

## Roundtable Session-1

**Room:** Grand Hall  
**Time:** 14:00-15:00

*Moderated by*  
**Ghaith Alghamdi**

*Affiliation or Company*  
**Amogy, Syzygy,  
Oxccc**

*Title*  
**Transitioning to Clean Energy: Advances in  
Low Carbon Fuels**

## Session-1 Sustainability Solutions (1)

**Chair:** Cafer T. Yafuz

**Co-chair:** Abdulrahman Al-Betar

**Room:** 1  
**Time:** 14:00-14:20

*Abstract*  
**74459**

*Name*  
**Cafer T. Yavuz**

*Affiliation or Company*  
**KAUST**

*Title*  
**Syngas economy with green hydrogen for  
rapid decarbonization of fuels and chemicals**

**Time:** 14:20-14:40

*Abstract*  
**74249**

*Name*  
**Kae Wong**

*Affiliation or Company*  
**SABIC**

*Title*  
**Adsorption: an effective way to stabilize and  
remove chlorides in plastic pyrolysis oil to  
protect assets**

**Time:** 14:40-15:00

*Abstract*  
**73932**

*Name*  
**Abdulrahman  
Al-Betar**

*Affiliation or Company*  
**KFUPM**

*Title*  
**Enhanced Water Oxidation Using Cobalt  
Composite Electrocatalyst**

**Time:** 15:00-15:20

*Abstract*  
**73440**

*Name*  
**Abdulmohsen  
Humam**

*Affiliation or Company*  
**Saudi Aramco**

*Title*  
**Integrated Electrochemical and Biological  
Approach for Remediating Oil-Contaminated  
Groundwater**

**Time:** 15:20-15:40

*Abstract*  
**73759**

*Name*  
**Gaurav  
Chaturvedi**

*Affiliation or Company*  
**Lummus  
Technology**

*Title*  
**Incremental Approach to Decarbonization for  
Steam Crackers**

**Session-1**  
**Sustainability Solutions (1)**

**Chair:** Cafer T. Yafuz

**Co-chair:** Abdulrahman Al-Betar

**Room:** 1

**Time:** 15:40-16:00

Abstract	Name	Affiliation or Company	Title
<b>73724</b>	<b>Hernando Salgado</b>	<b>BASF</b>	Sustainable operations in FCC units enable refinery transition to lower carbon footprint

**Time:** 16:00-16:20

Abstract	Name	Affiliation or Company	Title
<b>71409</b>	<b>Reem Albashrawi</b>	<b>Saudi Aramco</b>	The effect of acidic-basic structural of nickel-based catalyst for ammonia decomposition for hydrogen generation

**Time:** 16:20-16:40

Abstract	Name	Affiliation or Company	Title
<b>73170</b>	<b>Abdulaziz Al Mulhem</b>	<b>Saudi Aramco</b>	Ammonia to Hydrogen Technology for Lower-Carbon Hydrogen Production

**Time:** 16:40-17:00

Abstract	Name	Affiliation or Company	Title
<b>74416</b>	<b>Peter Nymann</b>	<b>Topsoe</b>	Co-processing of Conventional and Renewable Feedstocks in Hydrocrackers

**Session-2**  
**Sustainability Solutions (2)**

**Chair:** NOKTAN ALYAMI

**Co-chair:** Alexandra Scerbacova

**Room:** 2

**Time:** 14:00-14:20

Abstract	Name	Affiliation or Company	Title
<b>71648</b>	<b>Eun Seon Cho</b>	<b>KAIST</b>	Nanoporous Metal Hydride via Non-Corrosive Dealloying for Advanced Solid-state Hydrogen Storage.

