

Symposium 1 — Surfaces and Catalysis

Monday, 17 December 2007

Sym 1

Technical Session	Session 1		
Date/Time	Monday, 17 December 2007 / 11:00 – 12:30 hrs		
Venue	Room 302		
Chair	SIM Wee Sun		
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Sym1:01	11:00 – 11:30	Designed Surfaces for Selective Catalysis Characterized by Time-Resolved XAFS, STM and DFT	1:3
Keynote		<i>Yasuhiro Iwasawa</i>	
Sym1:02	11:30 – 11:45	Selective Chemistry on Metal Surfaces: Stereoselection on Pt(111) and Metathesis on Mo ₂ C	1:3
Invited		<i>P. H. McBreen</i>	
Sym1:03	11:45 – 12:00	Molecular Insight into the Site Requirements for Oxidative Transformation of Propane	1:3
Invited		<i>Yong Cao, Yong-Mei Liu, Miao Chen, Jie Xu, He-Yong He and Kang-Nian Fan</i>	
Sym1:04	12:00 – 12:15	Adsorption of CO on Stepped Rh(553) and on Ni Decorated Rh(553) Steps	1:4
		<i>P. Singnurka and R. Schennach</i>	
Sym1:05	12:15 – 12:30	Computational Study of Sulfur Poisoning of Ni Under SOFC Operation Conditions by First-Principles and Thermodynamics	1:4
		<i>J.-H. Wang, M. C. Lin and M. Liu</i>	
Lunch Break		12:30 – 14:00 hrs	

Technical Session	Session 2		
Date/Time	Monday, 17 December 2007 / 14:00 – 15:30 hrs		
Venue	Room 302		
Chair	CHUAH Gaik Khuan		
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Sym1:06	14:00 – 14:30	White Biotechnology — Enzyme Catalysis for Fine Chemicals	1:4
Keynote		<i>S. Jaenicke, G. K. Chuah, L. M. Toh and K. L. Fow</i>	
Sym1:07	14:30 – 14:45	Mechanism of Hydrocarbon Activation Over Lewis Acid-Base Pairs in Zeolites	1:5
Invited		<i>E. J. M. Hensen</i>	
Sym1:08	14:45 – 15:00	Enantioselective Michael Reactions of Thiomalonates Catalyzed by A Chiral Bicyclic Guanidine	1:5
		<i>Zhiyong Jiang, Yuanyong Yang, Yujun Zhao, Weiping Ye and Choon-Hong Tan</i>	

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Sym1:09	15:00 – 15:15	Highly Efficient 1,3-Dinitroalkane Synthesis with Use of Primary and Tertiary Amine Immobilized Solid Catalysts <i>K. Motokura, M. Tada, S. Tanaka, M. Tomita and Y. Iwasawa</i>	1:6
Sym1:10	15:15 – 15:30	Photocatalysis of TiO ₂ Nanoparticulate Films: Isolated Effects of Crystallinity and Surface Porosity <i>L. H. Tan, A. G. G. Toh, C. X. Cai and D. L. Butler</i>	1:6

Coffee Break	15:30 – 16:00 hrs
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Technical Session	Session 3		
Date/Time	Monday, 17 December 2007 / 16:00 – 17:45 hrs		
Venue	Room 302		
Chair	LIU Xiaogang		
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Sym1:11 Keynote	16:00 – 16:30	Catalysis Chemistry of the NanoConfined Systems <i>Xinhe Bao</i>	1:7
Sym1:12 Invited	16:30 – 16:45	Surface Chemical Reaction and Role of Reaction Intermediate: An Approach from Synchrotron-Based Spectroscopy <i>H. Kondoh</i>	1:7
Sym1:13 Invited	16:45 – 17:00	Synthesis of Carbon-Based Supporting Material followed by Carbon Nanostructures Growth for Catalysis <i>S. B. Abd Hamid, N. Abdullah, I. S. Mohamad, A. Rinaldi, S. Zakaria and R. Schloegl</i>	1:8
Sym1:14	17:00 – 17:15	Photo-Induced Construction of a Second Covalently Bonded d ₃ -Acetonitrile Layer on Si(111)-7 × 7 Surface <i>Shao Yanxia, Cai Yinghui, Dong Dong, Ang Siau Gek and Xu Guo Qin</i>	1:8
Sym1:15	17:15 – 17:30	Adsorption of Molecular Oxygen on Hydrogenated and Hydroxylated Diamond Surfaces: Spin-Polarized DFT Study <i>H. Y. Hoh, K. P. Loh, M. B. Sullivan and P. Wu</i>	1:9
Sym1:76	17:30 – 17:45	Solid State-solution Structural Diversity of Ni Complexes Bearing P,N Chelating Ligands <i>Roberto Pattacini</i>	1:28

