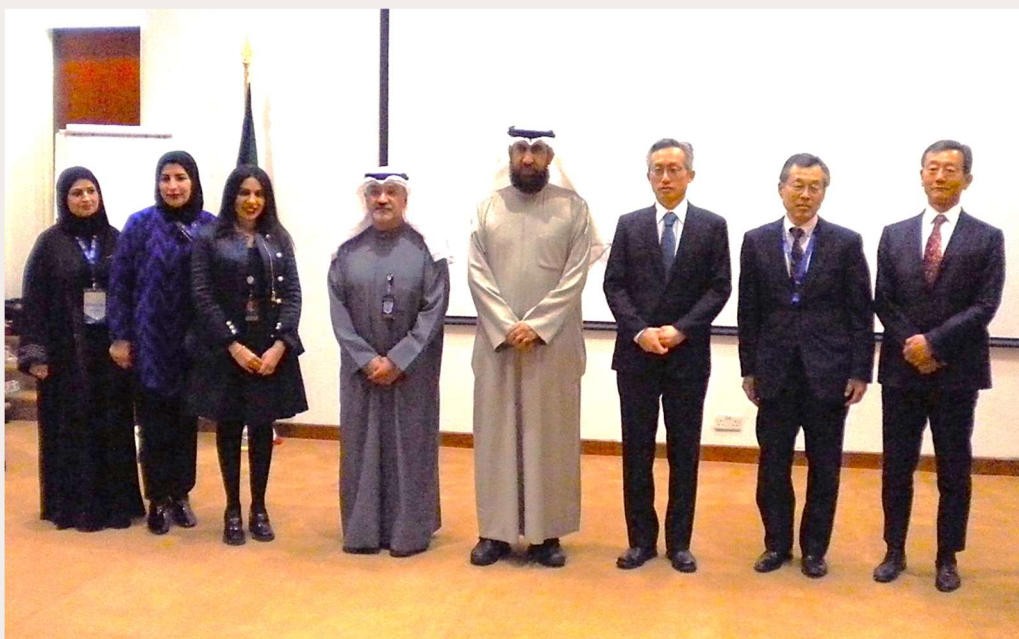


## The 21st Kuwait-Japan Joint Symposium

On February 5 and 6, 2024, KISR, KNPC (Kuwait National Petroleum Company), the Japan Petroleum Institute (JPI) and JCCP jointly organized the 21st Kuwait-Japan Joint Symposium.

The symposium was opened on the first day by Dr. Meshan M. Al-Otaibi, Acting President of KISR, Mr. Yasunari Morino, Ambassador of Japan to Kuwait, Mr. Masuda, Special Counsellor of JCCP, and Mr. Muramatsu, JPI President and Professor of Tohoku University, representing JPI. The symposium was attended by over 120 KISR researchers, KNPC and local Japanese companies.

The theme of this year's symposium was "Advancement in Petroleum Refining Industries", with 19 presentations (including five from Japan, including one online presentation) on a wide range of topics from catalyst technology to carbon neutrality, many active questions and answers were exchanged.



**The 21<sup>st</sup> Kuwait/Japan Joint Symposium**  
**“Advancement in Petroleum Refining Industries”**



**05-06 February 2024**  
**Scientific Program and Agenda**



Japan Cooperation  
Center for Petroleum  
and Sustainable Energy



Japan Petroleum  
Institute



Kuwait National  
Petroleum Company

# The 21<sup>st</sup> Kuwait/Japan Joint Symposium

## “Advancement in Petroleum Refining Industries”

### 05-06 February 2024

Day 1		Monday, 5 <sup>th</sup> February, 2024	
Opening Address		<b>Dr. Dawoud Bahzad</b> , Acting Executive Director (AED), Petroleum Research Center, Kuwait Institute for Scientific Research, KISR	
9:00 – 9:50		<b>Dr. Meshan M. Al-Otaibi</b> , Acting Director General, Kuwait Institute for Scientific Research, KISR  <b>His Excellency Mr. Yasunari Morino</b> , Ambassador Extraordinary and Plenipotentiary of the Embassy of Japan in Kuwait  <b>Mr. Hitoshi Masuda</b> , Special Counselor, Japan Cooperation Center Petroleum and Sustainable Energy, JCCP, Japan  <b>Dr. Atsushi Muramatsu</b> , President of JPI, Deputy Director (Soft Materials), Tohoku University, Japan	
Session 1 Key note lectures		<b>Chairperson; Dr. Hamza Al Bazzaz</b> , Kuwait Institute for Scientific Research, Kuwait	
9:50 – 10:15		<b>Kuwait Key note lecture:</b> <b>Prospective Role of Oil-Producing Nations in the Hydrogen Economy.</b> <b>Faisal Al Humaidan</b> , Kuwait Institute for Scientific Research, KISR, Kuwait	
10:15-10:40		<b>Japan Key note lecture:</b> <b>JPI direction along carbon neutrality and introduction of our research on zeolite catalysts</b> <b>Atsushi Muramatsu</b> , President of JPI, Japan	
		<b>10:40 – 10:50</b> <b>Break</b>	
Session 2 “Green Initiatives in Refining Industry”		<b>Chairperson; Dr. Naoya Kasai</b> , Yokohama National University, Japan	
10:50-11:10		<b>Presentation 1:</b> <b>legal framework of EU energy transition, and effect on fuels industry</b> <b>Maarten Van Haute</b> , Kuwait Petroleum Research and Technology, Netherlands (online)	
11:10-11:30		<b>Presentation 2:</b> <b>Carbon dioxide Utilization, Emission Reduction, and Recycling</b> <b>Hosam Jamal</b> , Kuwait National Petroleum Company, KISR, Kuwait	
11:30-11:50		<b>Presentation 3:</b> <b>Development of Hydrogen/Ammonia- fired Gas Turbine for Carbon Neutrality</b> <b>Sosuke Nakamura</b> , Gas Turbine Engineering Department, GTCC Energy Systems, Mitsubishi Heavy Industries. Ltd., Japan	