**Time:** 14:20-14:40

Abstract	Name	Affiliation or Company	Title
<b>73805</b>	<b>Janardhanraj Subburaj</b>	<b>KAUST</b>	Towards Green Aviation: Investigating Combustion Characteristics and Predicting Properties of Sustainable Aviation Fuel (SAF) Blends

**Session-2**  
**Sustainability Solutions (2)**

**Chair:** NOKTAN ALYAMI

**Co-chair:** Alexandra Scerbacova

**Room:** 2

**Time:** 14:40-15:00

Abstract	Name	Affiliation or Company	Title
<b>74248</b>	<b>Kion Norrman</b>	<b>KFUPM</b>	<b>Novel Approach to Enhance Organic Acid Adsorption on Rock Surfaces</b>

**Time:** 15:00-15:20

Abstract	Name	Affiliation or Company	Title
<b>72367</b>	<b>Lujain Almuhaish</b>	<b>Saudi Aramco</b>	<b>Molecular Modelling of Purity effects in Supercritical CO2 Environments.</b>

**Time:** 15:20-15:40

Abstract	Name	Affiliation or Company	Title
<b>73682</b>	<b>Amod Pandey</b>	<b>Lummus Technology</b>	<b>Integration of OCM &amp; Steam Cracker for CO2 Reduction</b>

**Time:** 15:40-16:00

Abstract	Name	Affiliation or Company	Title
<b>74384</b>	<b>Simen Aamodt</b>	<b>Coorstek Membrane Sciences AS</b>	<b>Multiphysics simulations of catalytic membrane reactors for efficient hydrogen production</b>

**Time:** 16:00-16:20

Abstract	Name	Affiliation or Company	Title
<b>72768</b>	<b>Noktan Alyami Tariq Al-Mubarak Faisal Alissa</b>	<b>Saudi Aramco</b>	<b>Effective Approach and Analytical Study for Recovering and Recycling Inorganic Scale Removal Chemicals</b>

**Time:** 16:20-16:40

Abstract	Name	Affiliation or Company	Title
<b>74440</b>	<b>Ana Rousseva</b>	<b>KAUST</b>	<b>Protein-rich Microalgae Gasification for Sustainable Syngas Production</b>

**Time:** 16:40-17:00

Abstract	Name	Affiliation or Company	Title
<b>72373</b>	<b>Maher Alerwi</b>	<b>Saudi Aramco</b>	<b>Carbon Emission Model for Upstream Oil and Gas Pipeline Leakages</b>

**Session-3**  
**Future of Refining & Chemicals**

**Chair:** Dr. Saad Al-Bogami  
**Co-chair:** Dr. Muhammad Nurunnabi Siddiquee

**Room:** 3  
**Time:** 14:00-14:20

Abstract	Name	Affiliation or Company	Title
73647	Juan Colom	KAUST	One-Step Crude to Chemicals Refining Technology: From Catalyst Design to Pilot-Plant Operation
<b>Time:</b> 14:20-14:40			
73710	ADIL ALSHOAIBI	King Faisal University	Trimetallic Oxides/GO Composites Optimized with Carbon Ions Radiations for Supercapacitive Electrodes
<b>Time:</b> 14:40-15:00			
73794	Carel Pouwels	Ketjen	Ketjen's Catalytic Solutions Help FCC refiners Maintain Profitability in Highly Volatile Olefins and Petrochemicals Market
<b>Time:</b> 15:00-15:20			
73723	Shi Shou	SINOPEC	Green and Flexible Catalytic Cracking Process Bridges the Present and Future
<b>Time:</b> 15:20-15:40			
73683	Peter Kuzma	Lummus Technology	Reformulated Feeds for Olefins Production
<b>Time:</b> 15:40-16:00			
73451	Mathew John	SABIC	Auqaprocessing an Intensified Hydroprocessing Route for Conversion of Crude to Chemicals

**Session-3**  
Future of Refining & Chemicals

**Chair:** Dr. Saad Al-Bogami  
**Co-chair:** Dr. Muhammad Nurunnabi Siddiquee

**Time:** 16:00-16:20

Abstract	Name	Affiliation or Company	Title
71798	Muhammad Nurunnabi Siddiquee	KFUPM	Prospects and Challenges of Controlled Autooxidation to Produce Value-added Products From Low-value Petroleum Fractions

**Time:** 16:20-16:40

Abstract	Name	Affiliation or Company	Title
73335	Hiroshi Shintaku	JGC C&C	FCC Catalyst Technology for Light Olefin Production

**Time:** 16:40-17:00

Abstract	Name	Affiliation or Company	Title
73538	Harshal Lokhande	Siemens Energy	Comprehensive Analysis and Management of Emergency Relief Scenarios in Olefins Plants: A Focus on Heat Integration and Fractionation Systems