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Technical Session	Session 4		
Date/Time	Tuesday, 18 December 2007 / 11:00 – 12:30 hrs		
Venue	Room 303		
Chair	Stephen JAENICKE		
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Sym1:16 Keynote	11:00 – 11:30	Creating Chiral Surfaces: From Nanoscale Control to Macroscale Amplification <i>R. Raval</i>	1:9
Sym1:17 Invited	11:30 – 11:45	Adsorption and Microscopic Diffusion Processes of NO on Pt(997) <i>Jun Yoshinobu, Noriyuki Tsukahara, Kozo Mukai and Yoshiyuki Yamashita</i>	1:9

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Sym1:18	11:45 – 12:00	Reaction Dynamics on Pt/C Fuel-Cell Cathode Catalysts Studied by In-Situ Time-Resolved XAFS <i>Mizuki Tada</i>	1:9
Invited			
Sym1:19	12:00 – 12:15	In Situ RAIRS Studies with Multivariate Chemometrics Analyses of Methyl Acetate on Ni(111) Single Crystal Surfaces <i>Wee Chew and Wee-Sun Sim</i>	1:10
Sym1:20	12:15 – 12:30	The Quantitative Analysis of Catalytic Materials by Diffuse Reflectance FT-IR <i>J. Sirta, S. Phanichphant, C. Hardacre, R. Burch, F. C. Meunier</i>	1:10

Lunch Break	12:30 – 14:00 hrs
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Technical Session	Session 5		
Date/Time	Tuesday, 18 December 2007 / 16:00 – 17:45 hrs		
Venue	Room 302		
Chair	CAO Yong		
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Sym1:75	16:00 – 16:30	Bimetallic Complexes, Chains, Clusters and Nanomaterials <i>Pierre Braunstein</i>	1:28
Keynote			
Sym1:21	16:30 - 16:45	Lightening the Path of Photonic Nanomaterials with Photons <i>C.-C. Chang</i>	1:10
Invited			
Sym1:22	16:45 - 17:00	Hierarchical Catalysis: A New Concept Based on Designed Hierarchically Micro-Meso-Macroporous Multifunctional Single Nanocatalysts for Highly Efficient Industrial Processes <i>Bao-Lian Su</i>	1:11
Invited			
Sym1:23	17:00 - 17:15	Experimental and Theoretical Study of Single Molecular Reaction on the Si(111)-(7 × 7) Surface <i>Yongping Zhang, Kian Soon Yong and Guo Qin Xu</i>	1:11
Sym1:24	17:15 - 17:30	Advanced Thermal Characterization of Surface Modified Biomaterials <i>K. Jankova, H. Egsgaard and S. Hvilsted</i>	1:11
Sym1:25	17:30 - 17:45	Characteristics of Toluene Gas Sensor Using Palladium and TiO ₂ at room Temperature <i>Kwang-Su Kim, Hyung-Jung Her, Jea-Kyoung Kim, Tae-Sic Yoon, C. J. Kang and Yong-Sang Kim</i>	1:12

