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**IOR 2021**

**21<sup>ST</sup> EUROPEAN SYMPOSIUM  
ON IMPROVED OIL RECOVERY**

**Sustainable Ways to Maximize Recovery**

19-22 APRIL 2021 • ONLINE

**PROGRAMME**



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## Technical programme

### Oral Presentations | Monday 19 April

DAY 1			
13:00	Opening Session		
13:15	Keynote: Comparing Benefits of CO2 storage and CO2EOR from a Climate Mitigation Perspective - P. Ringrose <sup>1*</sup> , B. Nazarian <sup>1</sup> , A.M. Zadeh <sup>1</sup> <sup>1</sup> Equinor ASA		
13:55	Coffee break		
14:05	Keynote: Implementing EOR in a Mid-size European Oil Company - T. Clemens <sup>1*</sup> <sup>1</sup> OMV		
14:45	Coffee break		
Session: Pilot and field experiences I		Session: Fundamental science and mechanisms for EOR/IOR I	Session: Facility design and engineering challenges of chemical flooding for EOR at field scale
15:00	Organic Oil Recovery - Resident Microbial Enhanced Production Pilot in the Scott Field (UKCS) - R. Findlay <sup>1*</sup> , A. Bostock <sup>2</sup> , C. Hill <sup>3</sup> , C. Venske <sup>1</sup> , M. Carroll <sup>3</sup> <sup>1</sup> Hunting Energy Services; <sup>2</sup> CNOOC Petroleum Europe Ltd; <sup>3</sup> Titan Oil Recovery Inc	Successful Wettability Alteration Pilot in an Offshore Reservoir: Laboratory analysis to support planning, implementation and interpretation - N. Rohilla <sup>1*</sup> , A. Katiyar <sup>1</sup> , P. Saxena <sup>2</sup> , M. Pal <sup>2</sup> , P. Rozowski <sup>1</sup> , A. Gentilucci <sup>1</sup> <sup>1</sup> The Dow Chemical Company; <sup>2</sup> North Oil Company	The Potential Impact of Surfactant and Polymer Production on Separated Water Quality - J. Almorihil <sup>1*</sup> , A. Mouret <sup>2</sup> , M. Marsiglia <sup>2</sup> , V. Miralles <sup>3</sup> , A. AISoffi <sup>1</sup> <sup>1</sup> Saudi Aramco; <sup>2</sup> IFPEN; <sup>3</sup> Solvay
15:20	Successful Wettability Alteration pilot in offshore reservoir: Pilot Planning, execution, monitoring and interpretation - M. Pal <sup>1*</sup> , P. Saxena <sup>1</sup> , N. Rohilla <sup>2</sup> , A. Katiyar <sup>2</sup> , P. Rozowski <sup>2</sup> , T. Knight <sup>2</sup> <sup>1</sup> North Oil Company; <sup>2</sup> DOW chemicals	Experimental Design and Evaluation of Surfactant Polymer for a Heavy Oil Field in Sultanate of Oman - R. Al-Jabri <sup>2</sup> , R. Farajzadeh <sup>2</sup> , A. Alkindi <sup>2</sup> , R. Al-Mjeni <sup>2</sup> , D. Rousseau <sup>1*</sup> , S. Renard <sup>1</sup> , V. Miralles <sup>3</sup> , E. Delamaide <sup>4</sup> <sup>1</sup> IFP Energies nouvelles; <sup>2</sup> Petroleum Development of Oman; <sup>3</sup> Solvay; <sup>4</sup> IFP Technologies	Evidence that High Polymer Viscosity Accelerates and Increases Oil Response in Grimbeek Manantiales Behr - J. JURI <sup>1*</sup> <sup>1</sup> YPF
15:40	Joint Q&A		Detailed Surfactant Model Construction Elucidates Benefits of Cross-flow in Fuvial Heterogenous Surfactant-polymer Pilot in Grimbeek - V.S. Scordo Paes De Lima <sup>1*</sup> , G.F. Villarroel <sup>1</sup> , V. Lara <sup>1</sup> , F. Schein <sup>1</sup> , A. Therisod <sup>1</sup> , P. Guillen <sup>1</sup> , A.M. Ruiz <sup>1</sup> , A. Lucero <sup>1</sup> , J.E. Juri <sup>1</sup> <sup>1</sup> YPF S.A.
15:50	Coffee break		
16:00	Integrated Study and Application of Polymer Injection in Arctic Environment - T. Pepe <sup>1*</sup> , M. Martin <sup>1</sup> , P. Galeazzi <sup>1</sup> , F. Masserano <sup>1</sup> , M. De Simoni <sup>1</sup> , M. Bartosek <sup>1</sup> , S. Furlani <sup>1</sup> , V. Salvi <sup>1</sup> , H. Giraud <sup>1</sup> <sup>1</sup> Eni Spa	Approximating Irreversible Asphaltene Adsorption to Screen IOR Candidates - S. Hassan <sup>1*</sup> , S. Kamireddy <sup>1</sup> , M. Yutkin <sup>1</sup> , C. Radke <sup>2</sup> , T. Patzek <sup>1</sup> <sup>1</sup> King Abdullah University of Science and Technology (KAUST); <sup>2</sup> University of California Berkley	Joint Q&A
16:20	Is Chemical EOR Finally Coming of Age? - E. Delamaide <sup>1*</sup> <sup>1</sup> IFP Technologies (Canada) Inc.	Initiation of a surfactant-polymer flooding project at PJSC Tatneft: from laboratory studies to test injection. - M. Khisametdinov <sup>1</sup> , D. Nuriev <sup>1*</sup> , A. Lutfullin <sup>1</sup> , A. Daminov <sup>1</sup> , A. Gaifullin <sup>1</sup> , S. Puskas <sup>2</sup> <sup>1</sup> PJSC Tatneft; <sup>2</sup> MOL-Group	End of Day 1
16:40	Joint Q&A	Surface Complexation Modeling of SmartWater Synergy with EOR in Carbonates - M. Abu-AISaud <sup>1*</sup> , A. Al-Ghamdi <sup>1</sup> , S. Ayirala <sup>1</sup> , A. Al-Sofi <sup>1</sup> <sup>1</sup> Saudi Aramco	
16:50	End of Day 1		
17:00	Joint Q&A		
17:15	End of Day 1		

