroxide <u>S. Jaenicke</u> , J. Lee, X. Wang, <i>National University of Singapore (Singapore)</i>
A2-O39	18:10 to 18:30	Investigation on the adsorption states of H₂O molecules on oxide surfaces by the FTIR and NIR spectroscopies <u>M. Takeuchi</u> , <i>Osaka Prefecture University (Japan)</i> ; G. Martra, S. Coluccia, <i>Universita di Torino (Italy)</i> ; M. Anpo, <i>Osaka Prefecture University (Japan)</i>

**Catalysis for Energy & Fuels
Oral Session 6**

**8 December 2006, Friday
LT 2**

A6-O26	16:35 to 16:55	Particle size effects on selectivity for cobalt Fischer-Tropsch catalysts E. Rytter, S. Eri, T.H. Skagseth, D. Schanke, H. Wigum, <i>Statoil R&D (Norway)</i> ; A. Olafsen, E. Bergene, R. Myrstad, A. Lindvag, <i>SINTEF Materials & Chemistry (Norway)</i>
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A6-O27	16:55 to 17:15	The surface modification effects of silica support by organic solvents for Fischer-Tropsch synthesis catalysts <u>Y. Zhang</u> , K. Hanayama, N. Tsubaki, <i>University of Toyama (Japan)</i>
A6-O28	17:15 to 17:35	Selective oxidation of ethane over Mo-V-Al-(Pd)-O systems: effect of synthesis and reaction parameters on the acetic acid selectivity and structure-activity correlation <u>P. Manikandan</u> , T.M. Sankaranarayanan, T. Raja, <i>National Chemical Laboratory, Pune (India)</i>
A6-O29	17:35 to 17:55	Preparation and application of mesocellular carbon foams to catalyst support for polymer electrolyte fuel cells <u>J.B. Joo</u> , P. Kim, W.Y. Kim, J. S. Kim, N.D. Kim, J.H. Yi, <i>Seoul National University (Korea)</i>
A6-O30	17:55 to 18:15	Effect of complex oxide promoters and Pd on activity and stability of Ni/YSZ (ScSZ) cermets as anodes for IT SOFC <u>V.A. Sadykov</u> , N.V. Mezentseva, R.V. Bunina, G.M. Alikina, A.I. Lukashevich, T.G. Kuznetsova, V.A. Rogov, V.I. Zaikovskii, A. Ischenko, <i>Boreskov Institute of Catalysis (Russia)</i> ; O.F. Bobrenok, <i>Institute of Thermophysics (Russia)</i> ; A. Smirnova, <i>University of Connecticut (U.S.)</i> ; J. Irvine, <i>University of St. Andrews (U.K.)</i> ; O. D. Vasylyev, <i>Institute for Problems of Materials Science (Ukraine)</i>

POSTER PRESENTATIONS

**Nanotechnology in Catalysis
Poster Session 1**

**6 December 2006, Wednesday
18:30 to 20:30, Auditorium Foyer**

- A1-P1 **Detailed local structure analysis of active structure of Co-Mo sulfide catalyst by means of XAFS**
T. Kubota, Y. Okamoto, *Shimane University (Japan)*
- A1-P2 **Structure of Mo sulfide clusters encaged in NaY zeolite: effect of an H₂ treatment**
T. Kandonou, T. Kubota, Y. Okamoto, *Shimane University (Japan)*
- A1-P3 **In-situ DRIFTS studies of Al₂O₃ coated cordierite honeycomb supported CuO catalyst for selective catalytic reduction of NO by NH₃**
Q.Y. Liu, Z.Y. Liu, *Beijing University of Chemical Technology (China)*
- A1-P4 **TPD study of novel heterogeneous PPh₃-Rh/SiO₂ catalyst for ethylene hydroformylation**
L. Yan, Y.J. Ding, H.J. Zhu, J.W. Li, G.P. Jiao, L.W. Lin, *Dalian Institute of Chemical Physics (China)*
- A1-P5 **Synergistic effects on Fe-Ni bimetallic nitride catalysts for hydrazine decomposition**
M.Y. Zheng, Y.Y. Shu, R.H. Cheng, T. Zhang, *Dalian Institute of Chemical Physics (China)*
- A1-P6 **In situ formation of carbon nanofiber/carbon coating on surface of carbon fiber**
P. Li, X.L. Yu, T. Li, C.C. He, X.G. Zhou, W.K. Yuan, *East China University of Science & Technology (China)*
- A1-P7 **Synthesis of Ni-Al hydrotalcite-like compounds with magnetism through hydrothermal method**
J. Wang, C.N. Zhong, C.H. Zheng, M.Q. Fan, M.L. Zhang, *Harbin Engineering University (China)*
- A1-P8 **Synthesis of novel nanoporous ZrO₂-Al₂O₃-Fe₃O₄ composites with super-paramagnetism**
J. Wang, M.L. Zhang, M.Q. Fan, C.N. Zhong, X.Y. Jing, *Harbin Engineering University (China)*
- A1-P9 **Direct synthesis of a nanoporous graphitic carbon using as-synthesized AIPO precursor**
G. Liu, W.X. Zhang, Z.L. Wang, Y. Liu, M.J. Jia, *Jilin University (China)*
- A1-P10 **Synthesis, characterization and photocatalytic properties of nanocrystalline BiVO₄**
J.Q. Yu, *Qingdao University (China)*; A. Kudo, *Japan Science & Technology Agency (Japan)*
- A1-P11 **In-situ grafting of ZnS photocatalyst onto the mesoporous silicates: synthesis and characterization**
J.P. Li, Y. Xu, J. L. Zheng, N. Zhao, W. Wei, D. Wu, Y.H. Sun, *Institute of Coal Chemistry (China)*
- A1-P12 **Synthesis, electronic structure and photocatalytic properties of La and LA-InGa oxides / sulfides**
T. Mitsuyama, S. Ando, A. Tsutsumi, K. Ikeue, M. Machida, *Kumamoto University (Japan)*
- A1-P13 **Analytical TEM observations of Au-Pd core-shell particles prepared by sonochemical techniques**
T. Akita, *AIST (Japan)*; T. Hiroki, *Osaka Prefecture University (Japan)*; S. Tanaka, *AIST (Japan)*; T. Kojima, F. Hori, *Osaka Prefecture University (Japan)*; M. Kohyama, *AIST (Japan)*; A. Iwase, *Osaka Prefecture University (Japan)*
- A1-P14 **Preparation and characterization of the solid-solution photocatalysts (AMoO₄)_x(BiVO₄)_{1-x}**
W.F. Yao, J.H. Ye, *NIMS (Japan)*
- A1-P15 **Local structure and catalytic property of Cr-oxide photocatalysts loaded on zeolite and mesoporous silica**
Y. Masui, S. Ohshiro, *Osaka University (Japan)*; M. Anpo, *Osaka Prefecture University (Japan)*; K. Mori, T. Ohmichi, I. Katayama, H. Yamashita, *Osaka University (Japan)*
- A1-P16 **Niobium-containing mixed oxide nanosheets as strong solid acid catalysts**
A. Takagaki, C. Tagusagawa, K. Domen, *The University of Tokyo (Japan)*; J.N. Kondo, M. Hara, *Tokyo Institute of Technology (Japan)*; S. Hayashi, *AIST (Japan)*
- A1-P17 **Design of novel copper catalysts in terms of the immiscible interaction between Cu and M (M = Fe, Cr, Co)**
S. Kameoka, M. Okada, A. P. Tsai, *Tohoku University (Japan)*
- A1-P18 **Preparation of highly nitrated mesoporous silica materials**
F. Hayashi, K. Ishizu, T. Yamamoto, M. Iwamoto, *Tokyo Institute of Technology (Japan)*
- A1-P19 **Synthesis and characterization of Ni-doped TiO₂ nanotube by hydrothermal method**
D.H. Kim, J.H. Jho, *Hanyang University (Korea)*; M. Qamar, S.J. Kim, *Sejong University (Korea)*; K.S. Lee, *Hanyang University (Korea)*
- A1-P20 **Microwave synthesis and characterization of mesoporous ZSM-5 by using carbon template**
J.B. Koo, E.A. Prasetyanto, S.H. Cho, *Inha University (Korea)*; J. Cejka, *J. Heyrovsky Institute of Physical Chemistry, Czech Republic*; S.E. Park, *Inha University (Korea)*
- A1-P21 **Characterization of direct synthesized mesoporous silica Al-SBA-16**
S.C. Lee, N.Z. Jiang, D.S. Han, Sujandi, S.E. Park, *Inha University (Korea)*
- A1-P22 **Characteristics of heteropolyacid catalysts supported on a carbon nanoporous material (CMK-1) and copolymer (APMMA-50)**
J.J. Oh, S.N. Hwang, *Korea University (Korea)*; I.K. Song, *Seoul National University (Korea)*; S.H. Yeom, *Kangnung National University (Korea)*; K.Y. Lee, *Korea University (Korea)*