Technical Session	Poster Session		
Date/Time	Tuesday, 18 December 2007 / 14:00 – 15:30 hrs		
Venue	Gallery		
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Sym1:26		Investigation of Chemical Reaction Between NaNH ₂ and LiAlH ₄ <i>Y. S. Chua, Z. T. Xiong, G. T. Wu and Ping Chen</i>	1:12
Sym1:27		Dechlorination and In-Situ Hydrogenolysis of Persistent Organic Chemicals Using Naomembrane Supported Catalysis <i>Chanbasha Basheer, Fathima Shahitha Jahir Hussain, Nurhanim Bte Md Haron, Suresh Valiyaveettil and Hian Kee Lee</i>	1:12

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Sym1:28	Tailoring the Surface Properties of SiO ₂ -ZrO ₂ <i>W. T. Tan and G. K. Chuah</i>	1:13
Sym1:29	A Selective [4+2]-Like Cycloaddition of α , β -Unsaturated Ketone on Si(111)-7 \times 7 <i>Shuai Wang, Hai Hua Tang, Ying Hui Cai, Yue Sheng Ning, Yee Hing Lai and Guo Qin Xu</i>	1:13
Sym1:30	Dangling Bond-Initiated Polymerization on Si(111) Surface <i>Y. S. Ning, Y. X. Shao, H. H. Tang and G. Q. Xu</i>	1:13
Sym1:31	Selective Dissociative Adsorption of 4-Chloroaniline on the Si(111)-7 \times 7 Surface <i>Y. Liu, Y. H. Cai, Y. X. Shao, D. Dong, H. H. Tang, S. Wang, S. G. Ang and G. Q. Xu</i>	1:13
Sym1:32	The Binding of Glycine and L-Cysteine on Si(111)-7 \times 7 <i>Jing Yan Huang, Yue sheng Ning, Kian Soon Yong, Ying Hui Cai, Hai Hua Tang, Yan Xia Shao, Solhe Faisal Alshahateet, Yue Ming Sun, Hong Zhang and Guo Qin Xu</i>	1:14
Sym1:33	BINAP Functionalized Transition Metal Nanoparticles <i>L. Wang and W. S. Sim</i>	1:14
Sym1:34	Studies of SAMs Formed by Binary Fatty Acids System Using Scanning Tunneling Microscopy and Computational Methods <i>Chaoli Xiang and Guo-Qin Xu</i>	1:14
Sym1:35	Transformation from Hydrophilic Surface into Superhydrophobic Surface <i>Aiqin Zhao, Xuedong Zhou, Feng Gu and Guoqin Xu</i>	1:14
Sym1:36	The Synthesis of Novel Molybdenum and Tungsten Carbonyl NHC-Carbene Complexes and their Application for the Oxidation Catalysis <i>J. Zhao, S.-Y. Li and T. S. A. Hor</i>	1:15
Sym1:37	Development of Beta/SBA-15 Micro-Mesoporous Catalytic Materials <i>Y. T. Nie, S. Jaenicke and G. K. Chuah</i>	1:15
Sym1:38	Influence of Preparation Conditions and Silica Doping on the Oxygen Storage Capacity of Ceria-Zirconia Mixed Oxides <i>Vadivukarasi Raju, Zhong Liang and G. K. Chuah</i>	1:16
Sym1:39	Polymer-Incarcerated Pd-Nanoparticles as Catalyst for the Direct Formation of Hydrogen Peroxide in a Capillary Micro-Reactor <i>J. F. Ng, Y. T. Nie, G. K. Chuah and S. Jaenicke</i>	1:16
Sym1:40	Direct Hydroxylation of Benzene to Phenol Over Vanadium Catalysts <i>Christina Priya Dhanuja and S. Jaenicke</i>	1:16
Sym1:41	Etherification of Glycerol with Ethanol Over Supported WO ₃ – Catalysts <i>Rajitha Radhakrishnan and G. K. Chuah</i>	1:17
Sym1:42	Ruthenium Catalysts in the Oxidation of Alcohols: Effect of Supports and Regenerability <i>Xingjun Tu, Yinghong Yue, Yuntong Nie, Dong Minh Do, Stephan Jaenicke and Gaik-Khuan Chuah</i>	1:17

