

**Session-17 Sustainability
Solutions (1)**

Chair: Dong-Yeun Koh

Co-chair: Hayat Haddad

Room: 1

Time: 14:00-14:20

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
71650	Dong-Yeun Koh	KAIST	Electrified Fiber Sorbent for Energy - Efficient Direct Air Capture

Time: 14:20-14:40

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
72829	Ali Al Shakhs	Saudi Aramco	Modulator-Directed synthesis of high-density monolithic Zr-MOFs for exceptional volumetric hydrogen storage capacity

Time: 14:40-15:00

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
71560	Hana Alhawaj	Saudi Aramco	Plasma based NH₃ Decomposition: A Low Temperature Approach for Hydrogen Production

Time: 15:00-15:20

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
73783	Yilun Huang	Sinopec	Grafting of Maleic Anhydride onto Waste Plastics and Their Application for Compatibilization of Plastic Blends

Time: 15:20-15:40

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
73155	Minseok Bae	Saudi Aramco	Combined Hydrogen and Electricity Production from Hydrocarbon Fuels using Solid Oxide Fuel Cell

Time: 15:40-16:00

<i>Abstract</i>	<i>Name</i>	<i>Affiliation or Company</i>	<i>Title</i>
72676	Raghad Alharbi	Saudi Aramco	A Compact Cascade Structure for CO₂ separation by Thermal Diffusion

**Session-17 Sustainability
Solutions (1)**

Chair: Dong-Yeun Koh

Co-chair: Hayat Haddad

Room: 1

Time: 16:00-16:20

Abstract
72297

Name
Hayat Haddad

Affiliation or Company
KFUPM

Title
**Modified Walnut Shell Biochar Enhances Soil
Quality and Removes Heavy Metals from
Wastewater**

Time: 16:20-16:40

Abstract
XXX

Name
Klaus Ohlig

Affiliation or Company
Linde Engineering

Title
Ammonia Cracking

Time: 16:40-17:00

Abstract
76358

Name
Dr. Hadeel Banbela

Affiliation or Company
University of Jeddah

Title
**Applying Highly Active Nanomaterials
Supported on Different Oxidized Carbon
Based Nanomaterials for Improvement of
Supercapacitor and Electrochemical Cells
Performance**

**Session-18 Sustainability
Solutions (2)**

Chair: Sebastien Duval

Co-chair: Zainab AlDhawi

Room: 2

Time: 14:00-14:20

Abstract
73893

Name
Marius Weber

Affiliation or Company
hte GmbH

Title
**Unlocking High Pressure NH₃ Cracking:
Catalyst Screening and Process Optimization
using advanced High throughput Techniques**

Time: 14:20-14:40

Abstract
73288

Name
Anouar Elhancha

Affiliation or Company
SLB

Title
**On The Road to Net-Zero Carbon Emissions:
Cement-Free Well Cementing**

Time: 14:40-15:00

Abstract
73196

Name
Aadesh Harale

Affiliation or Company
Saudi Aramco

Title
**Electrified Steam Methane Reforming Process
for Low Carbon Hydrogen Production: 6 TPD
demonstration at Shaybah NGL**

**Session-18 Sustainability
Solutions (2)**

Chair: Sebastien Duval
Co-chair: Zainab AlDhawi

Room: 2

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
73565	Sebastien Duval	Saudi Aramco	Challenges and opportunities in Gas Processing on the Path to a Net Zero Gas Plant

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
72871	Vikrant Kumar	SABIC	Sustainability Improvements with in Chemical industry

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
72553	Fakhar Mehmood	Saudi Aramco	Novel concepts to Achieve Ultra-Low Vehicle Emissions for Sustainable and Clean Mobility

Time: 16:00-16:20

Abstract	Name	Affiliation or Company	Title
72675	Ahmed Ameen	Saudi Aramco	Membrane Assisted CO2 Capture from Associated and Non-associated Natural Gas Streams

Time: 16:20-16:40

Abstract	Name	Affiliation or Company	Title
73500	Sayed Rushd	KFU	Developing a Sustainable and Eco-friendly Solution to Naturalize Red Mud with Seawater

Time: 16:40-17:00

Abstract	Name	Affiliation or Company	Title
73241	Layla AlFadel	Saudi Aramco	Advanced Polymer Solution for Lightweight PV Solar Panels