- A1-P23 **Preparation of Pt nano particles on MWNT using electrochemical deposition**
H.Y. Kim, N.J. Jung, S.J. Lee, *Korea Institute of Energy Research (Korea)*
- A1-P24 **Grain size control of well-dispersed Al-containing nanoparticles: synergic effect of aluminum precursor and nonionic co-surfactant**
S.R. Zhai, Il Kim, C.S. Ha, *Pusan National University (Korea)*
- A1-P25 **Influence of preparation method on the distribution and reducibility of mesoporous Co-MCM-41**
C.B. Wang, C.C. Kuo, K.S. Wu, C.W. Tang, *National Defense University (Taiwan)*; W.Y. Yu, S.H. Chien, *Institute of Chemistry (Taiwan)*
- A1-P26 **Microwave-assisted rapid synthesis of Co₃O₄ nanorods and application to phenol degradation**
T.L. Lai, C.C. Lee, C.B. Wang, *National Defense University (Taiwan)*; G. L. Huang, Y.Y. Shu, *National Kaohsiung Normal University (Taiwan)*
- A1-P27 **Liquid-phase semihydrogenation of 1-heptyne over nano-Pd/SiO₂ catalysts prepared by flame spray pyrolysis**
S. Somboonthanakij, J. Panpranot, P. Praserthdam, *Chulalongkorn University (Thailand)*; O. Mekasuwandumrong, *Silpakorn University (Thailand)*
- A1-P28 **Characteristic and catalytic properties of nanocrystalline Co/ZrO₂ prepared via flame spray pyrolysis (FSP)**
P. Boonpitak, O. Mekasuwandumrong, C. Chaisuk, *Silpakorn University (Thailand)*; P. Praserthdam, *Chulalongkorn University (Thailand)*
- A1-P29 **Probing factors affecting photocatalytic H₂ evolution over nanocrystalline mesoporous Pt/TiO₂ prepared by single-step sol-gel process with surfactant template**
T. Sreethawong, T. Puangpetch, S. Chavadej, *Chulalongkorn University (Thailand)*; S. Yoshikawa, *Kyoto University (Japan)*
- A1-P30 **Hierarchical catalysis: a new concept based on designed hierarchically micro-meso-macroporous multifunctional single nanocatalyst**
A. Vantomme, A. Leonard, Y.X. Yu, B.L. Su, *University of Namur (Belgium)*
- A1-P31 **Promoting effect of Si doping on Pd/γ-Al₂O₃ catalysts for CH₄ combustion reaction**
P. Tantichuwet, O. Mekasuwandumrong, C. Chaisuk, *Silpakorn University (Thailand)*; P. Praserthdam, *Chulalongkorn University (Thailand)*
- A1-P32 **The effect of calcination on titanium tartrate immobilized in LDHs**
H.M. Shi, W.H. Zhang, J. He, *Beijing University of Chemical Technology (China)*
- A1-P33 **Synthesis of NiO/NiTiO₃ nanoparticles as photocatalysts from layered double hydroxide precursors**
X. Shu, J. He, W.H. Zhang, D. Chen, *Beijing University of Chemical Technology (China)*
- A1-P34 **Synthesis, characterization and photocatalytic properties of Cr-incorporated mesoporous SBA-15**
L. Zhang, Y.H. Zhao, H.N. Li, H.X. Dai, H. He, *Beijing University of Technology (China)*
- A1-P35 **Preparation, characterization and catalytic activities of SBA-15-supported CrO_x catalyst for isobutane ODH**
G.Z. Wang, L. Zhang, H.X. Dai, H. He, X.H. Zi, *Beijing University of Technology (China)*
- A1-P36 **Hydrothermally-derived La_{1-x}Sr_xCoO_{3-δ} (x = 0, 0.4) nanocatalysts highly active for VOCs combustion**
J.G. Deng, Y. Zhang, J.R. Niu, H.X. Dai, H. He, X.H. Zi, *Beijing University of Technology (China)*
- A1-P37 **Formation of Au nanoparticles in the channels of nitrated SBA-15**
Y.F. Zhao, Y. Qi, Z.M. Liu, *Dalian Institute of Chemical Physics (China)*
- A1-P38 **Synthesis, characterization and application of metal-containing ZSM-5 zeolite in synthesis gas-to-dimethyl ether (DME) reaction**
L.G. Wang, S. Y. Sang, Y. Zhang, Y. L. He, Y. Qi, Z.M. Liu, *Dalian Institute of Chemical Physics (China)*
- A1-P39 **A new approach to synthesis of high performance Co/C catalyst for selective hydrogenation of nitrobenzenes**
L. Xing, J. S. Qiu, C.H. Liang, C. Wang, L. Mao, *Dalian University of Technology (China)*
- A1-P40 **Large scale production of carbon-encapsulated iron nanoparticles and their use in adsorption removal of thiophene from oil**
C. Yu, J.S. Qiu, Z.B. Zhao, Y.F. Sun, X.H. Li, *Dalian University of Technology (China)*
- A1-P41 **Preparation and use of Ag/CNTs catalyst in selective hydrogenation of o-chloronitrobenzene**
C. Wang, J.S. Qiu, Y.Y. Chen, *Dalian University of Technology (China)*
- A1-P42 **The thermal stability of nano-scale TS-1 modified by TPAOH and its catalytic properties in ammoxidation of methyl ethyl ketone**
P. Li, X.W. Guo, J.B. Mao, X.S. Wang, *Dalian University of Technology (China)*
- A1-P43 **Synthesis and catalytic activity of CeMnAl₁₁O_y with hexaaluminate structure**
B. Wang, Y. Guo, G.Z. Lu, *East China University of Science & Technology (China)*
- A1-P44 **Highly ordered, extremely hydrothermal stable (Al)SBA-15**
C.L. Li, Y.Q. Wang, X.H. Liu, G.Z. Lu, *East China University of Science & Technology (China)*

- A1-P45 **Functionalization of large pore cubic Ia3d mesoporous silica for immobilization of penicillin G acylase**
Y.J. Lu, Q. L. Zhao, Y. L. Guo, Y.Q. Wang, Y. Guo, G.Z. Lu, *East China University of Science & Technology (China)*
- A1-P46 **Synthesis of nanostructured rare earth oxides and their activity in methane catalytic combustion**
C. Wen, Y. Guo, Y.Q. Wang, G.Z. Lu, *East China University of Science & Technology (China)*
- A1-P47 **In-situ electrochemical purification of carbon nanofiber for oxygen reduction reaction**
J.S. Zheng, X.S. Zhang, P. Li, W.L. Yu, P. Xu, W.K. Yuan, *East China University of Science & Technology (China)*
- A1-P48 **Preparation of nitrogen containing SAPO-34 molecular sieves and their DRIFTS investigation**
X.X. Guan, G.J. Wu, F.X. Zhang, N.J. Guan, *Nankai University (China)*; T. Onfroy, H. Knoezinger, *Universitat Munchen (Germany)*
- A1-P49 **Solvothermal synthesis of N-doped TiO₂ nanorod**
Z.Y. Wang, F.X. Zhang, Y.L. Yang, J. Cui, N.J. Guan, *Nankai University (China)*
- A1-P50 **Solvothermal synthesis and crystal structure of a 3-D framework copper-sodium oxalate**
Y.L. Yang, Z.Y. Wang, J. Cui, F.X. Zhang, N.J. Guan, *Nankai University (China)*
- A1-P51 **Synthesis of bulk and alumina-supported Co₃Mo₃C catalyst by a one-step method**
X.H. Wang, H.M. Wang, L.Y. Zhang, M.H. Zhang, W. Li, K.Y. Tao, *Nankai University (China)*
- A1-P52 **Organic modified TiO₂ nanocrystals for visible light photocatalysis**
D. Jiang, Y. Xu, B. Hou, D. Wu, Y.H. Sun, *Shanxi Institute of Coal Chemistry (China)*
- A1-P53 **Preparation of La³⁺ doped MgO-ZrO₂: a novel mesoporous solid base with high activity and stability**
S.G. Liu, S.Y. Huang, J.P. Li, N. Zhao, W. Wei, Y.H. Sun, *Shanxi, Institute of Coal Chemistry (China)*
- A1-P54 **Novel route to prepare highly dispersed nanocrystalline a-MoC_{1-x} in silica with micro/meso/macropores**
J. Zou, Y. Xu, M.L. Xiang, W.J. Xu, D. Wu, Y.H. Sun, *Shanxi Institute of Coal Chemistry (China)*
- A1-P55 **Modification of ITQ-6 and catalytic activity for esterification reaction**
M.A. Yarmo, R.S.R. Shariff, J.C. Juan, S.R. Omar, *Universiti Kebangsaan Malaysia (Malaysia)*; A. Ramli, *SIRIM (Malaysia)*
- A1-P56 **Studies of epoxidation reaction of methyl oleate using zeolite Ti-ITQ-6 catalyst**
M.A. Yarmo, S.R. Omar, F.W. Harun, H. Harun, A. Rinaldi, R.S.R. Shariff, J.C. Juan, *Universiti Kebangsaan Malaysia (Malaysia)*; A. Ramli, *SIRIM (Malaysia)*
- A1-P57 **Comparative study of Cu/ZnO catalysts derived from different precursors as a function of aging**
E.N. Muhamad, R. Irmawati, Y.H. Taufiq-Yap, A.H. Abdullah, *Universiti Putra Malaysia (Malaysia)*; B.L. Kniep, T. Ressler, *Fritz-Haber-Institute de MPG (Germany)*
- A1-P58 **Influence of ammonium hydroxide concentration on the physicochemical properties of copper oxide**
R. Irmawati, H.H. Lau, Y.H. Taufiq-Yap, *Universiti Putra Malaysia (Malaysia)*
- A1-P59 **The influence of the synthesis parameters on the defect structure of zirconia and its catalytic properties**
T. Kuznetsova, V. Sadykov, E. Burgina, E. Moroz, L. Batuev, *Boreskov Institute of Catalysis (Russia)*
- A1-P60 **Mechanochemical synthesis of S-doped TiO₂ with visible light photocatalytic activity**
T.P. Ang, J.Y. Lin, *ICES (Singapore)*
- A1-P61 **Synthesis and application of micro-mesoporous SBA-3 with 1,2-bis(triethoxysilyl)ethane as secondary silica source**
F.X. Chen, H.K. Luo, Y.F. Han, C. Wang, G.J. Gan, *ICES (Singapore)*
- A1-P62 **Use of band-target entropy minimization and in-situ raman spectroscopic study to determine oxidation state change in β-MnO₂ by visible laser irradiation**
E. Widjaja, J. Thirugnanasampanthar, *ICES (Singapore)*
- A1-P63 **Recyclable spherical catalyst incarcerating Pd (0) via poly(HPA-co-GDMA) in polystyrene**
Y.H. Ng, H. Hong, C. Chai, *ICES (Singapore)*
- A1-P64 **Synthesis of porous transition metal oxides and their application in catalysis**
Z.Y. Zhong, V. Ng, S.P. Teh, J.Z. Luo, *ICES (Singapore)*
- A1-P65 **Effects of preparation method on the stability of SAPO-34 for the methanol conversion**
Y.J. Lee, S.C. Baek, K.W. Jun, *Korea Institute of Chemical Technology (Korea)*
- A1-P66 **Interaction of gold nanoparticles with R-phycoerythrin**
Z.H. Suo, H.Q. Yuan, L. Sun, L. Sun, X.Q. Gong, *Yantai University (China)*
- A1-P67 **Synthesis and characterization of novel photocatalysts Zn_xNi_{1-x}Ta₂O₆ (0 < x < 1)**
D.P. Liu, R. Xu, *Nanyang Technological University (Singapore)*
- A1-P68 **Low temperature synthesis of N-doped mesoporous TiO₂ spheres**
Y.X. Zhang, T.T.Y. Tan, R. Xu, *Nanyang Technological University (Singapore)*
- A1-P69 **A model for adsorbed molecule on noble-metal-particle**
K. Kuramoto, M. Ban, S. Hyodo, *Toyota Central R&D Labs, Inc. (Japan)*