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Sym1:43	Enhanced Asymmetric Reduction of Ethyl Acetoacetate by Baker's Yeast via Slow Substrate Feeding and Selective Inhibition <i>K. L. Fow, C. H. Poon, S. T. Sim, S. Jaenicke and G. K. Chuah</i>	1:17
Sym1:44	Highly Efficient Palladium Nanowire Catalyzed Suzuki-Cross Coupling Reactions Under Mild and Aerobic Conditions <i>Sadananda Ranjit, Changlong Jiang, Zhongyu Duan and Xiaogang Liu</i>	1:18
Sym1:45	Surface Transfer Doping to Adsorbates Covalently Bonded on Diamond <i>Y. L. Zhong and K. P. Loh</i>	1:18
Sym1:46	Functionalization and Immobilization Studies on Quartz Surfaces Using Click Chemistry <i>Jie-Xun Li, Hong-Yan Song, Jonathan Hoble and Martin J. Lear</i>	1:18
Sym1:47	Reduction and Oxidation Characteristics of New Oxygen Carrier Particles for Chemical-Looping Combustion <i>H. J. Ryu, S. Y. Lee, C. K. Ryu, J. W. Kim and M. H. Park</i>	1:19
Sym1:48	Effects of Number of Cycles and Sulfation Pattern on CO ₂ Capture Characteristics of Calcium Based Dry Sorbents <i>H. J. Ryu, D. H. Bae, S. H. Jo and Y. C. Park</i>	1:19
Sym1:49	Syntheses of Mononuclear Platinum(II) Complexes with Secondary Phosphine Ligands and their Reactivity <i>Masaki Takeya, Makoto Tanabe and Kohtaro Osakada</i>	1:19
Sym1:50	Deactivation of Carbon Active Sites on Activated Carbon During Heat Treatment in Inert Gas <i>N. Oda, K. Kawata and Y. Otake</i>	1:20
Sym1:51	Surface Tension of Polymer Melts — Experimental Investigations of its Effects on Polymer-Polymer Adhesion <i>Aminul Islam, Katja Jankova, Hans N. Hansen and Peter T. Tang</i>	1:20
Sym1:52	Chromium (III) and Vanadium (IV) Complexes Immobilized on Silica Gel as Catalysts for Oxidation of Cyclohexene <i>Salam J. J. Titinchi and Selwyn F. Mapolie</i>	1:20
Sym1:53	Novel Pyrazolyl-Pyridine Vanadium(III) Complexes as Ethene Polymerization Catalysts <i>Hanna S. Abbo, Selwyn F. Mapolie and James Darkwa</i>	1:21
Sym1:54	Adsorption and Dissociation of CO _x ($x = 1, 2$) on W(111) Surface: A Computational Study <i>Hsin-Tsung Chen, Djameladdin G. Musaev and M. C. Lin</i>	1:21
Sym1:55	Synthesis and Electrochemical Investigation of the Cobalt (II) Complexes with Tetra-Dantate Azo-Containing Schiff — Base Ligands <i>Kamila Najati and Zakie Alizade</i>	1:21
Sym1:56	Ruthenium(III) Catalyzed Kinetics of Amides Oxidation by Sodium N-Bromotoluenesulphonamide in Hydrochloric Acid Medium <i>M. B. Jagadeesha, S. Ananda and M. G. Ramananda</i>	1:22
Sym1:57	Polyaniline-Pt Composites — Electrocatalytical Activity and Poisoning by Cl ⁻ Ions <i>P. Holzhauser and K. Bouzek</i>	1:22