**Session-4 Materials Discovery for Sustainability Applications**

**Chair:** Dr. Turki Baroud  
**Co-chair:** Dr. Abduljabar Al-Sayoud

**Room:** 4  
**Time:** 14:00-14:20

Abstract	Name	Affiliation or Company	Title
73673	Arun Prakash Aranga Raju	Levidian Nanosystems Ltd	Simultaneous Industrial Decarbonization and High-Value Material Production via Microwave Plasma-Based Methane Cracking

**Time:** 14:20-14:40

Abstract	Name	Affiliation or Company	Title
73892	Prashant Bhatt	KAUST	MOFs for CO <sub>2</sub> Capture and other Environmentally Important Separations

**Time:** 14:40-15:00

Abstract	Name	Affiliation or Company	Title
74215	Linda Cheng	Honeywell UOP	Novel Materials Innovation For Sustainable Future

**Session-4 Materials Discovery  
for Sustainability Applications**
**Chair:** Dr. Turki Baroud

**Co-chair:** Dr. Abduljabar Al-Sayoud

**Room:** 4

**Time:** 15:00-15:20

**Abstract**  
**80285**
**Name**  
**Jillian Collier**
**Affiliation or Company**  
**Johnson Matthey**
**Title**  
**On the Challenges and Performance of JM  
after-treatment Catalysts Under H<sub>2</sub>-ICE  
Conditions**
**Time:** 15:20-15:40

**Abstract**  
**72512**
**Name**  
**Ali Hayek**
**Affiliation or Company**  
**Saudi Aramco**
**Title**  
**Molecular Design of Polymeric Membranes for  
High-Pressure Natural Gas Upgrading**
**Time:** 15:40-16:00

**Abstract**  
**73514**
**Name**  
**Faiz almansour**
**Affiliation or Company**  
**Saudi Aramco**
**Title**  
**Advancing Membrane Technology for  
Challenging Membrane Separation**
**Time:** 16:00-16:20

**Abstract**  
**73672**
**Name**  
**Vivek Koncherry**
**Affiliation or Company**  
**Graphene  
Innovations  
Manchester Ltd**
**Title**  
**Graphene Fiber: Next Generation of Carbon  
Fiber Made in the KSA**
**Time:** 16:20-16:40

**Abstract**  
**74410**
**Name**  
**Yuda Prima  
Hardianto**
**Affiliation or Company**  
**KFUPM**
**Title**  
**Optimized Zinc-Ion Battery with MnO<sub>2</sub>/Basil  
Activated Carbon Composite Cathode**
**Time:** 16:40-17:00

**Abstract**  
**73795**
**Name**  
**Kyriakos Stylianou**
**Affiliation or Company**  
**Oregon State  
University**
**Title**  
**Discovering Materials For Carbon Capture**

**Session-5 Innovative  
Oilfield Chemicals**

**Chair:** Rasim Serdar

**Co-chair:** Rajendra Kalgaonkar

**Room:** 5

**Time:** 14:00-14:20

*Abstract*

**74262**

*Name*

**Alexey Yudin**

*Affiliation or Company*

**TAQA**

*Title*

**Advances in Dynamic Diversion of Fracturing Fluids, a Tailored Solution to Middle East**

**Time:** 14:20-14:40

*Abstract*

**73636**

*Name*

**Xiujuan He**

*Affiliation or Company*

**Sinopec Shanghai Research Institute of Petrochemical Technology Co. Ltd.**

*Title*

**Creation and Application of Highly Efficient Foaming Agents for Gas Well Deliquification**

**Time:** 14:40-15:00

*Abstract*

**73083**

*Name*

**Amro Othman**

*Affiliation or Company*

**King Fahd University of Petroleum & Minerals**

*Title*

**Long-term Exposure of Standard Tight Sandstone Core Samples to Typical Fracturing Fluid**

**Time:** 15:00-15:20

*Abstract*

**74227**

*Name*

**Ayman Alnakhli**

*Affiliation or Company*

**Saudi Aramco**

*Title*

**Novel Thermochemical Stimulation System Unlocks New Horizons for Enhanced Acidizing Openhole Horizontal Carbonates with Organic Damage**