- A1-P70 **Direct synthesis of ultra large pore GaSBA-15 with high gallium content and its catalytic performance as alkylation catalyst**
M. Selvaraj, S. Kawi, *National University of Singapore (Singapore)*
- A1-P71 **Study on catalytic activity of platinum nanoparticles in a defined contact between platinum and carbon via carbon oxidation**
K. Hizbullah, S.Z. Khan, *University of Peshawar (Pakistan)*
- A1-P72 **Identification of the di-nuclear iron site and peroxy species by in-situ UV-Vis diffuse reflectance spectroscopy and resonance raman spectroscopy**
H.A. Xia, K.Q. Sun, Z.C. Feng, C. Li, *Dalian Institute of Chemical Physics (China)*
- A1-P73 **Room-temperature synthesis of an Al-containing mesoporous molecular sieve and their application for catalytic isomerization of polycyclic hydrocarbons**
J.W. Guo, L.H. Li, *Guangdong University of Technology (China)*; S. Liu, *South China University of Technology (China)*; Y.H. Cui, *Guangdong University of Technology (China)*
- A1-P74 **Synthesis, characterization and catalytic application of new CrSBA-15 mesoporous catalyst for selective oxidation of anthracene**
M. Selvaraj, S. Kawi, *National University of Singapore (Singapore)*
- A1-P75 **Cation-anion-double-hydrolysis approach to preparation of mesoporous γ -Al₂O₃ catalytic materials**
P. Bai, P.P. Wu, W. Xing, *National University of Singapore (Singapore)*; Z.F. Yan, *China University of Petroleum (China)*; X.S. Zhao, *National University of Singapore (Singapore)*
- A1-P76 **Mesoporous SrTiO₃ photocatalyst synthesized via surfactant-assisted templating sol-gel method and its methyl orange photodegradation activity**
T. Puangpetch, T. Sreethawong, S. Chavadej, *Chulalongkorn University (Thailand)*; S. Yoshikawa, *Kyoto University (Japan)*
- A1-P77 **Effects of lanthanum phase transformation interference in doped ZnO-SnO₂ and its CO sensing properties**
S.B. Abdullah, *University College of Engineering & Technology Malaysia (Malaysia)*; M.Z. Abu Bakar, *University Science Malaysia (Malaysia)*

**Catalytic Reaction Engineering
Poster Session 1**

**6 December 2006, Wednesday
18:30 to 20:30, Auditorium Foyer**

- A2-P1 **Monooxidation of ethylene by hydrogen peroxide on heterogeneous biomimetic catalyst**
U.V. Nasirova, L.M. Gasanova, *Institute of Chemical Problems (Azerbaijan)*; I.T. Nagieva, *Baku State University (Azerbaijan)*; J. Terner, *Virginia Commonwealth University (U.S.)*; T.M. Nagiev, *Baku State University (Azerbaijan)*
- A2-P2 **Characterizing acidity of HK-SUZ-4 zeolite by FTIR and NH₃-TPD**
S. Jiang, S.G. Yan, *Dalian Maritime University (China)*; J.S. Hwang, S.E. Park, *Korea Research Institute of Chemical Technology (Korea)*
- A2-P3 **Hydroformylation of higher olefins catalyzed by Rh/PETPP complex in thermoregulated PEG biphasic system**
Y.H. Wang, F.J. Liu, J.Y. Jiang, Z. L. Jin, *Dalian University of Technology (China)*
- A2-P4 **Mechanism of doping yttrium into TiO₂ and improving its photocatalytic performance**
W.Q. Lu, J.Y. Liu, J.C. Foshan University (China); J.C. Yu, *The Chinese University of Hong Kong (Hong Kong)*
- A2-P5 **H₂ treatment of an aged Cu-Ce/AC used for catalytic dry oxidation of adsorbed phenol**
Z.P. Lei, Z.Y. Liu, Z.G. Huang, *Shanxi Institute of Coal Chemistry (China)*
- A2-P6 **Effect of carbon dioxide in the catalytic oxidehydrogenation of ethylbenzene**
X.H. Li, W.Y. Li, K.C. Xie, *Taiyuan University of Technology (China)*
- A2-P7 **Kinetic analysis of coupled catalytic processes for the direct utilization of methane**
Z.J. Song, Y.X. Xin, D.Z. Wang, *Tsinghua University (China)*
- A2-P8 **Selective oxidation of carbon monoxide in excess hydrogen catalyzed by platinum over mesoporous silica**
T. Oshio, J. Kimura, Y. Sakamoto, M. Ichikawa, A. Fukuoka, *Hokkaido University (Japan)*
- A2-P9 **Photo-assisted selective catalytic reduction of NO with NH₃ over WO₃/TiO₂**
S. Yamazoe, Y. Masutani, T. Shishido, T. Tanaka, *Kyoto University (Japan)*
- A2-P10 **Support effect on oxidation resistance of precious metal catalysts as examined by N₂O decomposition**
H. Yoshida, T. Tsuruta, Y. Yazawa, *Nagoya University (Japan)*; T. Hattori, *Aichi Institute of Technology (Japan)*
- A2-P11 **Production of propylene oxide by homogeneous chain reaction initiated by supported molybdenum oxide nano-particle**
N. Mimura, Z.X. Song, T. Akita, *AIST (Japan)*; H. Yamashita, *Osaka University (Japan)*; S. Tsubota, T. Fujitani, S. T. Oyama, *Virginia Tech (U.S.)*
- A2-P12 **Effect of Ultrasound on liquid phase adsorption of azeotropic and non-azeotropic mixture**
A. Bono, *University Malaysia Sabah (Malaysia)*

- A2-P13 **Measurement of partial pressure of O₂ and Zr activity in Cu-Zr alloy catalyst using an advanced YSZ sensor**
S. Tanigawa, K. Mori, T. Ohmichi, H. Yamashita, I. Katayama, *Osaka University (Japan)*
- A2-P14 **Visible-light induced photochemical reaction on TiO₂ (001)**
H. Ariga, T. Taniike, H. Marikawa, M. Tada, Y. Iwasawa, *The University of Tokyo (Japan)*; K. Watanabe, Y. Matsumoto, *National Institute of Natural Science (Japan)*; S. Ikeda, K. Saiki, *The University of Tokyo (Japan)*
- A2-P15 **Oxidation of unsaturated hydrocarbons over Ti-YNU-1**
W.B. Fan, *Tokyo Institute of Technology (Japan)*; P. Wu, *East China Normal University (China)*; Y. Kubota, *Yokohama National University (Japan)*; T. Tatsumi, *Tokyo Institute of Technology (Japan)*
- A2-P16 **Partial oxidation of isobutene using a solid electrolyte membrane reactor**
M. Tatsumi, T. Araki, K. Mori, T. Ohmichi, I. Katayama, H. Yamashita, *Osaka University (Japan)*
- A2-P17 **Synthesis of cyclic carbonate from vinyl cyclohexene oxide and CO₂ using ionic liquid as catalyst**
E.H. Lee, N.Y. Moon, J.Y. Ahn, M.D. Manju, D.W. Park, *Pusan National University (Korea)*
- A2-P18 **Poly(styrene-co-vinylbenzyl chloride)-supported catalyst containing pendant triethylammonium chloride for the reaction of glycidyl methacrylate with carbon dioxide**
S.W. Park, B.S. Choi, D.W. Park, *Pusan National University (Korea)*; J.W. Lee, *Sogang University (Korea)*
- A2-P19 **Photocatalytic decomposition of orange II over titanium dioxides prepared from peroxotitanate solution using hydrothermal method**
S.S. Park, S.Y. Jun, Y.B. Ryu, G.D. Lee, S.S. Hong, *Pukyong National University (Korea)*
- A2-P20 **Au-Ag alloy catalyst for the preferential oxidation of carbon monoxide under a hydrogen rich atmosphere**
C.W. Yen, Y.C. Luo, A.Q. Wang, C.Y. Mou, *National Taiwan University (Taiwan)*
- A2-P21 **Comparative study on the catalytic isomerization of dimethylnaphthalene in the solvent-free and solvent systems**
N. Kraikul, P. Rangsunvigit, *Chulalongkorn University (Thailand)*; S. Kulprathipanja, *UOP LLC (U.S.)*
- A2-P22 **A study on the thermodynamic properties of the biomolecular complex formation in the processes of converting toluene into p-xylene over acidic catalysts**
M. Tuyen, H.V. Thang, *Institute of Industrial Chemistry (Vietnam)*
- A2-P23 **Kinetics of isobutane transformations over Fe-containing ZSM-5 at low pressure**
T.C. Brown, *The University of New England (Australia)*; M.C. Le, *Hanoi University of Education (Vietnam)*
- A2-P24 **Sulphur poisoning of Al₂O₃-supported Pd catalysts for methane combustion**
B. Xue, H. He, H.X. Dai, X.H. Zi, *Beijing University of Technology (China)*
- A2-P25 **Decoking kinetics of long-chain paraffine dehydrogenation catalyst**
J.Q. Li, H.Z. Du, C.L. Sun, *Dalian Institute of Chemical Physics (China)*
- A2-P26 **High selective ethylbenzene obtainment through alkylation of dilute ethene with gas phase-liquid phase benzene and polyethylated benzenes**
S.L. Liu, F.C. Chen, S.J. Xie, Q.X. Wang, L.Y. Xu, *Dalian Institute of Chemical Physics (China)*
- A2-P27 **Pt/MnO_x-CeO₂ catalyst for complete oxidation of formaldehyde at ambient temperature**
X.F. Tang, Y.D. Xu, W.J. Shen, *Dalian Institute of Chemical Physics (China)*
- A2-P28 **Regeneration of the activity of used nano-HZSM-5 catalyst for FCC gasoline upgrade**
W.S. Wang, J.Z. Zang, S.H. Xiao, C.G. Yang, J.L. Wang, W.S. Wang, H.C. Guo, *Dalian University of Technology (China)*; X.C. Fang, L.P. Zhao, *Fushun Research Institute of Petroleum Processing (China)*
- A2-P29 **High efficient hydrogenation of nitrate on Pd-Cu/TiO₂ prepared by photo-deposition and metal size dependent selectivity**
F.X. Zhang, X. Zhang, J.X. Chen, J.Cui, N.J. Guan, *Nankai University (China)*
- A2-P30 **Efficient propylene carbonate synthesis from propylene glycol and carbon dioxide via organic bases**
S.Y. Huang, S.G. Liu, J.P. Li, N. Zhao, W. Wei, Y.H. Sun, *Shanxi Institute of Coal Chemistry (China)*
- A2-P31 **In situ IR and pulse reaction studies of the active oxygen species over SrF₂/Nd₂O₃ catalyst**
L.H. Wang, X.D. Yi, W.Z. Weng, H.L. Wan, *Xiamen University (China)*
- A2-P32 **Distribution of the carbon deposited over a Ni/Al₂O₃ catalyst in the fixed-bed dry reforming of methane**
Z.G. Zhang, X. Chen, *AIST (Japan)*
- A2-P33 **The H₂ additive influence on the catalytic lifetime of supported-Ni catalysts in CH₄ decomposition**
Z.G. Zhang, Y. Suzuki, *AIST (Japan)*
- A2-P34 **Photocatalytic hydroxylation of phenol with H₂O₂ over TS-1**
S.G. Kim, S.W. Kim, J.J. Kim, S.S. Park, S.S. Hong, G.D. Lee, *Pukyong National University (Korea)*
- A2-P35 **Effect of doping with Cu on the photocatalytic activity of Bi₁₂TiO₂₀ in visible light**
H.H. Jeong, T.G. Kim, H.J. Kim, S.Y. Jeon, S.S. Park, S.S. Hong, G.D. Lee, *Pukyong National University (Korea)*