Session-19 Future of Refining & Chemicals

Chair: Dr. Gopal Juttu

Co-chair: Dr. Abdennou Bourane

Room: 3

Time: 14:00-14:20

Abstract	Name	Affiliation or Company	Title
73690	Mikhail Shiryayev & Alessandro Riva	ExxonMobil (and Ketjen)	Boosting Diesel Yields and refinery Profits with MIDWTM Drop-in Catalyst Solutions

Time: 14:20-14:40

Abstract	Name	Affiliation or Company	Title
73098	Sanjib Das Sharma	Saudi Aramco	A New Deactivation Model for Hydrotreating Catalysts Deactivation

Time: 14:40-15:00

Abstract	Name	Affiliation or Company	Title
73611	Zuhair Malaibari	KFUPM	BTX Production From Aromatization of Light Naphtha Over Modified ZSM-11 with Gallium

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
73738	Sohrab Askarli	KAUST	Investigating the Effect of Extra Framework Aluminum Species on (Hydro)cracking activity of USY Zeolite

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
74272	Alexis Pailier	Axens	Crude to Chemicals Complex: Innovative Pathways with Ebullated Bed technology to boost economics thanks to ultra deep conversion of Residue

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
73250	Isa Al Aslani	KAUST	Improving The Yield Prediction Accuracy for the Direct Catalytic Cracking of Crude Oil to Chemicals

Session-19 Future of Refining & Chemicals

Chair: Dr. Gopal Juttu

Co-chair: Dr. Abdennou Bourane

Room: 3

Time: 16:00-16:20

Abstract
74274

Name
Naji AbouChedid

Affiliation or Company
Honeywell UOP

Title
Petrochemical Industry Growth with UOP IOS Solutions

Time: 16:20-16:40

Abstract
73922

Name
Ioan-Teodor Trotus

Affiliation or Company
HTE company

Title
Redefining catalyst and process development in fluid catalytic cracking for co-processing novel feedstocks

Time: 16:40-17:00

Abstract
73829

Name
Kurt Dumong

Affiliation or Company
Zeopore

Title
Affordable superior hydrocracking catalysts through strategic zeolite modifications

Session-20 Materials Discovery for Sustainability Applications

Chair: Dr. Wala Algozeeb

Co-chair: Dr. Matteo Leoni

Room: 4

Time: 14:00-14:20

Abstract
73968

Name
Steven Mullens

Affiliation or Company
VITO nv

Title
Hierarchal Structuring of CO₂ Sorbents and Benchmarking Their Performance

Time: 14:20-14:40

Abstract
74318

Name
Will Purvis

Affiliation or Company
EcoChem

Title
Accelerating Heterogenous Catalysis Development: A Novel AI-Robotics Platform for Sustainable Fuel Production

Time: 14:40-15:00

Abstract
80286

Name
Jillian Collier

Affiliation or Company
Johnson Matthey

Title
Developing N₂O Removal Catalytic Solutions to Enable Ammonia (NH₃) as a Fuel and Hydrogen (H₂) Carrier

Session-20 Materials Discovery
for Sustainability Applications

Chair: Dr. Wala Algozeeb

Co-chair: Dr. Matteo Leoni

Room: 4

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
71711	Robert Hodgkins	Saudi Aramco	Hierarchical Zeolites With Tailored Long-range Mesoporous Ordering For Vacuum Gas Oil Hydrocracking

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
74312	Faisal Almana	SABIC	SABIC's Solutions for Reinforced Thermoplastic Pipes (RTPS)

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
73209	Ammar Alahmed	Saudi Aramco	Novel MOF Sorbents for CO ₂ Capture from Diluted Streams

Time: 16:00-16:20

Abstract	Name	Affiliation or Company	Title
74283	Sanjay Remanan	KFUPM	Free-Radical Emulsion Copolymerization of Styrene/1-Hexene in an Autoclave: Synthesis and Property Evaluation

Time: 16:20-16:40

Abstract	Name	Affiliation or Company	Title
71774	Nujud Maslamani	Jazan U	CuO-Fe ₂ O ₃ /calcium alginate-carboxymethylcellulose-chitosan as efficient nanocomposite beads for catalytic reduction of organic and inorganic pollutants

Time: 16:40-17:00

Abstract	Name	Affiliation or Company	Title
73704	Muidh Alheshibri	Jubail Industrial College	Nanobubbles: Fundamentals and Applications

Session-21 Innovative
Oilfield Chemicals

Chair: Alexey Yudin

Co-chair: Rajendra Kalgaonkar

Room: 5

Time: 14:00-14:20

Abstract	Name	Affiliation or Company	Title
72423	Mustafa Alsalem	Saudi Aramco	Integrity Assessment Of Plunger Lift System Under Unconventional Gas Conditions.