**Time:** 15:20-15:40

*Abstract*

**72673**

*Name*

**Abdullah Al-Enezi**

*Affiliation or Company*

**Saudi Aramco**

*Title*

**Developing of Kerogen Control Fluid System to Enhance the Permeability in Shale Reservoirs**

**Time:** 15:40-16:00

*Abstract*

**73866**

*Name*

**Abdullah Al Moajil;  
Syed Haider;  
Abdallah Ghreizy**

*Affiliation or Company*

**Saudi Aramco;  
Sinopec Middle East  
R&D Center;  
Sinopec Tech  
Middle East**

*Title*

**Efficient Screening Methodology of Matrix Acidizing Recipes in Mechanically Weak Carbonate Formation**

**Session-5 Innovative  
Oilfield Chemicals**

**Chair:** Rasim Serdar  
**Co-chair:** Rajendra Kalgaonkar

**Room:** 5  
**Time:** 16:00-16:20

Abstract	Name	Affiliation or Company	Title
72827	Wengang Li	Saudi Aramco	Strategies to Strengthen Saudi Sand as Hydraulic Fracturing Proppant

**Time:** 16:20-16:40

Abstract	Name	Affiliation or Company	Title
73411	Jawad AL-Darweesh	King Fahd University of Petroleum and Minerals	A Novel Viscoelastic Surfactants for CO2 Foamed Seawater Based Fracturing Fluid

**Time:** 16:40-17:00

Abstract	Name	Affiliation or Company	Title
73231	Abdullah Al Harith	Saudi Aramco	Innovative Stimulation Formula for Sandstone Formation

**Session-6 Digitalization  
in Oil & Gas**

**Chair:** Balaji Mohan (R&DC, Aramco)  
**Co-chair:** Jihad Badra (R&DC, Aramco)

**Room:** 6  
**Time:** 14:00-14:20

Abstract	Name	Affiliation or Company	Title
73758	Zhuang Yuan	Sinopec	Semi-supervised chemical process fault intelligent diagnosis based on deep ladder network under nonideal data conditions

**Time:** 14:20-14:40

Abstract	Name	Affiliation or Company	Title
72925	Ziyad Abdlaal	Saudi Aramco	Successful Overseeing of Parts Obsolescence through Reverse Engineering and 3D printing Metallic/Non Metallic in YRD

**Time:** 14:40-15:00

Abstract	Name	Affiliation or Company	Title
72999	Abderrahman Fakiri	Saudi Aramco	Machine-Learning-Assisted Fiber-Optic Distributed Acoustic Sensing for Quantifying Metal Loss in Composite Repaired Pipelines



Session-6 Digitalization  
in Oil & Gas

**Chair:** Balaji Mohan (R&DC, Aramco)  
**Co-chair:** Jihad Badra (R&DC, Aramco)

**Room:** 6

**Time:** 15:00-15:20

Abstract	Name	Affiliation or Company	Title
73282	Mohamed Alnouri	SLB	Enhancing Well Integrity and Operational Efficiency in Cementing Operations: The Transformative Impact of Real-Time Cement Evaluation Software (RTCES) in Saudi Arabia

**Time:** 15:20-15:40

Abstract	Name	Affiliation or Company	Title
73304	Faisal Alissa	Saudi Aramco	Autonomous Calcium Sulfate Scale Prediction Model in Wellhead and Subsurface Equipment

**Time:** 15:40-16:00

Abstract	Name	Affiliation or Company	Title
73654	Hamzah Abushullaih	Saudi Aramco	Permanent Optical Gas Imaging Camera in Oil & Gas Refineries

**Time:** 16:00-16:20

Abstract	Name	Affiliation or Company	Title
79733	David Watson	Johnson Matthey	Digitisation of Chemical Manufacturing Processes

**Time:** 16:20-16:40

Abstract	Name	Affiliation or Company	Title
73936	Joe Alphonse Amitabha Sinha	Lummus Digital	Hybrid Models For Diagnosing and Mitigating Cracked Gas Compressor Fouling

**Time:** 16:40-17:00

Abstract	Name	Affiliation or Company	Title
72450	Zahrah Altarooti	Saudi Aramco	Digital Twin Technology for Enhanced Leak Detection in the Oil and Gas Industry

**Session-7 Flow**  
**Assurance Solutions**

**Chair:** Dr. Qiwei Wang (RASD, Aramco)  
**Co-chair:** Dr. Tao Chen (Expec-ARC, Aramco)

**Room:** 7  
**Time:** 14:00-14:20

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
<b>74405</b>	<b>Moin Muhammad</b>	<b>NESR</b>	<b>An Efficient, Safe, and Practical Chemical Method for Barium Sulfate Scale Removal</b>