- A2-P36 **Polymerization of 1,3-butadiene with nickel (II) α -diimine complexes cocatalyzed by ethylaluminum sesquichloride**
J.S. Kim, D. Chandran, C.S. Ha, I. Kim, *Pusan National University (Korea)*

**Biocatalysis
Poster Session 1**

**6 December 2006, Wednesday
18:30 to 20:30, Auditorium Foyer**

- A3-P1 **Clay minerals as prebiotic catalysis**
A. Negron-Mendoza, F.G. Mosqueira, S. Ramos-Bernal, *Universidad Nacional Autonoma de Mexico (Mexico)*
- A3-P2 **Chloroplasts within porous silica: Biomimetism of photocatalytic production of O₂ from CO₂**
C. Meunier, A. Leonard, B.L. Su, *University of Namur (Belgium)*
- A3-P3 **Preparation of bio-layered double hydroxide for high resolution of (+,-)-menthyl butyrate**
S.S. Othman, *Islamic University College of Malaysia (Malaysia)*; M. Basri, M.B. Abdul Rahman, R.N.Z.R. Abdul Rahman, A.B. Salleh, *Universiti Putra Malaysia (Malaysia)*
- A3-P4 **Role of functionalized surface of mesoporous materials as hosts for lipase in the transesterification in organic media**
Z.J. Liu, C.X. Hai, Z.H. Song, J. He, *Beijing University of Chemical Technology (China)*
- A3-P5 **Tolerance of immobilized *Candida antarctica* lipase to organic solvents**
S.M. Puah, B.Y. Teo, J.C. Wu, Y. Chow, W.J. Choi, MMR Talukder, *ICES (Singapore)*
- A3-P6 **Biotransformation of benzoic acid to cis,cis - muconic acid**
W.J. Choi, *ICES (Singapore)*; S.G. Bang, B.J. Kim, *Seoul National University (Korea)*
- A3-P7 **Amoxicillin production catalysed by penicillin acylase adsorbed on ion-exchange resin**
Y. Chow, X. Yun, D. Ting, D. Saravanan, J. Decosta, N. bte Gul Zaman, J.C. Wu, MMR Talukder, W.J. Choi, R.J. Li, *ICES (Singapore)*
- A3-P8 **Levulinic acid production from elephant grass (*miscanthus x giganteus*)**
C.B. Rasrendra, H.J. Heeres, *University of Groningen (The Netherlands)*; S. Adisasmito, IGBN Makertihartha, *Institut Teknologi Bandung (Indonesia)*

**Theoretical Catalysis
Poster Session 1**

**6 December 2006, Wednesday
18:30 to 20:30, Auditorium Foyer**

- A4-P1 **First principles calculations of CH₄ dissociation on Ni (100) surface**
Y.A. Zhu, Y.C. Dai, P. Li, J.H. Zhou, Z.J. Sui, W.K. Yuan, *East China University of Science & Technology (China)*
- A4-P2 **Sensitivity analysis of factors controlling catalytic activity by neural network**
S. Kito, T. Hattori, *Aichi Institute of Technology (Japan)*
- A4-P3 **The density functional study on the mechanism of switchover reaction on a formic acid on TiO₂ (110) surface**
Y. Uemura, T. Taniike, M. Tada, Y. Morikawa, Y. Iwasawa, *The University of Tokyo (Japan)*
- A4-P4 **Olefin formation in Fischer-Tropsch synthesis: quantum chemical studies**
O. Swang, V. Bakken, *SINTEF Materials & Chemistry (Norway)*
- A4-P5 **Transformation of oxygen species at small La-O clusters: theoretical characterization**
W. Xia, W.Z. Weng, H.L. Wan, *Xiamen University (China)*
- A4-P6 **Hydrodynamically-enhanced light intensity distribution in a novel aerated photoreactor containing immobilized titania**
I.A.L. Lee, C.H. Hsu, T. Safinski, F. Trujillo, T. Hudaya, A. Qazaq, A.A. Adesina, *University of New South Wales (Australia)*

**Catalysis for Fine Chemicals & Pharmaceuticals
Poster Session 2**

**7 December 2006, Thursday
16:30 to 18:30, Auditorium Foyer**

- A5-P1 **A partially decomposed heteropoly acid active in the Friedel-Crafts reactions**
K. Yamashita, K. Yamada, K. Okumura, M. Niwa, *Tottori University (Japan)*
- A5-P2 **Synthesis, characterization and catalytic properties of mesoporous iron-containing analog of MSU-1**
H. Liu, Z.G. Wang, H. Li, *Shanghai University (China)*
- A5-P3 **Preparation and reactivity of robust Fe^{III}-OOH complex with one carboxamide nitrogen**
T. Itoh, Y. Hitomi, T. Tanaka, *Kyoto University (Japan)*
- A5-P4 **Liquid phase selective photo-oxidation of solvent-free 1-pentanol over Nb₂O₅**
T. Miyatake, D. Tsukio, T. Ohuchi, Y. Hitomi, *Kyoto University (Japan)*
- A5-P5 **Novel mixed carbene-phosphine palladium (II) complexes as catalysts in Suzuki-coupling reactions**
S.K. Yen, H.V. Huynh, T.S.A. Hor, *National University of Singapore (Singapore)*
- A5-P6 **Chirality inversion over Pd/MgO catalysts for asymmetric hydrogenation of isophorone**
S. Li, E.S. Zhan, Y. Li, Y.D. Xu, W.J. Shen, *Dalian Institute of Chemical Physics (China)*

- A5-P7 **Hydrogenation of 1-phenyl-1,2-propanedione over Pt/Al₂O₃ modified by Cinchona Alkaloid C9-O-Ethers**
I. Busygin, E. Toukoniitty, J. Warna, D.Y. Murzin, R. Leino, Abo Akademi University (Finland)
- A5-P8 **Epoxidation of olefins with hydrogen peroxide over solid base catalysts**
V. Raju, G.K. Chuah, National University of Singapore (Singapore)
- A5-P9 **Effect of preparation conditions on the dehydration of BE acid over H-β zeolite catalysts**
R.S. Xu, L.J. Zhai, J. Wen, X.W. Guo, G.R. Wang, J. Liu, Dalian University of Technology (China)
- A5-P10 **Selective synthesis of 4,4'-dimethyldiphenylmethane catalyzed over H-beta zeolite**
D.F. Jin, Z.Y. Hou, J. Gao, X.M. Zheng, Zhejiang University (China)
- A5-P11 **Epoxidation of propylene by molecular oxygen over the modified Ag/α-Al₂O₃ catalysts**
Y. Wei, Y.L. Guo, X.H. Liu, Y. Guo, Y.S. Wang, G.Z. Lu, East China University of Science & Technology (China)
- A5-P12 **A novel route for the synthesis of methyl acetoacetate from dimethyl carbonate and acetone over solid base**
D. Wu, J.P. Li, N. Zhao, W. Wei, Y.H. Sun, Shanxi Institute of Coal Chemistry (China)
- A5-P13 **Application of monodentate secondary phosphine oxides as preligands in the Rhodium catalyzed hydroformylation**
A. Christiansen, R. Ludwig, W. Baumann, A. Spannenberg, A. Borner, Universitat Rostock (Germany)
- A5-P14 **Epoxidation of propylene by cumene hydroperoxide over Mo-based catalysts**
X.H. Liu, X.L. Liu, Y.L. Guo, Y.Q. Wang, Y. Guo, G.Z. Lu, East China University of Science & Technology (China)
- A5-P15 **Mediated improvement of catalytic performnce with MCM-41 immobilized chromium Schiff base complex in solvent-free oxidation of benzyl alcohol**
X. L. Wang, G.D. Wu, J.P. Li, N. Zhao, W. Wei, Y.H. Sun, Shanxi Institute of Coal Chemistry (China)
- A5-P16 **Synthesis of amorphous Ni-B catalyst from ethylene glycol bath and its performance on acetophenone hydrogenation**
Z.J. Wu, S.H. Ge, M.H. Zhang, W. Li, K.Y. Tao, Nankai University (China)
- A5-P17 **Simple route to the synthesis of molybdenum nitride and carbide catalysts**
H.M. Wang, X.H. Wang, M.H. Zhang, W. Li, K.Y. Tao, Nankai University (China)
- A5-P18 **A novel route for synthesis of salicylamide from urea and phenol over metal oxide catalysts**
W.C. Peng, J.P. Li, N. Zhao, X.Z. Wang, W. Wei, Y.H. Sun, Shanxi Institute of Coal Chemistry (China)
- A5-P19 **Studies on manganese-catalyzed epoxidation of styrene in bicarbonate-H₂O₂ solution**
C.W. Quah, J. Bu, W. Chew, M. Garland, ICES (Singapore)
- A5-P20 **Asymmetric epoxidation of stilbene over zeolite beta**
F.Y. Lee, George X.S. Zhao, National University of Singapore (Singapore)
- A5-P21 **Distinct oxidation behaviours of pi-bonded and di-sigma-bonded propylene on Ag (111)**
W.X. Huang, University of Science & Technology China, Hefei (China)
- A5-P22 **Heterogeneous asymmetric hydroformylation of olefines on chirally modified Rh/SiO₂ catalysts**
D.F. Han, X.H. Li, H.D. Zhang, Z.M. Liu, C. Li, Dalian Institute of Chemical Physics (China)
- A5-P23 **Epoxidation of allylic alcohols on layered double hydroxide-hosted [WZn₃(ZnW₉O₃₄)₂]¹²⁻ catalysts**
P. Liu, H. Wang, Z.C. Feng, C. Li, Dalian Institute of Chemical Physics (China)

