



**ADRAC** ادراك

ABU DHABI INTERNATIONAL RESEARCH AND  
DEVELOPMENT CONFERENCE AND EXHIBITION

MAY 24 - 26, 2015

ABU DHABI NATIONAL EXHIBITION CENTRE  
UNITED ARAB EMIRATES

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# Driving Energy R&D: Innovation into Motion

# WELCOME TO A WORLD OF NEW IDEAS AND INNOVATIONS FOR THE OIL & GAS SECTOR



It is my great pleasure to welcome and invite you to the **4th ADRAC Conference & Exhibition** to be hosted in Abu Dhabi, United Arab Emirates, from May 24-26, 2015.

This is an exciting time to be in the energy industry in which innovation and technology are key factors to ensure safe passage through the 21st century.

The technological advances and the significant investments made globally in R&D are already evident: from the CO<sub>2</sub> injection projects in UAE, the Middle East's successful EOR initiatives in Oman and heavy oil field pilot developments in Kuwait to the world's biggest solar photovoltaic facility in Texas A&M by the United States.

**ADRAC is all about R&D** - bringing new ideas and innovation with the aim of future deployments. In the 2015 edition, our newly designed plenary and technical sessions will promote an excellent opportunity to interconnect and exchange knowledge, from fundamental Research to Development that can be readily-tested in an operational environment.

While energy R&D initiatives are already underway across the GCC, ADRAC will strive to be **the key comprehensive international R&D conference for the energy industry** by creating a platform for the best researchers and practitioners in the Middle East and from around the world. Following the success of three previous conferences, ADRAC 2015 will offer an intimate and vibrant atmosphere in which delegates hear cutting-edge developments in the field and discuss how they resolve concerns common to our interests.

I very much look forward to seeing you in Abu Dhabi in May!

## **Yasser Saeed Al Mazroui**

Chairman  
ADRAC 2015

## Chairman of ADRAC 2015

Mr. Yasser Saeed Al Mazroui

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## A UNIQUE & PIONEER R&D FOCUSED PROGRAM

ADRAC is a three-day programme that focuses on the latest R&D findings, strategies and initiatives in the energy world. All sessions at ADRAC are being designed to allow maximum time for interaction between the presenters and the audience. ADRAC welcomes stimulating dialogue and ensures that the concepts and ideas are actively discussed - and even challenged, if needed!

ADRAC will be THE place for knowledge exchange and the driving force behind future R&D initiatives in Oil & Gas Industry.

### Day 1 | Sunday, 24 May 2015

08:30 - 09:00	Breakfast Networking
09:00 - 11:00	<a href="#">Opening Session (Conference Room A)</a>
11:00 - 11:30	Coffee Break (Exhibition Area)
11:30 - 12:30	<b>Plenary Session: Filling the Gap between Academic &amp; Industrial R&amp;D</b> (Conference Room A)
12:30 - 14:00	Lunch Break (Exhibition Area)
	<a href="#">Technical Sessions – Parallel Tracks (Conference Room B)</a>
	<b>(EEE 1) Energy Efficiency and Environment (Conference Room B/1)</b>
14:00 - 14:40	Natural Antibiotics from lignocellulosic wastes for the control of Lactic acid bacteria in the Bioethanol production from the Organic fraction of municipal solid waste, <b>S. Haris</b> , <i>Masdar Institute of Science &amp; Technology</i>
14:40 - 15:20	Modeling of a Build-in Closed Feedback Automatic – Reactive Power Compensation, <b>Mahmoud Arman</b> , <i>Brunel University London and Al Hosn Gas</i>
15:20 - 16:00	Development of Sustainable Produced Water Treatment Plant, <b>Deedar Nabi</b> , <i>Masdar Institute of Science &amp; Technology</i>
	<b>(RCM 1) Reservoir Characterization &amp; Modeling (Conference Room B/2)</b>
14:00 - 14:40	Analogue modeling of Shah Structure in Abu Dhabi; mode and structural evolution, <b>Hemin Koyi</b> , <i>ADCO</i>
14:40 - 15:20	Coupling geochemistry with geomechanics in modeling diagenesis in carbonate reservoirs, <b>Lyesse Laloui</b> , <i>EPFL</i>
	<b>(FA 1) Flow Assurance (Conference Room B/3)</b>
14:00 - 14:40	A Miniaturized EPR Sensor for Monitoring Asphaltenes Concentration and Aggregation in Real Time, <b>Aydin Babakhani</b> , <i>Rice University</i>
14:40 - 15:20	Chemical Characterization of Asphaltenes Obtained from Middle East, <b>Khalfan Al Marzouqi</b> , <i>The Petroleum Institute</i>
15:20 - 16:00	Scale reduction with the application of electromagnetic fields, <b>Adetunji Alabi</b> , <i>Masdar Institute of Science and Technology</i>