**Time:** 14:20-14:40

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
<b>71709</b>	<b>Gordon Graham</b>	<b>Scaled Solutions Ltd, UK</b>	<b>Overcoming the Challenges for Rapid Onsite Scale Inhibitor Residuals Analysis Using Improved Time Resolved Fluorescence Approaches</b>

**Time:** 14:40-15:00

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
<b>72441</b>	<b>Clare Johnston</b>	<b>ChampionX, USA</b>	<b>Synergistic Scale Inhibitor Blends For Severe Carbonate Scaling Systems</b>

**Time:** 15:00-15:20

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
<b>73256</b>	<b>Mohamed Abu Bakr Khalifa</b>	<b>Saudi MultiChem</b>	<b>Removal of Iron Sulfide Scale with a New Formulation: A Field Application in a sandstone Reservoir in Egypt"</b>

**Time:** 15:20-15:40

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
<b>73970</b>	<b>Martin Andersson</b>	<b>KFUPM</b>	<b>Towards first principles based computational design of improved scale inhibitors</b>

**Time:** 15:40-16:00

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
<b>73003</b>	<b>Qassim Hashim</b>	<b>Saudi Aramco</b>	<b>Downhole Iron Sulfide Scale Removal: Lab Studies and Field Deployments</b>

### Session-7 Flow

#### Assurance Solutions

**Chair:** Dr. Qiwei Wang (RASD, Aramco)

**Co-chair:** Dr. Tao Chen (Expec-ARC, Aramco)

**Room:** 7

**Time:** 16:00-16:20

Abstract	Name	Affiliation or Company	Title
73095	Maryam Aldubaikel	Halliburton, USA	A New Inhibitor for Squeeze Treatment to Control Calcium Carbonate Deposition

**Time:** 16:20-16:40

Abstract	Name	Affiliation or Company	Title
74496	Ibrahim Al Balushi	NESR	Innovative solution to dissolve highly challenging Iron Sulfide scales

**Time:** 16:40-17:00

Abstract	Name	Affiliation or Company	Title
74211	Theis Solling	KFUPM	Synthesis of new type of macrocycle based on biotin[6]juril, that is equipped with a series of Ca <sup>2+</sup> -binding ligand sites

### Session-8

#### Oilfield Chemicals

**Chair:** Tulio D. Antunes Olivares

**Co-chair:** Mohamed Zeghouan

**Room:** Grand Hall

**Time:** 15:00-15:20

Abstract	Name	Affiliation or Company	Title
74346	Syed Muhammad Shakil Hussain	KFUPM	Developments of Zwitterionic Surfactants as a Sustainable Material for Enhanced Oil Recovery Under Harsh Reservoir Environment

**Time:** 15:40-16:00

Abstract	Name	Affiliation or Company	Title
71635	Muthukumar Nagu	Saudi Aramco	Effect of Oilfield Produced Water on API 5LX-60 Pipeline Steel in Presence of H <sub>2</sub> S and CO <sub>2</sub>

Session-8  
Oilfield Chemicals

**Chair:** Tulio D. Antunes Olivares  
**Co-chair:** Mohamed Zeghouan

**Room:** Grand Hall  
**Time:** 16:00-16:20

**Abstract**  
**72854**

**Name**  
**Marcelo**  
**Dourado Motta**

**Affiliation or Company**  
**SLB**

**Title**  
**FLOTHRU: Enabling Production Through**  
**Filtercake Technology - Maximizing Financial**  
**Benefits and Reducing Operational Time**

**Time:** 16:20-16:40

**Abstract**  
**73666**

**Name**  
**Enoc Basilio**

**Affiliation or Company**  
**KAUST**

**Title**  
**Predictive Model for Silica Nano-dispersion**  
**Gelation to Enhance Conformance Control in**  
**Oilfields**

**Time:** 16:40-17:00

**Abstract**  
**86480**

**Name**  
**Liz Rowsell**

**Affiliation or Company**  
**Johnson Matthey**

**Title**  
**Application of PEM Technology for**  
**Decarbonization**