**Catalysis for Energy & Fuels
Poster Session 2**

**7 December 2006, Thursday
16:30 to 18:30, Auditorium Foyer**

- A6-P1 **Ru-Co, Ru-Ni mesoporous molecular sieves: highly efficient catalysts for selective oxidation of alcohol in liquid phase**
V. Parvulescu, R. Ene, Institute of Physical Chemistry (Romania); B.L. Su, University of Namur (Belgium)
- A6-P2 **An original approach by experiments design towards a better understanding of photocatalysis in a real world environment**
M. Halasa, P. Dandoy, B.S. Su, University of Namur (Belgium)
- A6-P3 **Effect of Mo species distribution on the olefin metathesis over Mo/Hbeta-Al₂O₃ catalysts**
X.J. Li, W.P. Zhang, J.M. Sun, S.L. Liu, L.Y. Xu, X.W. Han, X.H. Bao, Dalian Institute of Chemical Physics (China)
- A6-P4 **Ti-containing composite molecular sieve Ti-HMS/TS-1 prepared through a two-step crystallization process**
C.Z. Jin, G. Li, X.S. Wang, Y. Wang, D.W. Sun, Dalian University of Technology (China)
- A6-P5 **Kinetic consideration of non-catalytic and catalytic oxidation of soot**
V. Tomasic, I. Brnardic, University of Zagreb (Croatia); H. Jenei, PLIVA (Croatia); S. Zrncevic, University of Zagreb (Croatia)
- A6-P6 **Conversions of sugars by mesoporous solid acid catalysts**
M. Watanabe, P.L. Dhepe, A. Fukuoka, Hokkaido University (Japan)

- A6-P7 **Highly active alkaline metal modified Pd/ZnO catalysts for preferential oxidation of CO in H₂ rich gas**
N. Iwasa, S. Arai, M. Arai, Hokkaido University (Japan)
- A6-P8 **Preparation of high-surface area tungsten carbides and application to electrocatalysts for PEFC**
Y. Hara, Mitsubishi Chemical Group Science & Technology Research Centre, Inc. (Japan)
- A6-P9 **Photocatalytic H₂ production over ANbO₃ (A = Li and Na) prepared by solid state reaction and hydrothermal methods**
G.Q. Li, T. Kako, D.F. Wang, NIMS (Japan); Z.G. Zou, Nanjing University (China); J.H. Ye, NIMS (Japan)
- A6-P10 **Synergistic combination effect between alkali halides and SiO₂ found in catalytic propylene carbonate synthesis from propylene oxide and CO₂**
T. Takahashi, S. Kitazume, H. Yasuda, T. Sakakura, AIST (Japan); K. Hirata, T. Oku, H. Tsuneki, Nippon Shokubai Co. Ltd. (Japan)
- A6-P11 **Preparation and characterization of Ce_{0.64}Zr_{0.16}Bi_{0.20}O_{1.90}/γ-Al₂O₃ and Ag/Ce_{0.64}Zr_{0.16}Bi_{0.20}O_{1.90}/γ-Al₂O₃ catalysts**
T. Masui, K. Koyabu, K. Minami, N. Imanaka, Osaka University (Japan)
- A6-P12 **Efficient overall water splitting on (Ga_{1-x}Zn_x)(N_{1-x}O_x) solid solution photocatalyst under visible light**
K. Maeda, K. Teramura, The University of Tokyo (Japan); N. Saito, Y. Inoue, Nagaoka University of Technology (Japan); K. Domen, The University of Tokyo (Japan)
- A6-P13 **Characterization of cocatalyst dispersed on photocatalyst for overall water splitting**
K. Teramura, K. Maeda, The University of Tokyo (Japan); D.L. Lu, Japan Science & Technology Agency (Japan); N. Saito, Y. Inoue, Nagaoka University of Technology (Japan); K. Domen, The University of Tokyo (Japan)
- A6-P14 **Photocatalytic overall water splitting under visible light by ATaO₂N (A = Ca, Sr, Ba) and WO₃ with an IO₃⁻/I⁻ shuttle redox mediator**
M. Higashi, K. Teramura, T. Takata, K. Domen, The University of Tokyo (Japan); R. Abe, B. Ohtani, Hokkaido University (Japan)
- A6-P15 **Formation of 2,6-dimethylnaphthalene from 2-methylnaphthalene on H-SAPO-11**
T. Komatsu, T. Naito, Tokyo Institute of Technology (Japan)
- A6-P16 **Surface modification of Ni catalysts with noble metals for oxidative steam reforming of methane**
S. Kado, Y. Mukainakano, S. Naito, K. Yoshihda, K. Kunimori, K. Tomishige, Tsukuba University (Japan)
- A6-P17 **Cr-free metal oxide catalysts for high temperature water gas shift reaction of fuel processor using LPG**
J.Y. Lee, J.H. Jang, S.M. Kim, K.Y. Lee, Korea University (Korea)
- A6-P18 **Study on the heterogeneous catalyst system for the production of biodiesel from used vegetable oils**
Y.M. Park, H.J. Kim, Korea University (Korea); D.K. Kim, J.S. Lee, Korea Institute of Energy Research (Korea); K.Y. Lee, Korea University (Korea)
- A6-P19 **Optimized statistical modeling of biodiesel production in supercritical fluid using response surface methodology**
J.H. Lee, J.H. Kwon, Y.S. Song, J.W. Kang, S.W. Kim, Korea University (Korea); B.S. Tae, Hankyong National University (Korea)
- A6-P20 **Visible light-responsive TiO₂ thin film photo-catalysts prepared by reactive sputtering**
W.J. Jeong, S.E. Yang, H. H. Yang, Y.J. Kim, G.C. Park, Mokpo National University (Korea); I.S. Moon, S.K. Cho, Chosun College of Science & Technology (Korea); H.G. Ahn, Suncheon National University (Korea)
- A6-P21 **Development of graphitized carbon support for low-temperature fuel cell**
D.B. Kim, D.H. Lim, H.I. Lee, Seoul National University (Korea)
- A6-P22 **Heat-transfer enhanced catalyst system for Fischer-Tropsch synthesis**
J.I. Yang, H.J. Kim, J.K. Yoon, H.K. Joo, H. Jung, Korea Institute of Energy Research (Korea)
- A6-P23 **Oxidative dehydrogenation of C₄ raffinate-3 to 1,3-butadiene over bismuth molybdate catalysts**
J. C. Jung, H.S. Kim, I.K. Song, Seoul National University (Korea); A.S. Choi, Y.M. Chung, T.J. Kim, S.J. Lee, S.H. Oh, SK Corporation (Korea)
- A6-P24 **Effect of oxidation-reduction treatment on the activity of porous Ni catalyst for CO removal by methanation and water-gas shift reaction**
S.H. Kim, K.Y. Kim, H.I. Lee, Seoul National University (Korea); J. Han, S.P. Yoon, S.W. Nam, T.H. Lim, S.A. Hong, Korea Institute of Science & Technology (Korea)
- A6-P25 **Improvement of intermediate temperature polymer electrolyte fuel cell performance using colloidal form of phosphoric acid-doped polybenzimidazole ionomer**
J.H. Kim, D.H. Lim, H.I. Lee, Seoul National University (Korea); H.J. Kim, I.H. Oh, S.A. Hong, T.H. Lim, Korea Institute of Science & Technology (Korea)
- A6-P26 **Hydrogen production from butane decomposition by carbon-black catalyst**
S.H. Yoon, G.B. Han, N.K. Park, S.O. Ryu, T.J. Lee, Yeungnam University (Korea); K.J. Yoon, Sungkyunkwan University (Korea)