## Day 2 | Monday, 25 May 2015

08:30 - 09:00	Breakfast Networking
09:00 - 11:00	<p><b>The CTO Summit (Conference Room A)</b></p> <p><b>Crossover Technologies – How Can Innovation from Other Industries Play a Key Role in Enhancing Performance in the Energy Sector?</b></p> <p>As the global oil and gas industry ventures into some of the world's most remote territories and deepest waters, the application of advanced technologies that ensure safe, efficient and reliable hydrocarbon production is becoming ever more important. As the technological challenges of the industry are mounting, crossover technologies from other Sectors such as aerospace, automotive, and even medicine are making their way into the oil and gas Sector, providing new solutions and applications that in turn help drive efficiencies, boost productivity and optimize performance. Whether it's use of advanced materials for components and equipment operating in challenging environments, collaborating with other industries on development of new solutions, or cross sector SHARING of best practices, rapidly evolving technology has triggered a transformation process that has potential to change how the oil and gas industry operates. Creating new platforms for knowledge Exchange and R&amp;D among energy and different industries will be seminal in identifying and developing technologies that have the potential to crossover in oil and gas – as automation, aviation, medicine and robotics depict potential to revolutionize the energy industry further in coming years.</p>
11:00 - 11:30	Coffee Break (Exhibition Area)
	<b>Technical Sessions - Parallel Tracks (Conference Room B)</b>
	<b>(EEE 2) Energy Efficiency and Environment ( Conference Room B/1)</b>
11:30 - 12:10	Screening and Production of Biogas from Macro Algae Biomass Native to Abu Dhabi, <b>Rashed Hussain Farzanah</b> , <i>Masdar Institute of Science &amp; Technology</i>
12:10 - 12:50	MV versus LV chiller - Comparative Analysis, <b>Muna Alnahdi</b> , <i>RIT</i>
12:50 - 13:30	Elemental Sulfur/High Density Polyethylene Composites: Structure-Property Relationship, <b>Kishore K. Jena</b> , <i>The Petroleum Institute</i>
	<b>(AGTC 1) Advanced Geophysical Technology in Carbonates (Conference Room B/2)</b>
11:30 - 12:10	S-waves offshore UAE; about their properties, <b>Karl Berteussen</b> , <i>The Petroleum Institute</i>
12:10 - 12:50	Enhancement of fracture characterization by innovative geophysical data processing and integration in carbonate reservoirs, <b>Jun Matsushima</b> , <i>The University of Tokyo</i>
12:50 - 13:30	Advanced 4C OBC processing procedures for signal enhancement and shear waves detection, <b>Zhao Zhang</b> , <i>Texas A&amp;M University</i>
	<b>(GP 1) Gas Processing (Conference Room B/3)</b>
11:30 - 12:10	Functionalized graphene based solid adsorbents for hydrogen sulfide removal from natural gas, <b>Sunil Lonkar</b> , <i>The Petroleum Institute</i>
12:10 - 12:50	Unprecedented High Capacity Regenerable Adsorbent for H <sub>2</sub> S Removal, <b>Balasubramanian Veerappan Vaithilingam</b> , <i>University of Minnesota Twin Cities</i>
12:50 - 13:30	Unlocking Highly Sour Gas Reserves: Catalytic CO <sub>2</sub> +H <sub>2</sub> S Conversion to Value Added Hydrocarbons, <b>Jonas Baltrusaitis</b> , <i>Lehigh University</i>
13:30 - 15:00	Lunch Break (Exhibition Area)

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## Technical Sessions - Parallel Tracks (Conference Room B)

**(EEE 3) Energy Efficiency and Environment (Conference Room B/1)**

15:00-15:40	Adaptation of energy geostructures to arid and semi-arid climates, <b>Lyesse Laloui</b> , <i>EPFL</i>
15:40-16:20	Drill-Cutting Disposal: An Unexploited Resource, <b>Matteo Chiesa</b> , <i>Masdar Institute of Science &amp; Technology</i>
16:20-17:00	Nylon / Sulfur Composite: Structure, Thermal and Morphological Study, <b>Vijay Kumar S.</b> , <i>The Petroleum Institute</i>

**(EOGR 1) Enhanced Oil and Gas Recovery (Conference Room B/2)**

15:00-15:40	The use of micromodels to study foam based EOR, <b>Sibani Lisa Biswal</b> , <i>Rice University</i>
15:40-16:20	Oil effect on CO2 foam generated by a switchable amine surfactants at high temperature and high, <b>Amro Elhag</b> , <i>University of Texas at Austin</i>
16:20-17:00	Injection strategies to optimize Smart Water injection in carbonate rocks, <b>Lyesse Laloui</b> , <i>EPFL</i>