Time: 14:20-14:40

Abstract	Name	Affiliation or Company	Title
73229	Luai Alhamad	Saudi Aramco	Advanced Characterization and Removal of OBM-Induced Sludge: A Lab Study

Time: 14:40-15:00

Abstract	Name	Affiliation or Company	Title
74330	Khaled Ibrahim	KFUPM	High-Temperature Carbonate Reservoir Stimulation Using GLDA and DTPA in Seawater

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
74387	Marc Archibald	Italmatch Chemicals GB Ltd	Induced Formation Damage Technology for Zonal Shut-off Application – A Case Study

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
72525	Mohammed Alabdrabalnabi	Saudi Aramco	Maximizing Production Efficiency in High Temperature Gas Wells with Nanosilica System for Water Control

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
74375	Manas Ranjan Parida	KFUPM	Coherent Anti-Stokes Raman Scattering Microscopy: Design and Application for Oilfield Investigations

**Session-21 Innovative
Oilfield Chemicals**

Chair: Alexey Yudin

Co-chair: Rajendra Kalgaonkar

Room: 5

Time: 16:00-16:20

Abstract	Name	Affiliation or Company	Title
74407	Albaraa Al-Nassar	King Fahd University of Petroleum and Minerals	How Monovalent Ions Sizes and Intermolecular Forces Govern Water in Crude Oil Emulsion Stability

Time: 16:20-16:40

Abstract	Name	Affiliation or Company	Title
73552	Yingcheng Li	Sinopec Shanghai Research Institute of Petrochemical Technology Co. Ltd.	Creation and Application of Highly Efficient Mixtures of Anionic-Cationic Surfactants for Enhanced Oil Recovery and Injection Enhancement

Time: 16:40-17:00

Abstract	Name	Affiliation or Company	Title
73567	Omprakash Pal	Saudi Aramco	Rapid Screening of Formation Water Sample Quality and Mud Filtrate Contamination

**Session -22 Digitalization
in Oil & Gas**

Chair: Yasir Ghunaim (KAUST)

Co-chair: Jihad Badra (R&DC, Aramco)

Room: 6

Time: 14:00-14:20

Abstract	Name	Affiliation or Company	Title
72444	Mohammad Rakib	Saudi Aramco	Hybrid Model for Process Optimization of An Industrial Hydrogen Generation Unit

Time: 14:20-14:40

Abstract	Name	Affiliation or Company	Title
73641	Tameem Almani	Saudi Aramco	New Algorithms for Predicting Formation Breakdown Pressures for Deviated and Horizontal Wells

Time: 14:40-15:00

Abstract	Name	Affiliation or Company	Title
73819	Rajesh Sivadasan Ashish Gupta	Lummus Digital	Advance Techniques for REAC and Water Wash Performance Upgrade

Session -22 Digitalization
in Oil & Gas

Chair: Yasir Ghunaim (KAUST)
Co-chair: Jihad Badra (R&DC, Aramco)

Room: 6

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
72702	Rima Alfaraj	Saudi Aramco	Breakdown Advisory Tool to Improve The Mechanics of Hydraulic Fracturing

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
74296	Majed Aljeshi	Saudi Aramco	Title: Sustaining Crude Stabilizer Performance by Leveraging Digital Simulation

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
72721	Frankly Toro	Saudi Aramco	Advanced Simulation Methods to Train Deep Learning Algorithms Dedicated to Detect anomalies of Flange Joints

Time: 16:00-16:20

Abstract	Name	Affiliation or Company	Title
73559	Ramasamy Srinivasagan	King Faisal University	Transforming Predictive Maintenance in Oil & Gas with Edge Computing and TinyML-Driven Machine Learning Models for Real-Time Anomaly Detection

Time: 16:20-16:40

Abstract	Name	Affiliation or Company	Title
73935	Ashish Gupta Viraj Gore	Lummus Digital	Improving residue Hydrocracking Operational Agility using Realtime Assessment of Catalyst Performance

Time: 16:40-17:00

Abstract	Name	Affiliation or Company	Title
73973	Ananth Sharma	SABIC	Development of Coupled Modelling Approach to Evaluate Impact of High Emissivity Coating on Cracker Furnace Performance also Ananth Paid as delegate - Partial Refund