### Poster Presentations | Tuesday 20 April

DAY 2	
Poster Session I	
13:00	New correlations to calculate the CO2-oil interfacial tension including the asphaltene precipitation effect - I.E. Lins <sup>1*</sup> , P.H.A. Dantas <sup>2</sup> , G.M.N. Costa <sup>1</sup> , S.A.B. Vieira de Melo <sup>1,3</sup> <sup>1</sup> Programa de Engenharia Industrial, Escola Politécnica, Universidade Federal da Bahia; <sup>2</sup> Departamento de Engenharia Química, Escola Politécnica, Universidade Federal da Bahia; <sup>3</sup> Centro Interdisciplinar em Energia e Ambiente, Campus Universitário da Federação/Ondina, Universidade Federal da Bahia
	Smartwater Flooding in Carbonates: The Role of Iodides Ions in Wettability Alteration - A. Gmira <sup>1*</sup> , D. Cha <sup>1</sup> , A. Alghiryafi <sup>1</sup> , A. Alyousef <sup>1</sup> <sup>1</sup> Saudi Aramco
	Surfactant Flooding Simulation with a Modified HLD-NAC Model to Predict Microemulsion Phase Behavior - X. Sun <sup>1,2*</sup> , K. Lie <sup>1</sup> , K. Bao <sup>1</sup> , H. Nilsen <sup>1</sup> <sup>1</sup> SINTEF Digital; <sup>2</sup> China University of Petroleum (East China)
	Low pH Manganese Assisted Waterflooding Processes for Enhanced Oil Recovery in Carbonates - A. Alghamdi <sup>1*</sup> , S. Salah <sup>1</sup> , M. Otaibi <sup>1</sup> , S. Ayirala <sup>1</sup> , A. Yousef <sup>1</sup> <sup>1</sup> Saudi Aramco