**(RCM 2) Reservoir Characterization & Modeling (Conference Room B/3)**

15:00-15:40	Generation of Oil/Water Capillary Pressure and Relative Permeability Scanning Curves for Carbonate Reservoir samples using Digital Rock Physics, <b>Kamel Zahaf</b> , <i>ADMA-OPCO</i>
15:40-16:20	Impact of stylolitization on diagenesis and reservoir quality: A case study from an Early Cretaceous reservoir in a giant oilfield, Abu Dhabi, United Arab Emirates, <b>Sadoon Morad</b> , <i>The Petroleum Institute</i>
16:20-17:00	Analogue Modeling of Shah Structure in Abu Dhabi; Predicting The Fracture System, <b>Manhal Sirat</b> , <i>ADCO</i>

## Day 3 | Tuesday, 26 May 2015

08:00 - 08:30 Breakfast Networking

## Technical Sessions - Parallel Tracks (Conference Room B)

**(EEE 4) Energy Efficiency and Environment (Conference Room B/1)**

08:30 - 09:10	Rotating Packed Beds for Process Intensification, <b>Nadeen Awwad</b> , <i>The Petroleum Institute</i>
09:10 - 09:50	Hybrid membrane process to treat oil and gas produced water for recycling and reuse, <b>Linda Zou</b> , <i>Masdar Institute of Science and Technology</i>
09:50 - 10:30	Fundamental Understanding of Molecular Weight Growth Kinetics in Olefin Pyrolysis, <b>Anthony M. Dean</b> , <i>Colorado School of Mines</i>

**(EOGR 2) Enhanced Oil and Gas Recovery (Conference Room B/2)**

08:30 - 09:10	Enhanced Oil Recovery Using Ionic Liquids, <b>Enas M. Nashef</b> , <i>Masdar Institute of Science &amp; Technology</i>
09:10 - 09:50	Desalination of Production Water & Seawater for Reservoir Fluid Re-injection using Gas Hydrate Formation, <b>Cornelis Peters</b> , <i>The Petroleum Institute</i>
09:50 - 10:30	Non dense gas foams with improved mobility reduction foam in presence of high salinity and residual oil, <b>Lahcen Nabzar</b> , <i>IFP Energies Nouvelles</i>

**(Fint 1) Facilities Integrity & (WDC 1) Well Drilling and Completion (Conference Room B/3)**

08:30 - 09:10	Optimizing the cleaning operations in gas pipelines: assessment of cleanliness and time-efficient planning, <b>Efstratios Svinterikos</b> , <i>UAEU</i>
09:10 - 09:50	Improving the mechanical stability of zeolite fibers using alumina support, <b>Saepurahman</b> , <i>Masdar Institute of Science &amp; Technology</i>
09:50 - 10:30	A Cementing Solution for Lost Circulation, <b>Sandip Patil</b> , <i>Halliburton Technology India Pvt.</i>

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10:30 - 11:00	Coffee Break (Exhibition Area)
11:00 - 12:00	<b>Plenary Session</b> (Conference Room A) <i>Open vs. Closed Innovation: Understanding the R&amp;D Dilemma</i>
12:00 - 13:00	<b>Plenary Session</b> (Conference Room A) <i>Innovative Sensor Technologies for real time proactive response</i>
13:00 - 15:30	Lunch Break (Exhibition Area)



## ADRAC AIMS TO BE THE R&D HUB FOR THE OIL AND GAS INDUSTRY

### Why Attend?

- BE INSPIRED by world renowned **Keynote speakers** and **international R&D experts**.
- EXPLORE the latest R&D initiatives at the dedicated exhibition hosting over 20 internationally recognised universities and leading industry exhibitors
- CONNECT with over 1500 experts across a wide range of fields from academia and industry
- LEARN by increasing your technical expertise with the **latest Oil & Gas findings** presented during the 3-day technical program, panel discussions and R&D focused events.

### Who Should Attend?

- University Faculty, Researchers & Students
- Industry Experts from National & International Oil Companies and Service Providers
- R&D Specialists and Research Institutes

# REGISTRATION FOR ALL CONFERENCE SESSIONS AND THE EXHIBITION **IT'S FREE!**

Space is limited and Pre-registration is required.

visit [www.adrac.info](http://www.adrac.info) today to reserve your seat

ADRAC 2015 EXHIBITION INTERCONNECTS ACADEMIA AND INDUSTRY TO FOSTER R&D COLLABORATIONS IN THE OIL AND GAS SECTOR.

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