Session -23 Flow
Assurance Solutions

Chair: Jeremy Moloney , ChampionX

Co-chair: Dr. Nayef Alanazi , Aramco

Room: 7

Time: 14:00-14:20

Abstract	Name	Affiliation or Company	Title
75798	Ahmed Al Suwij	Baker Hughes	Corrosion Assessment for Coil Tubing in Sour Environment for Stimulation

Time: 14:20-14:40

Abstract	Name	Affiliation or Company	Title
76330	Basheer Chanbasha	KFUPM	Understanding the analytical detection methods for measuring residual corrosion inhibitors in oil and gas and other industrial facilities: a crucial aspect of corrosion mitigation and monitoring

Time: 14:40-15:00

Abstract	Name	Affiliation or Company	Title
73077	Jeremy Moloney	ChampionX, USA	Doing More with Less in Corrosion Inhibition: Cost-Effective Corrosion Inhibitor Development and Application for Carbon Steel Pipelines

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
80328	Abdulaziz Abdullah Alharbi	SABIC	Performance of Graphene Oxide Modified Polyaniline as Corrosion Inhibitor for stainless steel 304H in Acidic Environment

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
76329	Ayoub I. Awaji	KFUPM (Halliburton)	Synthesis and Performance of PMAS Polymer as Corrosion Inhibitor

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
73071	Heonyeong Song	Unicoh Specialty Chemicals, Korea	High pressure and high temperature (HPHT) corrosion inhibitors for sour conditions

**Session -23 Flow
Assurance Solutions**

Chair: Dr. Abdulrahman Ajina (RASD, Aramco)
Co-chair: Dr Hicham Al-Hajj (Halliburton)

Room: 7
Time: 16:00-16:20
**Abstract
73825**
**Name
Yi Zheng**
**Affiliation or Company
SINOPEC, China**
**Title
Study on Emergency Protection and Disposal
Technology for Highly Acidic Gas Field
Hydrogen Sulfide Leakage**
Time: 16:20-16:40
**Abstract
77547**
**Name
Reem Alalwan**
**Affiliation or Company
Saudi Aramco**
**Title
Idea to demonstration; corrosion inhibitor for
sour Environment**
Time: 16:40-17:00
**Abstract
74411**
**Name
Septriandi Chan**
**Affiliation or Company
NESR**
**Title
Why EDTA and DTPA are not suitable for barite
scale dissolving**
**Session-24 Sustainability
Solutions (3)**

Chair: Lujayn Mohamed
Co-chair: Ardian Nengkoda

Room: Grand Hall
Time: 14:00-14:20
**Abstract
74085**
**Name
Nikhil Verghese**
**Affiliation or Company
SABIC**
**Title
Novel Reactive Polyetherimide Oligomers for
Toughening High Tg Epoxy Thermosets:
Performance robustness at clear casting and
carbon fiber composites**
Time: 14:20-14:40
Abstract
**Name
Federico Rampini**
**Affiliation or Company
TECNICAS
REUNIDAS**
Title
Time: 14:40-15:00
**Abstract
74002**
**Name
Peter Kuzma**
**Affiliation or Company
Lummus
Technology**
**Title
TC2C™: A low emissions and low CAPEX route
from crude to chemicals**

**Session-24 Sustainability
Solutions (3)**

Chair: Lujayn Mohamed
Co-chair: Ardian Nengkoda

Room: Grand Hall

Time: 15:00-15:20

Abstract	Name	Affiliation or Company	Title
72571	Weiping pan	North China Electric Power University	Zeolite Template Carbon For Energy and Environmental Applications

Time: 15:20-15:40

Abstract	Name	Affiliation or Company	Title
73830	Sami AlRashed	Lummus Technology	Advances in Post Combustion CO2 Capture Solvents

Time: 15:40-16:00

Abstract	Name	Affiliation or Company	Title
72856	Adam Kadhim	Topsoe	Innovative Solutions for Ultra-low Carbon Intensity Hydrogen Generation

Time: 16:00-16:20

Abstract	Name	Affiliation or Company	Title
73827	Ricardo prada silvy	chasm advanced materials	Large Scale Production of Carbon Nanotubes and Hydrogen From Low-cost Hydro-carbons

Time: 16:20-16:40

Abstract	Name	Affiliation or Company	Title
72772	Baoping Xu	North China Electric Power University	Application and Performance of Charged Zeolite Templated Carbon Adsorbents in the HVAC system for Direct Air Capture

Time: 16:40-17:00

Abstract	Name	Affiliation or Company	Title
72569	Md Ashraf Islam	Saudi Aramco	Future of Refinery: Methanol Co-feeding in Existing FCC