12:10-12:30	<b>Presentation 4:</b> <b>Electrocatalytic CO<sub>2</sub> Conversion to Value-Added Products</b> <b>Mari Vinoba</b> , Narjes Abul Ghaloum, R. Bouresli, R. Navvamani, Hanadi M. Al-Sheeha, Reem Al Fazran and Mohan S. Rana, Kuwait Institute for Scientific Research, KISR
12:30-12:50	<b>Presentation 5:</b> <b>Feasibility Study of Solar PV Implementation at Australian University</b> <b>Suad Al Radwan</b> , Petroleum Engineering, Australian University, Kuwait
12:50-1:10	<b>Presentation 6:</b> <b>Spirobifluorene based porous organic polymers for H<sub>2</sub> and CO<sub>2</sub> adsorption</b> <b>Jacob Samuel</b> , Aseel Al-Banna, Mustafa Al-Shamali and Rashed Al-Zufairi, Kuwait Institute for Scientific Research, KISR
1:10-1:45	<b>Posters</b>

Day 2	Tuesday, 6 <sup>th</sup> February, 2024
Session 3 “Advancement in downstream processes”	<b>Chairperson; Dr. Hassan Al Rabiah</b> , Kuwait Institute for Scientific Research, Kuwait

8:30 - 8:50	<b>Presentation 7:</b> <b>Zeolite membrane for hydrocarbon separation by molecular sieving effect</b> <b>Motomu Sakai</b> , Waseda University, Japan (online)
8:50 - 9:10	<b>Presentation 8:</b> <b>A Biodegradable Leaching Agent for Recycling Valuable Metals from Refinery Spent Hydroprocessing Catalysts</b> <b>Ashish Pathak</b> , Hanadi Al-Sheeha, Sakeena Al-Sairafi, R. Navvamani, Hanan M. Al-Enezi, and Mohan S. Rana, Kuwait Institute for Scientific Research, KISR
9:10 - 9:30	<b>Presentation 9:</b> <b>Development of FCC catalyst for shifting fuel oil demand and environmental protection</b> <b>Ryo Suzuki</b> , Research & Development Center, Cosmo Oil Co., Ltd., Japan
9:30 - 9:50	<b>Presentation 10:</b> <b>Dynamics of Crude Oils and Maltenes Confined to Engineered Nanoporous Silica Catalyst Proxies</b> <b>Salim Ok</b> , Kuwait Institute for Scientific Research, KISR
9:50 - 10:10	<b>Presentation 11:</b> <b>Effect of Additives on Ultra Low Sulfur Diesel Lubricity</b> <b>Rashed Bouresli</b> , Shibu Jose, Ravindranath Kanhirodan, Bader Al-Wakaa, Jaimes George, and Amani Mohammed, Kuwait Institute for Scientific Research, KISR
10:10 - 10:30	<b>Presentation 12:</b> <b>Influence of Gasoil End-Cutting Temperature on HDS Reactivity for ULSD Production</b> <b>Ahmed M. Al-Otaibi</b> , Fatma Al-Attar and Xiaoliang Ma, Kuwait Institute for Scientific Research, KISR

10:30 - 10:40 Break

Session 4  
“Maintainability and Plant  
Integrity”

**Chairperson; Ali Al Shatti, Research & Technology- Department MAB, Kuwait  
National Petroleum Company, KNPC, Kuwait**

10:40 - 11:00

**Presentation 13:**

**Amine Absorber: Troubleshooting Amine Carry Over and High DP Issue**

**Naser Alenezi and Suresh Ramakrishnan, Kuwait National Petroleum Company  
-MAA Refinery**

11:00 - 11:20

**Presentation 14:**

**Leakage-type-based Analysis of Accidents and Advanced Maintenance  
Technology**

**Naoya Kasai, Yokohama National University, Japan**

11:20 - 11:40

**Presentation 15:**

**Delayed Coker Unit-20 Coke Drum Keyhole Thermo-Mechanical Fatigue Life Span  
Enhancement and Unified SD structure and manpower allocation.**

**Ahmad Ghalib Abdullateef, Fahad Jassim Ben Awadh, and Mohammad  
Albdulateef, Kuwait National Petroleum Company**

11:40 - 12:00

**Presentation 16:**

**KNPC MAB Maintenance Department Successful Stories**

**Abdullah Bin Jumaah, Kuwait National Petroleum Company, Mina Abdullah Refinery**

12:00 -12:20

Prayer Time

12:20-12:40

**Presentation 17:**

**Trouble Shooting of Reaction Furnace Burner in Sulphur Recovery Unit of Acid  
Gas Removal Plant in KNPC-MAA Refinery**

**Saad Al-Mutairi, Kuwait National Petroleum Company -MAA Refinery**

12:40-1:00

**Presentation 18:**

**Design of an In-Pipe Inspection Robot for Pipelines' Inspection**

**Adel Younis, Ibrahim Qasem, Meshari AlAbbasi, Laila AlAnazi, Ahmad abbas and  
Aseel Abdullah, Mechanical Engineering, Australian University, Kuwait**

1:00-1:20

**Presentation 19:**

**Complete Replacement of Radiant Tubes in Reactors Feed Heaters in  
Hydrocracker Unit**

**Ahmad Tareq Alfoudery , Kuwait National Petroleum Company**

1:20 -1:40 Closing & Remarks