- A6-P27 **Catalytic partial oxidation of methane to hydrogen on supported cobalt catalysts at moderate temperature**
R. Lodeng, E. Bjorgum, *SINTEF Materials & Chemistry (Norway)*; B.C. Enger, J.L. Eilertsen, A. Holmen, *Norwegian University of Science & Technology (Norway)*; M. Ronnekleiv, B. Krogh, E. Rytter, *Statoil R&D (Norway)*
- A6-P28 **Effect of support materials on Ni-supported catalyst activity of low temperature steam reforming of methane**
A. Purnomo, T. Monroy, S. Gallardo, L. Abella, *De La Salle University (Philippines)*; H. Hinode, *Tokyo Institute of Technology (Japan)*
- A6-P29 **Development of the catalysts for portable hydrogen generators**
V.I. Simagina, O.V. Netskina, O.V. Komova, *Boriskov Institute of Catalysis (Russia)*
- A6-P30 **Effect of ceria loading on CeO₂/Co₃O₄ catalysts for carbon monoxide oxidation**
C.W. Tang, K.S. Wu, C.B. Wang, *National Defense University (Taiwan)*; S.H. Chien, *Institute of Chemistry (Taiwan)*
- A6-P31 **Hydrogen production from oxidative steam reforming of ethanol over supported ruthenium catalysts**
J.L. Bi, C.C. Lee, C.B. Wang, *National Defense University (Taiwan)*; T.H. Chang, *Ming Hsing University of Science & Technology (Taiwan)*; C.T. Yeh, *National Tsing-hua University (Taiwan)*
- A6-P32 **Influences of CO₂ and H₂O on preferential CO oxidation in excess hydrogen over Pt/A-zeolite and PtAu/A-zeolite catalysts**
P. Naknam, A. Luengnaruemitchai, S. Wongkasemjit, *Chulalongkorn University (Thailand)*
- A6-P33 **Ring opening of 1,3-dimethylcyclohexane on Ni- or K-promoted Ir/Al₂O₃ catalysts for octane number improvement**
S. Dokjampa, T. Rirksomboon, S. Osuwan, S. Jongpatiwut, *Chulalongkorn University (Thailand)*; P.T. Do, D.E. Resasco, *University of Oklahoma (U.S.)*
- A6-P34 **Development of supported organometallic cluster-derived ethanol steam reforming nanocatalysts**
A.C.W. Koh, W.K. Leong, *National University of Singapore (Singapore)*; L.W. Chen, T.P. Ang, J.Y. Lin, M. Tasrif, R. Kanaparthi, Y.F. Han, H.Sun, H.W. Mook, *ICES (Singapore)*; B.F.G. Johnson, T. Khimiyak, *University of Cambridge (U.K.)*
- A6-P35 **Alumina-supported cobalt-molybdenum catalyst for slurry phase Fischer-Tropsch synthesis**
C.G. Cooper, Y.J. Lee, T.H. Nguyen, T. Safinski, K.M. Hardiman, F.P. Lucien, A.A. Adesina, *University of New South Wales (Australia)*
- A6-P36 **Influence of acidity properties on the Hbeta catalytic performance of the olefin alkylation thiophenic sulfur in gasoline**
Z.K. Zhang, X. L. Niu, X.X. Zhu, S.L. Liu, L.Y. Xu, *Dalian Institute of Chemical Physics (China)*
- A6-P37 **Selective production of propylene by Co-reaction of ethylene and methanol over SAPO-34**
J.Z. Li, Y. Qi, G.Y. Liu, F.X. Chang, Z.M. Liu, *Dalian Institute of Chemical Physics (China)*
- A6-P38 **Synthesis, characterization and catalytic performance of metal-incorporated SAPO-34 for chloromethane transformation to light olefins**
Y.X. Wei, D.Z. Zhang, Y.L. He, L. Xu, Y. Yang, Z.M. Liu, *Dalian Institute of Chemical Physics (China)*; B.L. Su, *University of Namur (Belgium)*
- A6-P39 **Chloromethane conversion to light olefins over silicoaluminophosphate molecular sieve catalysts**
D.Z. Zhang, Y.X. Wei, A.P. Du, F.X. Chang, L. Xu, Z.M. Liu, *Dalian Institute of Chemical Physics (China)*; B.L. Su, *University of Namur (Belgium)*
- A6-P40 **Influence of water on acidity of bronsted acidic ionic liquids**
J.H. Shen, H. Wang, Z.M. Liu, H.C. Liu, Y. Sun, *Dalian Institute of Chemical Physics (China)*
- A6-P41 **Electrocatalytic reactivity for oxygen reduction of palladium-modified carbon nanofiber**
J.S. Zheng, X.S. Zhang, P. Li, X.L. Yu, P. Xu, W.K. Yuan, *East China University of Science & Technology (China)*
- A6-P42 **Study on silica-supported VTeO catalysts for selective oxidation of propane to acrolein**
C.J. Huang, Y.X. Jin, F. Ying, W.Z. Weng, H.L. Wan, *Xiamen University (China)*
- A6-P43 **The selective oxidation of propane to acrolein over MoVTenbO/SiO₂ catalysts via sol-gel method**
X.D. Yi, X.B. Zhang, C.J. Huang, W.Z. Weng, H.L. Wan, *Xiamen University (China)*
- A6-P44 **Hydrocracking of decane over sulfided Ni-PW₁₂/SiO₂ catalysts**
B. Qiu, X.D. Yi, L. Lin, W.P. Fang, H.L. Wan, *Xiamen University (China)*
- A6-P45 **Autothermal reforming of methane to syngas over Ni/CeO₂-ZrO₂-SiO₂ catalysts in a fluidized-bed reactor**
J. Gao, Z.Y. Hou, K. Shen, J.H. Fei, H. Lou, X.M. Zheng, *Zhejiang University (China)*
- A6-P46 **Preparation of nano Ni catalysts via impregnation of Ni complexes for autothermal reforming of methane**
J. Gao, Z.Y. Hou, K. Shen, J.H. Fei, H. Lou, Z.M. Zheng, *Zhejiang University (China)*

- A6-P47 **Influence of milling media on the physicochemicals and catalytic properties of mechanochemical treated vanadium phosphate catalysts**
Y.H. Taufiq-Yap, C.K. Goh, *Universiti Putra Malaysia (Malaysia)*
- A6-P48 **Flame-made M/Ba/Ce_xZr_{1-x}O₂ NSR-catalysts: role of support composition and precious metal**
R. Strobel, S. Walther, S.E. Pratsinis, A. Baiker, *ETH Zurich (Switzerland)*
- A6-P49 **Effect of different calcination environments on the vanadium phosphate catalysts for selective oxidation of propane and n-butane**
Y.H. Taufiq-Yap, C.S. Saw, *Universiti Putra Malaysia (Malaysia)*
- A6-P50 **Effect of pillared clays on the hydroisomerization of n-heptane**
F. Kooli, Y. Liu, *ICES (Singapore)*; P. Siril, R. Brown, *University of Huddersfield (U.K.)*
- A6-P51 **n-C7 hydroisomerization on Y₂O₃ promoted Pt/WO₃/ZrO₂ catalysts**
Y. Liu, G.J. Gan, R. Kanaparthi, F. Kooli, *ICES (Singapore)*
- A6-P52 **The photoluminescence characteristics of TiO₂ and its relation with photocatalysis reaction on Pt/TiO₂**
J.Y. Shi, J. Chen, Z.C. Feng, P.L. Ying, C. Li, *Dalian Institute of Chemical Physics (China)*
- A6-P53 **Synthesis and characterization of nitrogen-doped Titania as a visible light sensitive photocatalyst**
Y. Cong, J.L. Zhang, *East China University of Science & Technology (China)*; M. Anpo, *Osaka Prefecture University (Japan)*
- A6-P54 **Preparation and characterization of Au/Fe³⁺ - TiO₂ with high visible and UV light activity**
L. Xiao, J.L. Zhang, *East China University of Science & Technology (China)*; M. Anpo, *Osaka Prefecture University (Japan)*
- A6-P55 **Partial oxidation of gasoline and diesel fuel to synthesize gas over Pd based metal monolith catalyst**
H.J. Kim, J.H. Rhyu, J.I. Yang, H. Jung, *Korea Institute of Energy Research (Korea)*

**Catalysis for Environment
Poster Session 2**

**7 December 2006, Thursday
16:30 to 18:30, Auditorium Foyer**

- A7-P1 **A study on adsorption characteristics over various zeolites for VOCs removal and desorption by microwave irradiation**
K.J. Kim, Y.H. Kim, M.C. Chung, H.G. Ahn, *Sunchon National University (Korea)*; W.J. Jeong, G.C. Park, *Mokpo National University (Korea)*; N.C. Park, *Chonnam National University (Korea)*
- A7-P2 **La_{1-x}K_xCo_{0.5}Mn_{0.5}O₃ perovskite-type oxides for simultaneous removal of soot and nitrogen oxides**
H. Wang, Z.Q. Sun, *Beijing Institute of Petrochemical Technology (China)*
- A7-P3 **Catalytic ozonation of nitrobenzene and aniline in water with natural mineral magnesite**
Y.M. Dong, A.M. Zhang, Y. Yin, K. He, L. Yin, *Nanjing University (China)*
- A7-P4 **Honeycomb CuO/Al₂O₃ catalyst for SCR of NO - effect of Al₂O₃ coating**
J.H. Su, Z.Y. Liu, Z.G. Huang, Q.Y. Liu, X.L. Zhang, *Shanxi Institute of Coal Chemistry (China)*
- A7-P5 **Effect of KCl on V₂O₅/AC catalyst for selective catalytic reduction of NO with NH₃**
X.L. Zhang, Z.G. Huang, Z.Y. Liu, *Shanxi Institute of Coal Chemistry (China)*
- A7-P6 **Elemental sulfur production through regeneration of a SO₂-adsorbed V₂O₅ - CoO/AC in H₂**
X.Y. Xing, Z.Y. Liu, Z.G. Huang, *Shanxi Institute of Coal Chemistry (China)*
- A7-P7 **SCR of NO over V₂O₅ / AC regenerated in 5% NH₃ / Ar**
Y.X. Guo, Z.Y. Liu, Z.G. Huang, *Shanxi Institute of Coal Chemistry (China)*
- A7-P8 **Micro-kinetics of flue gas desulfurization over CuO/Al₂O₃ : effect of H₂O**
Z.H. Jia, Z.Y. Liu, Y.H. Zhao, Z.G. Huang, *Shanxi Institute of Coal Chemistry (China)*
- A7-P9 **Deactivation of commercial SCR vanadia-based catalysts by polyphosphates in a pilot scale setup**
F. Castellino, A.D. Jensen, J.E. Johnsson, *Technical University of Denmark (Denmark)*
- A7-P10 **Marked difference in activity of alumina catalysts for selective catalytic reduction of nitrogen oxide with methanol and dimethyl ether**
N. Okazaki, R. Yokoyama, A. Tada, *Kitami Institute of Technology (Japan)*
- A7-P11 **Synthesis of nitrogen- and fluorine-codoped TiO₂ photocatalyst for degradation of organic pollutants**
K. Mori, K. Maki, M. Tomonari, S. Yuan, H. Yamashita, *Osaka University (Japan)*
- A7-P12 **Selective catalytic reduction of NO with ethene over platinum loaded mesoporous silica**
C. Saito, T. Yamamoto, M. Iwamoto, *Tokyo Institute of Technology (Japan)*
- A7-P13 **Effect of oxygen catalytic removal of 1-nitropyrene over α-Fe₂O₃/α-Al₂O₃ catalyst**
M. Tabata, T. Chohji, D. Takata, H. Shoji, *Toyama National College of Technology (Japan)*; K. Hayakawa, *Kanazawa University (Japan)*
- A7-P14 **Relationship between the structure of some 4-ring polycyclic aromatic hydrocarbons and removal efficiency over Fe₂O₃ catalyst at 500°C**
M. Tabata, Y. Shiramata, T. Chohji, D. Takata, H. Shoji, *Toyama National College of Technology (Japan)*; K. Hayakawa, *Kanazawa University (Japan)*

