

# Catalysts in Petroleum Refining & Petrochemicals

Japan Cooperation  
Center, Petroleum

Saudi Aramco

King Fahd University of  
Petroleum & Minerals

The Japan Petroleum  
Institute

KFUPM Research Institute Bldg. 15; 4<sup>th</sup> Floor, Dhahran, Saudi Arabia, November 8-9, 2009

## Day 1: Sunday, November 8, 2009

### OPENING REMARKS SESSION

Chairman: Dr. Sulaiman Al-Khattaf

8:00 Registration & Coffee Break

8:30 Opening Remarks

- H.E. Dr. Khaled S. Al-Sultan, Rector of KFUPM
- Dr. Yasuaki Okamoto, Head Japanese Delegation, The Japan Petroleum Institute, JPI
- Mr. Kazuhisa Okumura, Deputy General Manager, Technical Cooperation Dept.-JCCP

### SESSION 1. SULFUR REMOVAL/UPGRADING-BIO

Chairman: Dr. Toshihide Baba

9:00 1. Keynote Paper: Oxidative Desulfurization of Hydrocarbon Fractions, **Farhan Al-Shahrani**, Saudi Aramco

9:30 2. Keynote Paper: Preparation of Highly Active Co-Mo HDS Catalysts by the Addition of Citric Acid as a Chelating Agent, **Yasuaki Okamoto**, Shimane University, Japan

10:00 Coffee Break

10:15 3. Invited Paper: Application of Solid Acid Catalysis for Refining and Petrochemical Production, **Suheil Abdo**, UOP, USA

10:45 4. Hydrothermal Technology to Upgrade Hydrocarbons, **Mohammad Aljishi**, Saudi Aramco

11:15 5. Production of BHD (Bio Hydrofined Diesel) with Improved Cold Flow Properties, **Hideki Ono**, Nippon Oil Corporation

11:45 Prayer & Lunch Break

### SESSION 2. NANOCATALYSIS AND FCC

Chairman: Dr. Farhan Al-Shahrani

13:00 6. Synthesis, Characteristics and Performance of Nanostructured Catalyst, **Ki-Hyouk Choi**, Saudi Aramco

13:30 7. ProtAgon Catalyst System: Maximizing Propylene Yields in the FCC Unit, **Kenneth Hindle**, Grace, Germany

14:00 8. Study on Pseudo-Equilibration of FCC Catalysts, **Rei Hamada**, JGC C&C, Japan

14:30 Prayer & Coffee Break

### SESSION 3. HT CATALYST TESTING

Chairman: Dr. Khalid Al-Hooshani

14:45 9. Accelerated Testing of Catalysts for Refinery Applications Using High-Throughput Experimentation Methods, **Sascha Vukojevic**, HTE Germany

15:15 10. Versatile Catalyst Testing Using High Throughput Technology, **Michael Krusche**, AMTEC, Germany

15:45 11. Novel High-Throughput Testing Tools for Kinetic-Studies of Heterogeneously Catalyzed Reactions & Selective Zeolite Adsorptions, **Anton Nagy**, ILS-Integrated Lab Solutions, Germany

16:15 Day One Ends

Each presentation includes 5-minutes Q&A

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## Day 2: Monday, November 9, 2009

### SESSION 4. NOVEL CATALYSTS/H<sub>2</sub> PRODUCTION

Chairman: **Dr. Kotohiro Nomura**

- 7:45            *Registration & Coffee Break*
- 8:00    12.    *Keynote Paper:* Relating Zeolites Activity to their Structure and Acidity, **Jiri Čejka**, *Academy of Science of the Czech Republic*
- 8:30    13.    Clean Hydrogen Production Using Low Temperature Water Gas Shift Catalysis, **Chris Hardacre**, *Queen's University, Belfast*
- 9:00    14.    *Keynote Paper:* New Complex Metal Oxide Catalysts for Chemical and Energy Conversion, **Wataru Ueda**, *Hokkaido University*
- 9:30    15.    *Keynote Paper:* Manufacturing Sustainable Hydrogen for Refinery Processes by Catalytic Conversion of Pyrolysis Oil from Biomass, **Robbie Burch**, *Queen's University, Belfast*
- 10:00            *Coffee Break*

### SESSION 5. CHEMICAL PROCESSES

Chairman: **Dr. Atieh Aburaqabah**

- 10:15    16.    Metal-Loaded Mesoporus Materials for Production of Dimethyl Carbonate, **Ahmed Arafat**, *King Abdulaziz University, Jeddah*
- 10:45    17.    A Newly Developed & Introduced Process to Remove Bad Smell from Petrochemical Naphtha, **Nobuyuki Nishii**, *Idemitsu Kosan Company*
- 11:15    18.    Phase Reforming of Xylose into Furfural, **Mohammad Ahmad**, *Queen's University, Belfast*
- 11:45            *Prayer & Lunch Break*

### SESSION 6. OLEFINS PRODUCTION

Chairman: **Dr. Wataru Ueda**

- 13:00    19.    *Keynote Paper:* Ethylene to Propylene on Single Site Catalysts, **Jean-Marie Basset**, *KAUST*
- 13:30    20.    Catalytic Propylene Production from Ethylene Using Zeolite Catalysts, **Toshihide Baba**, *Tokyo Institute of Technology*
- 14:00    21.    Study of Oxidative Dehydrogenation of Ethane over Dy<sub>2</sub>O<sub>3</sub>/MgO Supported LiCl Containing Eutectic Chloride Catalysts, **Balkrishna Tope**, *KFUPM-RI*
- 14:30    22.    Partial Oxidehydrogenation of Cyclohexane to Cyclohexene over Ni-Supported Catalysts Modified by RE-Metal Oxides, **Hany AbdelDayem**, *KFU, Al-Hofuf*
- 15:00            *Prayer and Coffee Break*

### SESSION 7. POLYMERIZATION CATALYSIS

Chairman: **Dr. Muhammad Atiqullah**

- 15:15    23.    *Keynote Paper:* Innovations in Polyolefin Catalysis, **Atieh Aburaqabah**, *SABIC Riyadh*
- 15:45    24.    New Transition Metal Complex Catalysts for Synthesis of New Polymers by Precise Olefin Polymerization, **Kotohiro Nomura**, *Nara Institute of Science & Technology, Japan*
- 16:15            *Closing Remarks, Symposium Ends*

Each presentation includes 5-minutes Q&A

Program November 3, 2009

Attendance is free @ [www.kfupm.edu.sa/catsymp](http://www.kfupm.edu.sa/catsymp) Info: Ph. 03 860-2029; E-mail [maitani@kfupm.edu.sa](mailto:maitani@kfupm.edu.sa)

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