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Sym1:58	Asymmetric Synthesis and Biological Activity of Highly Rigid L-Bicyclo[3.1.0]hexanyl Nucleoside Analogues <i>A.-Y. Park, H.-R. Lee, J.-A. Kang, D.-C. Kim and H. R. Moon</i>	1:22
Sym1:59	Synthesis of 2-“up”-Ethenyl- and Ethynyl-5-methylbicyclo[3.1.0]hexanyl Nucleoside Derivatives and their Biological Activity <i>A.-Y. Park, H. R. Moon, J.-A. Kang, H.-R. Lee and W.-H. Kim</i>	1:23
Sym1:60	Hydrophilization of Poly(ether ether ketone) Films by Surface-Initiated Atom Transfer Radical Polymerization <i>C. J. Fristrup, R. Eskimerger, J. T. Bukrinski, K. Jankova and S. Hvilsted</i>	1:24
Sym1:61	Detachable Immobilization of Liposomes on Polymer Gel Particles <i>Khaleque Abdul, Kalpana Rani Dey, Ayez Rabbani and Polash Kumar Sarker</i>	1:24
Sym1:62	Kinetic Improvements on Li-Mg-N-H System by the Addition of Triphenyl Phosphate <i>Jianhui Wang, Yongfeng Liu, Jianjiang Hu, Zhitao Xiong, Hongge Pan and Ping Chen</i>	1:24
Sym1:63	Bicyclic Guanidine — Catalyzed Enantioselective Phospha — Michael Reaction: Synthesis of Chiral β — Aminophosphine Oxides and β — Aminophosphines <i>Xiao Fu and Choon-Hong Tan</i>	1:25
Sym1:64	Enantioselective Intramolecular Michael Additions Initiated by Alkaloids as Catalysts in the Preparation of Chiral Lactones <i>Yan Zhang, Suresh Kumar Gorla and Choon-Hong Tan</i>	1:25
Sym1:65	Partial Oxidation of Pentane to Maleic and Phthalic Anhydride Using Vanadium Phosphorus Oxide Supported on Iron and Strontium Hydroxyapatites <i>S. Singh and S. B. Jonnalagadda</i>	1:25
Sym1:66	Dehydrogenation of LiAlH_4 in HMPA <i>Xueli Zheng, Zhitao Xiong, Hua Chen and Ping Chen</i>	1:25
Sym1:67	Structural and Compositional Changes During the Hydrogenation/Dehydrogenation of the Li-Mg-N-H System <i>J. J. Hu, Y. F. Liu, G. T. Wu, Z. T. Xiong and P. Chen</i>	1:26
Sym1:68	NaNH_2 Improved Mg-N-H System for Reversible Hydrogen Storage <i>Zhitao Xiong, Guotao Wu, Jianjiang Hu, Chua Yong Shen and Ping Chen</i>	1:26
Sym1:69	CuSO_4 as a Mild, Green and Efficient Catalyst for the One-Pot Conversion of THF Ethers to Acetates <i>Karim Asadolah</i>	1:26
Sym1:70	Iodobenzene Catalyzed Iodolactonisation Using Sodium Perborate Monohydrate as the End Oxidant <i>Hongjun Liu and Choon-Hong Tan</i>	1:26
Sym1:71	Chiral Bicyclic Guanidine-Catalyzed Enantioselective Reactions of Anthrones <i>Juan Shen, Thanh Truc Nguyen, Yong-Peng Goh, Weiping Ye, Xiao Fu, Junye Xu and Choon-Hong Tan</i>	1:27
Sym1:72	Vinylogous Aldol Reactions of 3-Hydroxy-2-Pyrones with Aldehydes <i>Y. T. Soh and C. H. Tan</i>	1:27

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- Sym1:73** Production of a Polyacrylamine Chelating Fibers and its Efficiency in the Removal of Cr(III) and Pb(II) Ions 1:27
M. Abdouss, M. Javanbakht, P. Tahaei, M. Edrissi and A.M. Shoushtari
- Sym1:74** Synthesis of a Chelating Fibrous Polymer with Thioamide Groups and Characterization of their Physical and Chemical Properties 1:27
M. Abdouss, P. Tahaei, M. Javanbakht, M. Edrissi and A.M. Shoushtari

** SYM-1 END **

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