## Oral Presentations | Tuesday 20 April

13:00	<b>Analysis of density, viscosity and CO2 solubility in the water-oil-CO2 system for CO2-WAG simulation</b> - L. Bastos <sup>1*</sup> , M.O. Rios <sup>2</sup> , G.M.N. Costa <sup>1</sup> , S.A.B. Vieira de Melo <sup>1,3</sup> <sup>1</sup> Programa de Engenharia Industrial, Escola Politécnica, Universidade Federal da Bahia; <sup>2</sup> Departamento de Engenharia Química, Escola Politécnica, Universidade Federal da Bahia; <sup>3</sup> Centro Interdisciplinar em Energia e Ambiente, Campus Universitário da Federação/Ondina, Universidade Federal da Bahia				
	<b>Novel In-Situ Visualization and Analysis of Oil/Brine Interfaces at Nano Scale for SmartWater Flooding</b> - D. Cha <sup>1*</sup> , M. AlOtaibi <sup>1</sup> , S. Ayirala <sup>1</sup> , A.A. Yousef <sup>1</sup> <sup>1</sup> Saudi Aramco				
	<b>Zeta Potential of the Crude Oil-Brine Interface and Implications for Controlled Salinity Waterflooding</b> - H. Collini <sup>1*</sup> , M. Jackson <sup>1</sup> <sup>1</sup> Imperial College				
	<b>Theoretical Comparison of Two Setups for Capillary Pressure Measurement by Centrifuge</b> - J. Abbasi <sup>2*</sup> , P.Ø. Andersen <sup>1</sup> <sup>1</sup> University of Stavanger; <sup>2</sup> Shiraz University				
	<b>A Predictive Approach for Condensate Blockage Risk Evaluation with Limited Data Availability</b> - R. Morgenstern <sup>1*</sup> , M. Rafiee <sup>2</sup> , A. Fogden <sup>2</sup> , R. Held <sup>2</sup> , A. Behr <sup>2</sup> , M.M. Amro <sup>1</sup> <sup>1</sup> TU Bergakademie Freiberg; <sup>2</sup> Wintershall Dea				
	<b>Upscaling Miscible CO2 EOR Processes: Characterisation of Physical Instabilities</b> - P. Ogbeiwu <sup>1*</sup> , K. Stephen <sup>1</sup> <sup>1</sup> Heriot-Watt University				
	<b>Analysis of the temperature impact on the calcite surface reactivity in modified salinity water applications</b> - M. Bonto <sup>1*</sup> , A.A. Eftekhari <sup>1</sup> , H. Nick <sup>1</sup> <sup>1</sup> Technical University Of Denmark				
	<b>Estimating two-phase reactive flow model parameters from single- and two-phase modified-salinity core flooding data</b> - H.M. Ciriaco <sup>1*</sup> , H.M. Nick <sup>1</sup> , A.A. Eftekhari <sup>1</sup> <sup>1</sup> Technical University of Denmark				
<b>Surfactants Mixture Towards Enhancing CO2-Foam Stability Under High Temperature and Salinity Conditions</b> - Z. AlYousif <sup>1*</sup> , M. Almajid <sup>1</sup> , A. Alabdulwahab <sup>1</sup> , O. Alswaie <sup>1</sup> <sup>1</sup> Saudi Aramco					
<b>Rheology, Stability, and Adsorption of an Amphoteric Foaming Agent for CO2 Mobility Control Applications under Reservoir Conditions</b> - Z. AlYousef <sup>2*</sup> , A. Gizzatov <sup>1</sup> , M. Almajid <sup>2</sup> , A. Alabdulwahab <sup>2</sup> <sup>1</sup> Aramco Americas; <sup>2</sup> Saudi Aramco					
<b>Welcome Day II Session</b>					
14:10	<b>Keynote: EOR &amp; CCUS Projects in MOL Group</b> - C. Wilms <sup>1*</sup> <sup>1</sup> MOL				
14:50	Coffee break				
<b>Session: Fundamental science and mechanisms for EOR/IOR II</b>		<b>Session: Pilot and field experiences II</b>		<b>Session: Challenges of modelling IOR</b>	
15:00	<b>A Study of Residual Oil and Wettability Effects on Polymer Retention</b> - J. Wang <sup>1*</sup> , A. AlSofi <sup>1</sup> <sup>1</sup> Saudi Aramco	<b>Learning from the Largest Polymer Flood Expansion in a Heavy Oil Field</b> - E. Delamaide <sup>1*</sup> <sup>1</sup> IFP Technologies (Canada) Inc.		<b>Acceleration of Thermodynamic Computations in Fluid Flow Applications</b> - S. Sheth <sup>1*</sup> , M. Heidari <sup>1</sup> , K. Neylon <sup>1</sup> , J. Bennett <sup>1</sup> <sup>1</sup> Schlumberger	