- A7-P15 **Catalytic removal of 1-nitropyrene over some ecomaterials (environmentally benign materials)**
M. Tabata, T. Chohji, H. Shoji, D. Takata, *Toyama National College of Technology (Japan)*; K. Hayakawa, *Kanazawa University (Japan)*
- A7-P16 **A study on reactivity of various Claus catalysts for removal of H₂S contained in coal gas**
N.K. Park, D.C. Han, G.B. Ha, T.J. Lee, S.O. Ryu, *Yeungnam University (Korea)*
- A7-P17 **Catalytic reduction of sulfur dioxide using hydrogen or carbon monoxide over Ce-Zr based catalysts for the recovery of elemental sulfur**
G.B. Han, N.K. Park, S.O. Ryu, T.J. Lee, *Yeungnam University (Korea)*
- A7-P18 **Influence of the support on the activity and deactivation of Pt catalyst for the oxidation of diesel exhaust gas**
S.T. Oh, S.M. Kim, M.S. Yun, H.I. Lee, *Seoul National University (Korea)*; H.K. Lee, G.K. Yeo, *Hyundai Eco-Technology Research Institute, Hyundai-Motors Company (Korea)*
- A7-P19 **CuZnAl mixed oxide catalyst prepared from hydrotalcite-like precursor for catalytic wet oxidation of phenol**
Y. Sun, M. Yang, H.R. Dou, C.L. Sun, *Dalian Institute of Chemical Physics (China)*
- A7-P20 **Catalytic wet air oxidation of phenol over rectorite catalyst**
A.H. Xu, M. Yang, H.Z. Du, J.Q. Li, C.L. Sun, *Dalian Institute of Chemical Physics (China)*
- A7-P21 **Catalytic wet air oxidation of coke-plant wastewater on Ru-based eggshell catalysts in a bubbling bed reactor**
M. Yang, A.H. Xu, H.Z. Du, C.L. Sun, C. Li, *Dalian Institute of Chemical Physics (China)*
- A7-P22 **Influence of wet oxygenation of activated carbon on the reduction of NO by carbon based catalyst**
Y.Y. Xue, Y. Guo, G.Z. Tao, G.Z. Lu, Y.L. Guo, J.P. Lin, *East China University of Science & Technology (China)*
- A7-P23 **The catalytic properties of Ce-doped MCM-41 in toluene combustion**
P.J. Li, Y. Guo, W.C. Zhan, Y.J. Lu, Z.G. Zhang, Y.Q. Wang, G.Z. Lu, *East China University of Science & Technology (China)*; J.H. Qian, *General Institute of Nonferrous Metals (China)*
- A7-P24 **NO selective reduction by hydrogen on TiO₂ supported metal clusters**
L.D. Li, F.X. Zhang, N.J. Guan, *Nankai University (China)*; E. Schreier, M. Richter, R. Fricke, *Leibniz-Institute for Catalysis (Germany)*
- A7-P25 **Photocatalytic reduction of nitrite ions to nitrogen on Ag/TiO₂ catalyst prepared by photodeposition**
F.X. Zhang, Y. Pi, J. Cui, X. Zhang, N.J. Guan, *Nankai University (China)*
- A7-P26 **SCR of NO with propane and propene over Co-based alumina catalysts with Co-precipitation method**
F.X. Zhang, S.J. Zhang, N.J. Guan, *Nankai University (China)*; R. Fricke, D. Schreier, R. Richter, R. Eckelt, *Leibniz-Institute for Catalysis (Germany)*
- A7-P27 **Support and catalyst pre-treatments effects on Au/Ce-Ti-O catalysts for VOCs oxidation**
M. Lamallem, R. Thomas, C. Gennequin, R. Cousin, S. Siffert, F. Aissi, A. Aboukais, *Universite du Littoral Cote d'Opale (France)*
- A7-P28 **Oxidation of dibenzothiophenes with molecular oxygen over Mo/MnO₂ catalysts**
D. Jian, J. T. Sampanthar, E. Widjaja, I.K. Surjani, *ICES (Singapore)*
- A7-P29 **In situ DRIFTS analyses of adsorption and reactions of ammonia over modified iron oxide SCR catalysts for the reduction of NO_x**
K. Hizbullah, M.T. Jan, *University of Peshawar (Pakistan)*; S. Kureti, *University of Karlsruhe (Germany)*
- A7-P30 **Design of BaO/La₂O₃ catalyst efficient for simultaneous removal of NO and carbon particulate**
G. Okamoto, T. Toyoshima, A. Miyauchi, K. Mori, T. Ohmichi, I. Katayama, H. Yamashita, *Osaka University (Japan)*
- A7-P31 **Catalytic oxidation of soot by iron oxide**
N. Jan, *University of Peshawar (Pakistan)*; S. Kureti, *University of Karlsruhe (Germany)*; K. Hizbullah, *University of Peshawar (Pakistan)*
- A7-P32 **Catalytic degradation of plastics over ferrierite**
H.J. Park, Y.K. Park, *University of Seoul (Korea)*; J.K. Jeon, J.H. Yim, *Kongju National University (Korea)*; J.M. Kim, *Sungkyunkwan University (Korea)*; J.H. Jung, *Korea University (Korea)*

Presentation Guidelines

Oral Presentations

Item	Information
Time allocated for oral presentation	<ul style="list-style-type: none"> ▪ Plenary lectures – 45 minutes of presentation ▪ Keynote lectures – 25 minutes of presentation, 5 minutes of Q&A (total = 30 minutes) ▪ Contributed papers – 17 minutes of presentation, 3 minutes of Q&A (total 20 minutes)
Slides	<ul style="list-style-type: none"> ▪ Powerpoint slides for presentation on a LCD video projector are recommended ▪ Transparencies are also acceptable
Presentation room facilities	<ul style="list-style-type: none"> ▪ A computer running Windows XP Professional operating system, with Office XP Professional installed ▪ A LCD video projector ▪ An overhead projector ▪ A microphone
Presentation files	<ul style="list-style-type: none"> ▪ Presentation files in a format compatible with the above applications are recommended ▪ Presenters may store presentation files in a CD-ROM or a USB thumb drive ▪ Presenters may also use their own notebook computer. Presenters are encouraged to bring the presentation files in a CD-ROM or a USB thumb drive as backup. ▪ Uploading of presentation files will be done daily during the coffee breaks / lunch.
Special requirements	<ul style="list-style-type: none"> ▪ Any other equipment needed must be sent by email request to the Conference Secretariat (scbe@ntu.edu.sg) at least one month before the conference date. ▪ Request is subject to availability of the equipment requested.

Poster Presentations

Item	Information
Poster size	<ul style="list-style-type: none"> ▪ A0 (width 841 mm, height 1189 mm)
Poster orientation	<ul style="list-style-type: none"> ▪ Posters must be in Portrait format
Poster board	<ul style="list-style-type: none"> ▪ Poster board will be provided to mount your poster ▪ Velcro adhesive will be provided at the conference to mount posters on the boards ▪ Your poster presentation code (e.g. A1-P2) will be indicated on the board
Mounting / dismantling of posters	<ul style="list-style-type: none"> ▪ Presenters are responsible for the mounting and dismantling of their posters ▪ Presenters can put up their posters from 9:00 on the day of their poster session and have to remove their posters by the end of the poster session ▪ Posters left behind after the stipulated time will be disposed

Submission to Catalysis Today

A selection of papers presented at APCAT 4 will be published in Catalysis Today. Authors will be informed about the procedures during the conference.

