

Catalysts in Petroleum Refining & Petrochemicals

Japan Cooperation Center,
Petroleum - JCCP

King Fahd University of
Petroleum & Minerals - KFUPM

The Japan Petroleum
Institute - JPI

Venue: KFUPM Research Institute Bldg. 15; 4th Floor, Dhahran, Saudi Arabia, November 27-28, 2011

Day 1: Sunday, November 27, 2011

OPENING REMARKS SESSION

Chairman: **Dr. S. Al-Khattaf**

8:00 Registration & Coffee Break

8:30 Opening Remarks

- **H.E. Dr. Khaled S. Al-Sultan**, Rector of KFUPM
- **Prof. Takashi Tatsumi**, Head Japanese Delegation, The Japan Petroleum Institute, JPI
- **Mr. Hideki Nomura**, General Manager, Japan Cooperation Center, Petroleum, JCCP

SESSION 1. HYDROPROCESSING

Chairman: **Dr. M. S. Ba-Shammakh**

9:00 1. Catalytic Roles of Nano-sized Oxides Composed with Zeolite for Hydrocracking, Catalytic Cracking & Reforming, **Prof. Sachio Asaoka**, University of Kitakyushu, Japan

9:30 2. Catalyst Developments for Production of Sulfur-Free Fuels: Effect of Ni Promoter & Chelating Reagent on Ni-MoS₂ HDS Catalysts, **Prof. Koichi Segawa**, Sophia University, Japan

10:00 Coffee Break

SESSION 2 AROMATICS & OIL MODELING

Chairman: **Prof. Koichi Segawa**

10:30 3. Transport, Sorption, & Catalytic Conversion of Aromatic Molecules in Zeolites
Prof. Johannes A. Lercher, Technical University of München, TUM, Germany

11:00 4. Kinetic Modeling of Ethylbenzene Dehydrogenation over Hydrotalcite Catalysts
Mr. Lugman Atanda, Chemical Engineering, KFUPM

11:30 5. Detailed Compositional Analysis for Kinetic Modeling of Heavy Oils
Dr. Takahiro Torii, Idemitsu Kosan Co., Japan

12:00 Prayer & Lunch Break

SESSION 3 OLEFINS PRODUCTION/PROCESSING

Chairman: **Prof. Sachio Asaoka**

13:00 6. Oxidative Dehydrogenation of Propane on VMoTeNb-O Mixed Oxide
Prof. Jacques Vadrine, Université Pierre et Marie Curie, France

13:30 7. Improvement of Performance of ZSM-5 Catalysts for Cracking of Naphtha
Prof. Takashi Tatsumi, Tokyo Institute of Technology

14:00 8. Selective Hydrogenation in Steam Cracking
Dr. Michael Bender, BASF, Germany

14:30 Prayer & Coffee Break

SESSION 4 SO₂ REDUCTION & FCC

Chairman: **Dr. Yuguo Wang**

14:45 9. Optimal SO₂ Reduction Strategies in an Oil Refinery Based on Arabian Light Crude Oil
Dr. Mohammed S. Ba-Shammakh, Chemical Engineering, KFUPM

15:15 10. Upgraded Technology of Residue FCC Catalyst
Mr. Takahisa Horie, JGC Catalysts & Chemicals, Japan

15:45 Day One Ends

Each presentation includes 5-minutes Q&A

<http://www3.kfupm.edu.sa/catsymp/>

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Day 2: Monday, November 28, 2011

SESSION 5 NOVEL APPLICATIONS

Chairman: Prof. Mikio Miyake

8:00 **Registration & Coffee Break**

8:30 11. New Catalyst Support Material for Fischer-Tropsch Synthesis
Prof. Toshimitsu Suzuki, *Kansai University, Japan*

9:00 12. Influences of Heat Treatment & deNO_x Performance of Cordierite Honeycombs Washcoated with Spinel Catalysts, **Dr. Md. Hasan Zahir**, *Chemistry Dept., KFUPM*

9:30 13. Does the Presence of ZSM-5 Influence the Catalytic Activity of Mesoporous Molecular Sieves?
Dr. B. Rabindran Jermy, *CRP KFUPM-RI*

10:00 **Coffee Break**

SESSION 6 NANOCRYSTALS & GAS ADSORPTION

Chairman: Prof. Jacques Vedrine

10:30 14. Preparation of Shape & Size Controlled Metal Nanocrystals & their Application as Novel Model Catalysts, **Prof. Mikio Miyake**, *Japan Advanced Institute of Science & Technology*

11:00 15. Application of Mono/Multilayer & Adsorption Potentials Theories to Gas Adsorption
Dr. Yuqun Wang, *Saudi Aramco R&DC, Dhahran*

11:30 16. Application of Neural Network Modeling for Gas Adsorption
Dr. Mohammed Hashim, *Saudi Aramco R&DC, Dhahran*

12 :00 **Prayer & Lunch Break**

SESSION 7 METATHESIS & ORGANOMETALS

Chairman: Dr. Cemal Ercan

13:00 17. Synthesis & Applications of Selective Olefin Metathesis Catalysts
Prof. Robert Grubbs, *(Nobel Laureate-Chemistry 2005), Caltech, USA*

13:30 18. Metal Catalyzed Cross Coupling Reaction in Organic Synthesis
Dr. Jaseer E. A., *CRP, KFUPM-RI*

14:00 **Prayer & Coffee Break**

SESSION 8 POLYMERIZATION & ESTERIFICATION

Chairman: Dr. Syed A. Ali

14:15 19. Metallocene-Catalyzed Diblock Co-polymerization of Methylmethacrylate with Ethylene
Dr. Muhammad Atiqullah, *CRP, KFUPM-RI*

14:45 20. Transesterification of Dimethyl Carbonate with Diethyl Carbonate over Al-Zn-MCM-41 & Al-MCM-41 Molecular Sieves, **Dr. Arudra Palani**, *CRP, KFUPM-RI*

15:15 **Closing Remarks, Symposium Ends**

Each presentation includes 5-minutes Q&A

Program Nov. 19, 2011

Registration: <http://www1.kfupm.edu.sa/kaust-cid/Registration.htm>; **E-mail** maitani@kfupm.edu.sa

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