15:20	<b>Adsorption/Retention of HPAM Polymer in Polymer Flooding Process: Effect of Molecular Weight, Concentration and Wettability</b> - B. Satken <sup>1*</sup> , H. Bertin <sup>1</sup> , A. Omari <sup>1</sup> <sup>1</sup> University of Bordeaux	<b>Advanced Surfactant-Polymer EOR Pilot in Algyó Field, Hungary; Experiences and Lessons Learned</b> - S. Puskás <sup>1*</sup> , T. Ördög <sup>1</sup> , M. Törő <sup>1</sup> , G. Kálmán <sup>2</sup> , R. Nagy <sup>3</sup> , L. Bartha <sup>3</sup> , Á. Vágó <sup>3</sup> , J. Dudás <sup>4</sup> , I. Dékány <sup>5</sup> , R. Tabajdi <sup>6</sup> , I. Lakatos <sup>6</sup> , G. Szentés <sup>6</sup> <sup>1</sup> MOL Hungarian Oil and Gas Plc. Oilfield Chemicals and Technologies; <sup>2</sup> MOL Hungarian Oil and Gas Plc., MOL Laboratories; <sup>3</sup> University of Pannonia Department of MOL Hydrocarbon and Coal Processing; <sup>4</sup> University of Pannonia Research Institute of Biomolecular and Chemical Engineering; <sup>5</sup> University of Szeged, Department of Physical Chemistry and Material Science; <sup>6</sup> University of Miskolc Research Institute of Applied Earth Sciences		<b>Upscaling Simulations of 3D Displacement Processes that Include Change of Wettability using Analytically Derived Relative Permeability</b> - H. Al-Ibadi <sup>1*</sup> , K.D. Stephen <sup>1</sup> , E. Mackay <sup>1</sup> <sup>1</sup> Heriot-Watt University	
15:40	Joint Q&A				
15:50	Coffee break				
16:00	<b>Novel Approach to Model and Visualize the Transport of Polymer Molecules in Porous Media Using Microfluidics</b> - H. Hoteit <sup>1</sup> , A. Sugar <sup>1*</sup> , S. Habuchi <sup>1</sup> , M. Serag <sup>1</sup> , U. Buttner <sup>1</sup> , M. Fahs <sup>2</sup> <sup>1</sup> King Abdullah University of Science and Technology (KAUST); <sup>2</sup> Universite de Strasbourg	<b>Determination of in-Situ Remaining Oil Saturation Before ASP Flooding for Giant Sandstone Reservoir in North Kuwait</b> - B. Baron <sup>1*</sup> , I. Abu Shiekah <sup>2</sup> , C. Chao <sup>1</sup> , M. AL-Ajmi <sup>1</sup> <sup>1</sup> Kuwait Oil Company; <sup>2</sup> Shell Kuwait Exploration and Production B.V		<b>Modeling nonisothermal modified salinity water flooding of chalk reservoirs</b> - S. Hosseinzadeh <sup>1*</sup> , A.A. Eftekhari <sup>1</sup> , H. Nick <sup>1</sup> <sup>1</sup> Technical University of Denmark	
16:20	<b>(De)Sorption, Surface Reconstruction, and Wettability Alteration in Carbonate Reservoirs</b> - A. Rao <sup>1*</sup> , S. Kumar <sup>1</sup> , A. Duy Le <sup>1</sup> , N. Schilderink <sup>1</sup> , S. C. Ayirala <sup>2</sup> , M. B. Alotaibi <sup>2</sup> , I. Siretanu <sup>1</sup> , M. H.G. Duits <sup>1</sup> , A. A. Yousef <sup>2</sup> , F. Mugele <sup>1</sup> <sup>1</sup> Faculty of Science and Technology, University Of Twente; <sup>2</sup> The Exploration and Petroleum Engineering Center - Advanced Research Center, Saudi Aramco	<b>Specificities of Surfactant-polymer Flooding Modeling and its Role in the Technology Implementation at the Tatneft Plays</b> - L. Minikhaïrov <sup>1*</sup> , A. Lutfullin <sup>1</sup> , A. Gaïffullin <sup>1</sup> <sup>1</sup> PJSC Tatneft		<b>Gas Injection Screening in Tight Chalk</b> - J. Dreier <sup>1*</sup> , S. Tagliaferri <sup>2</sup> , H. Nick <sup>1</sup> , K. Feilberg <sup>1</sup> , A.A. Eftekhari <sup>1</sup> <sup>1</sup> The Danish Hydrocarbon Research and Technology Centre, Technical University Of Denmark; <sup>2</sup> Texas A&M University	
16:40	Joint Q&A				
16:50	End of Day 2				