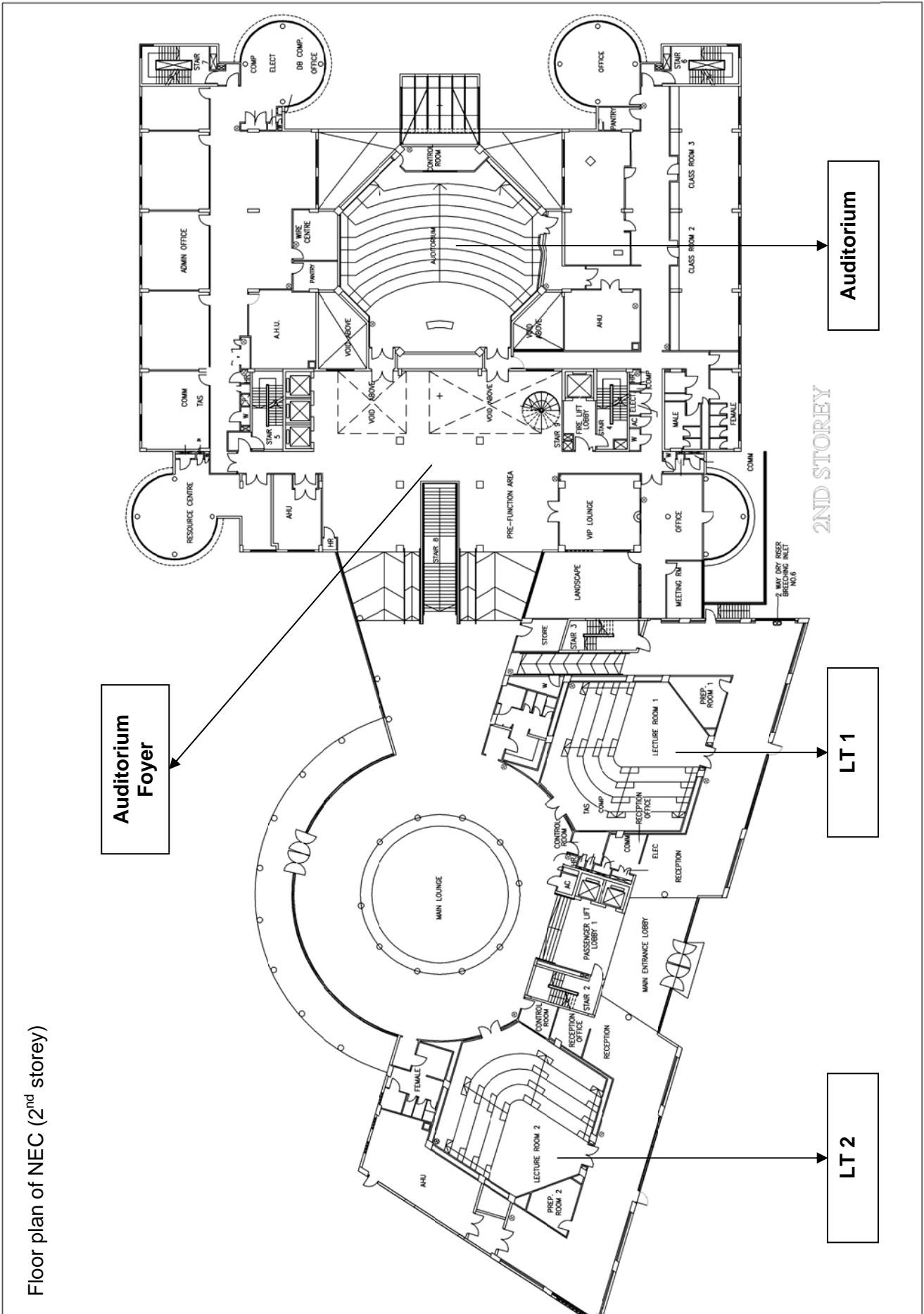
Conference Venue



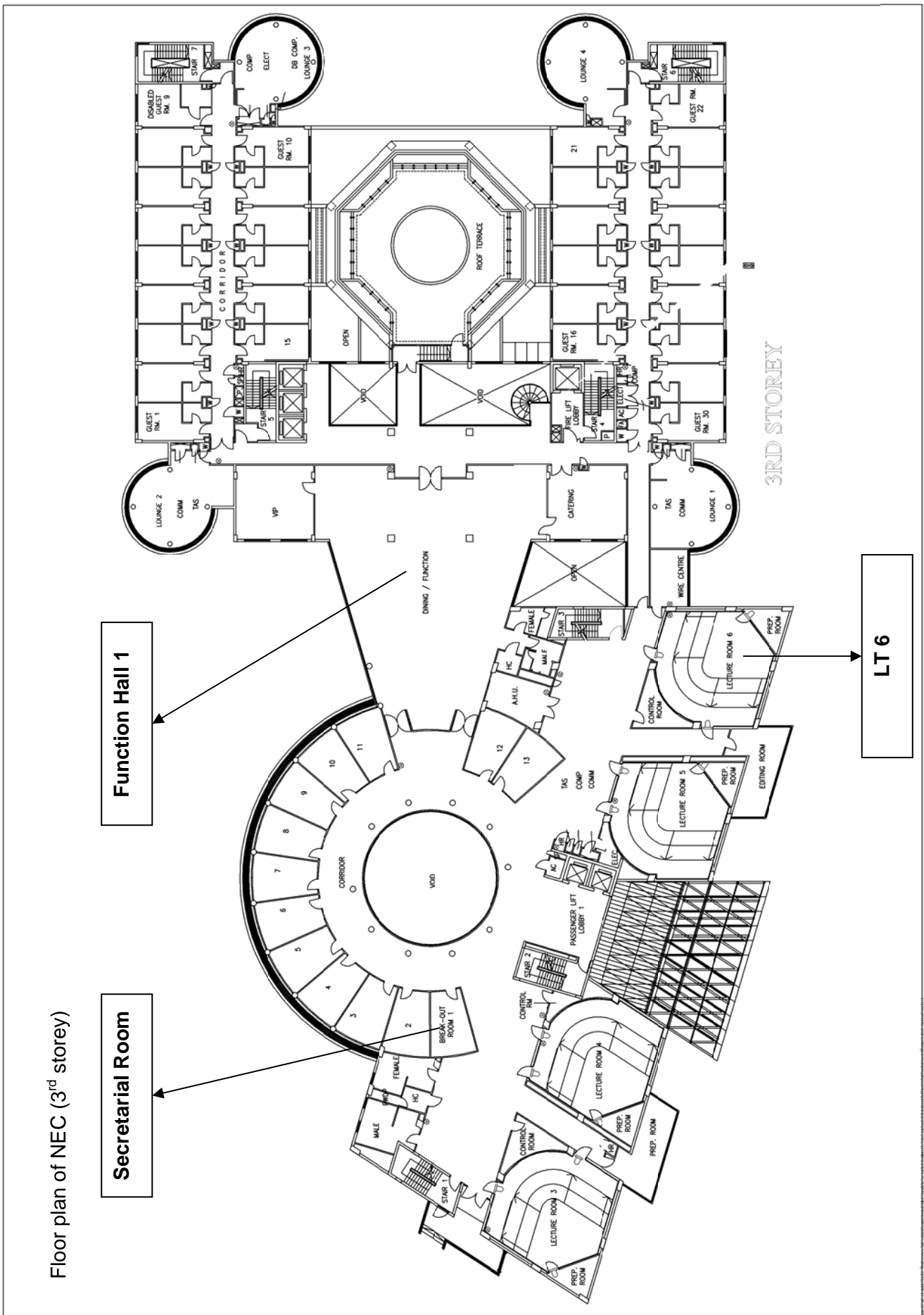
Nanyang Executive Centre (www.ntu.edu.sg/NEC)
Nanyang Technological University
60 Nanyang View
Singapore 639673
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The Nanyang Executive Centre (NEC) is strategically located in a quiet corner of the Nanyang Technological University (NTU) campus, tucked away discreetly yet easily accessible by private or public transport. Located about 25 kilometers from the city central, NEC is just 30 minutes from the shopping and business district and about 45 minutes from the airport by car.

The fastest and most convenient mode of transportation to reach NEC from the airport is by taxi and typically the taxi fare is around SGD30 to SGD35.

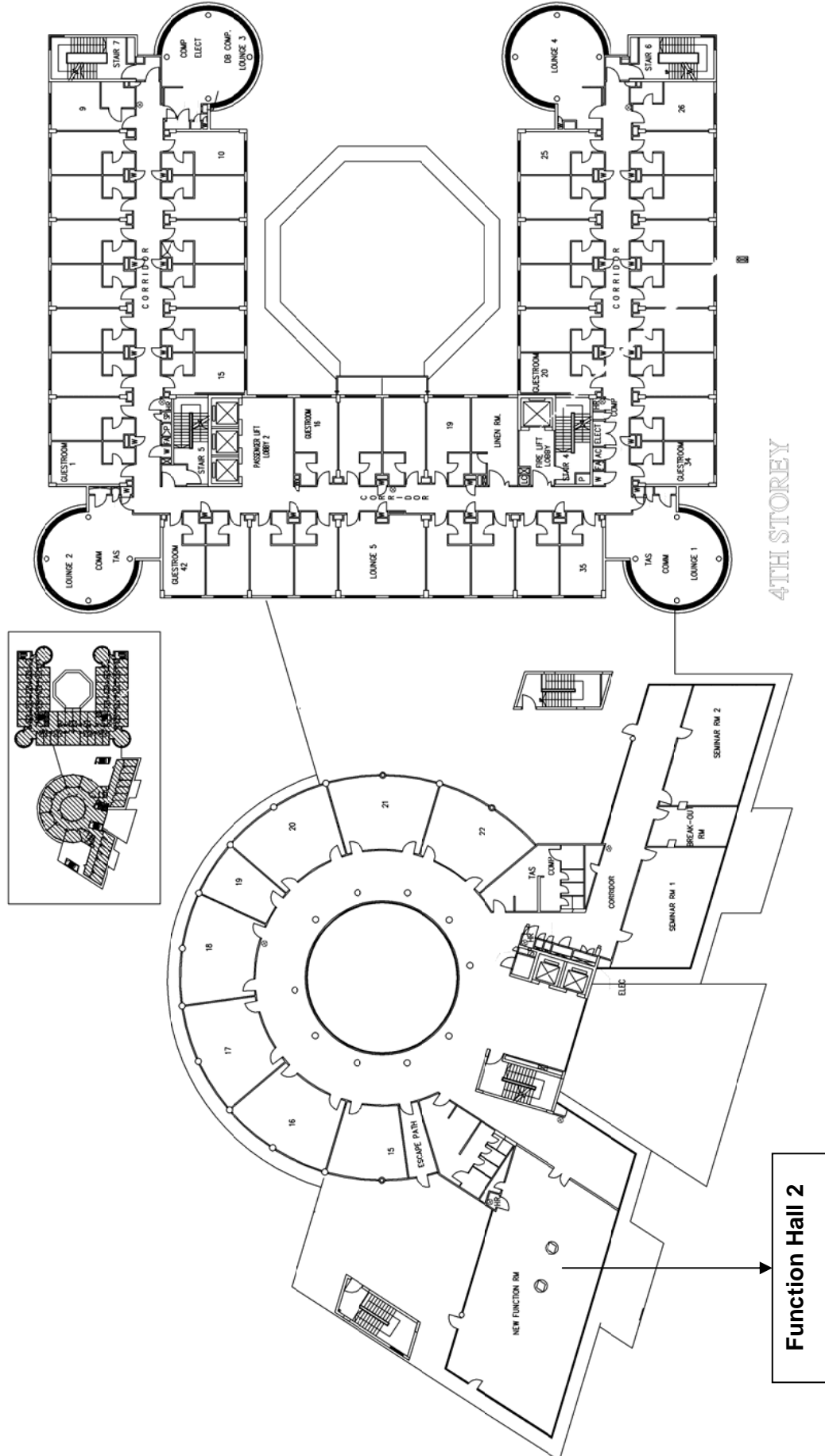


Floor plan of NEC (2nd storey)



Floor plan of NEC (3rd storey)

Floor plan of NEC (4th storey)



Other Accommodation Venues & Shuttle Services

RELC Hotel International Hotel (www.relcih.com.sg/location.html)

30 Orange Grove Road (off Orchard Road)
Singapore 258352
Tel: +65 6885 7888

Orchard Parade Hotel (www.orchardparade.com.sg)

1 Tanglin Road
Singapore 247905
Tel: +65 6737 1133

Shuttle Services		6 December 2006	7 December 2006	8 December 2006
RELC to Conference Venue	Pick up time	To be advised in due course		
	Pick up point	Hotel lobby	Hotel lobby	Hotel lobby
Orchard Parade to Conference Venue	Pick up time	To be advised in due course		
	Pick up point	Hotel lobby	Hotel lobby	Hotel lobby
Conference Venue to Hotels	Pick up time	To be advised in due course		
	Pick up point	NEC lobby	NEC lobby	NEC lobby

Conference Banquet

Date: 7 December 2006, Thursday
Time: 19:30 to 22:00
Venue: Bukit Chermin Road, Singapore 109918

The registration fee for regular participants covers admission to the conference banquet. Banquet tickets are available for sale to accompany persons and students:

- Before 31 October 2006 – SGD 80 per accompany person / SGD 60 per student
- On-site (additional SGD 20 administration fee) – SGD 100 per accompany person / SGD 80 per student

Payment (by cash only) and collection of tickets are to be made on-site at the Secretarial Room before 17:00, 6 December 2006, Wednesday.

For catering purposes, if you wish to attend the banquet / purchase the banquet tickets, please return the "Reply Slip – Conference Banquet" to the conference secretariat (fax: +65 6791 6741 or email: scbe@ntu.edu.sg) by 31 October 2006.

Other information

Money changers are available at the Singapore Changi Airport. [US\$1.00 = SG\$1.58 (approx.)]

Participants from some countries may need an entry visa for Singapore. For more information about entry visa requirements, please visit www.ntu.edu.sg/scbe/cbe/apcat4/otherinfo.htm.

Contact

For assistance or enquiries, please contact:
APCAT 4 Secretariat
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