

第28回 日本サウジアラビア合同シンポジウム開催について

11月12～13日の両日、サウジアラビア KFUPM Dhahran Techno Valley において、Saudi Aramco 社、KFUPM、公益社団法人石油学会 (JPI)、JCCP の4社共催で「第28回日本サウジアラビア合同シンポジウム」を開催しました。初日のオープニングではKFUPM サヘル学長、アラムコ アル・コウェイターCTO、JCCP 平岡常務理事、並びに JPI 江口会長兼京都大学教授が挨拶を行い、130名を超える研究者や学生、地元邦人企業からの出席を得て盛大なシンポジウムとなりました。「石油精製および石油化学技術」(Technology in Petroleum Refining & Petrochemicals) が今回のテーマでしたが、クリーン・フューエル、水素、IMO 規制、ペトロリクス等幅広く、初めてとなる女性による講演も含む、新たな分野の講演が多く実施され、講演数は24件(内、日本から8件(内2件はJCCP 派遣研究者))となり、活発な質疑応答等が交わされました。

【オープニング】



【会場風景】





Technology in Petroleum Refining & Petrochemicals

▲▲▲ Venue: KFUPM Dhahran Techno Valley, Innovation Cluster Bldg., Auditorium 1111▲▲▲

Day One: Monday, November 12, 2018

OPENING REMARKS SESSION

Chairman: *Dr. Hassan Al-Asiri*

8:15 *Registration & Coffee Break*

8:30 *Opening Remarks*

- *H.E. Dr. Sahel Abduljawad*, Rector, KFUPM
- *Mr. Ahmed Al-Khuwaiter*, CTO, Saudi Aramco
- *Mr. Eiji Hiraoka*, Senior Executive Director, JCCP
- *Dr. Koichi Eguchi*, President, JPI

SESSION ONE CLEAN FUELS AND HYDROGEN

Chairman: *Dr. Takeshi Shiono*

- 9:00 1. **Keynote:** Hydrogen energy based society, *Dr. Koichi Eguchi*, JPI
- 9:30 2. Hydrogen production through thermo-neutral reforming of liquid fuels using structured catalysts, *Dr. Shakeel Ahmed*, KFUPM/CRP
- 9:50 3. Catalytic steam reforming of biomass-derivatives for hydrogen production, *Dr. Yasushi Sekine*, Waseda University, Japan
- 10:10 4. Design of scalable and stable catalysts for CO₂ reforming of methane, *Dr. Oki Muraza*, KFUPM/CENT
- 10:30 *Coffee Break*

SESSION TWO NEW CHALLENGES: FUELS/CHEMICALS

Chairman: *Dr. Ali Al-Shareef*

- 10:50 5. **Keynote:** Future fuels & petrochemicals: new technologies in the face of new challenges *Dr. James Johnson*, Honeywell UOP, USA
- 11:20 6. Clean energy generation by artificial photosynthesis based on semiconductor technology *Dr. Kazuhiro Ohkawa*, KAUST
- 11:40 7. The effect of lanthanum exchange on USY-zeolites for the alkylation of 2-butene with isobutane, *Dr. Mohammed Al-Dossary*, Saudi Aramco R&DC
- 12:00 *Prayer & Lunch Break*

SESSION THREE IMO REGULATIONS/HEAVY OIL

Chairman: *Dr. Khalid Al-Hooshani*

- 13:00 8. Responding to 2020 IMO SO_x regulation, *Mr. Atsunori Sato*, JGC Corporation, Japan
- 13:20 9. Effect of zeolite Y modification on reaction performance of heavy crude oil hydrocracking, *Dr. Lianhui Ding*, Saudi Aramco R&DC
- 13:40 10. Oil soluble dispersed catalysts for slurry phase hydrocracking of heavy VGO, *Mr. Tareq Al-Attas*, KFUPM/ChE
- 14:00 11. Development of *Petroleomics* from fundamentals to applications, *Dr. Kazuhiro Inamura*, Japan Petroleum Energy Center (JPEC), Japan
- 14:20 *Day One Ends*



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Day Two: Tuesday, November 13, 2018

SESSION FOUR CATALYST TECHNOLOGY/AROMATICS

Chairman: Dr. Yasushi Sekine

8:00 Registration & Coffee Break

- 8:30 12. Effect of alumina binder on deactivation behavior of Pt-Beta catalyst for transalkylation of toluene with 1,2,4-trimethylbenzene, *Dr. Faisal Al-Mulla, Saudi Aramco R&DC*
- 8:50 13. Driving catalysis innovation in petrochemicals through designing of unneglectable support materials, *Dr. Muhammad Haider, SABIC Riyadh*
- 9:10 14. Study the nano-structured zeolites for hydrocarbon reforming: kinetic and reaction pathways, *Dr. Ali N. Al-Jishi, Saudi Aramco R&DC*
- 9:30 15. Advance characterization of heterogeneous catalyst of core-shell Pt@SiO₂ nanoparticles, *Dr. Noor Al-Mana, Saudi Aramco R&DC*
- 9:50 Coffee Break

SESSION FIVE PETROCHEMICAL APPLICATIONS

Chairman: Mr. Alhussain Bakhurji

- 10:20 16. Numerical modeling for selected chemical processes, *Dr. Tarek Jamaledine, SABIC Riyadh*
- 10:40 17. Oxidative reforming of n-butane to ethylene, propylene and syngas on acid/base nano-hybrid catalyst, *Dr. Sachio Asaoka, KFUPM-RI/CRP and JCCP*
- 11:00 18. Light naphtha upgrading to aromatics using metal modified MFI zeolite catalysts, *Dr. Yaming Jin, Saudi Aramco R&DC*
- 11:20 19. Upgrading of unused heavy fuel oil over iron oxide based catalysts under sub and supercritical water conditions, *Dr. Takuya Yoshikawa, Hokkaido University, Japan*
- 11:40 20. Zeolite catalyst development for enhancing p-xylene selectivity, *Dr. Mohammed Al-Bahar, Saudi Aramco R&DC*
- 12:00 Prayer & Lunch Break

SESSION SIX COMPOSITES AND POLYMERIS

Chairman: Dr. Mohammed Ba-Shammakh

- 13:00 21. MgO-blended polyethylene glycol composites as a shape-stabilized phase change material for solar thermal energy storage, *Dr. Md. Hasan Zahir, KFUPM-CoRERE*
- 13:20 22. Nuclear Magnetic Resonance (NMR) Spectroscopy at Saudi Aramco's R&D Center: Where Synergy is Opportunity, *Dr. Qasim Saleem, Saudi Aramco R&DC*
- 13:40 23. Catalytic conversion of Saudi alpha-olefins to energy-saving value-added polymeric flow aids, *Dr. Muhammad Atiqullah, KFUPM/CRP*
- 14:00 24. Novel cycloolefin copolymers synthesized by ansa-dimethylsilylene fluorenyl(amido) titanium-based catalysts, *Dr. Takeshi Shiono, Hiroshima University, Japan*
- 14:20 Closing Remarks, Symposium Ends

Each presentation includes 5-minutes Q&A

Program as of Oct. 22, 2018

Registration: <http://catsymp.kfupm.edu.sa/register.htm>

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