Poster Presentations | Wednesday 21 April

DAY 3	
Poster Session II	Poster Session III
<p><b>13:00</b> <b>Monitoring subsurface temperature from radar scans using machine learning with applications to EOR using thermal injection.</b> - K. Van den Doel<sup>1*</sup>, G. Stove<sup>1</sup>, M. Robinson<sup>1</sup> <sup>1</sup>Adrok Ltd<sup>1</sup></p>	<p><b>In-situ emulsification for enhanced oil recovery: A microfluidic study</b> - Z. Liu<sup>1,2*</sup>, Y. Li<sup>1</sup>, S.H. Hejazi<sup>2</sup> <sup>1</sup>China University of Petroleum (Beijing); <sup>2</sup>University of Calgary</p>
<p><b>FDP optimization with techno-economic viable Infills and their impact in water/miscible WAG injection in heterogeneous reservoir</b> - M.Y. Khan<sup>1*</sup>, A. Mandal<sup>2</sup> <sup>1</sup>EORT, Innovation and Technology Group, Kuwait Oil Company-KOC; <sup>2</sup>Department of Petroleum Engineering, Indian Institute of Technology (ISM)</p>	<p><b>A New Fluidics Method to Determine Minimum Miscibility Pressure</b> - F. Ungar<sup>1*</sup>, T. Yang<sup>1</sup>, K. Uleberg<sup>1</sup>, S. Ahitan<sup>2</sup> <sup>1</sup>Equinor ASA; <sup>2</sup>Interface Fluidics</p>
<p><b>Advanced Monitoring and Surveillance Technologies for CCUS &amp; CCS Projects</b> - A. AlQasim<sup>1*</sup>, S. Kokal <sup>1</sup>Saudi Aramco</p>	<p><b>Role of Water Chemistry on the Adsorption Behavior of a Saponin-based Biosurfactant on the Sandstone Surface</b> - J. Amanabadi<sup>1</sup>, M. Simjoo<sup>1</sup>, M.S. Mousapour<sup>1*</sup> <sup>1</sup>Sahand University of Technology</p>
<p><b>Lessons Learned from Offshore Polymer Flooding Practices</b> - H. Guo<sup>1*</sup>, K. Song<sup>1</sup>, S. Liu<sup>2</sup>, X. Xin<sup>3</sup> <sup>1</sup>China University of Petroleum-Beijing; <sup>2</sup>CNOOC EnerTech-Drilling &amp; Production Company; <sup>3</sup>Yangtze University</p>	<p><b>Experimental Investigation on the Formation, Stability and Emulsification Mechanism of Polymeric Surfactants Emulsion in Porous Media</b> - X. Chen<sup>1*</sup>, Y. Li<sup>1</sup> <sup>1</sup>China University Of Petroleum</p>
<p><b>Role of Enhanced Oil Recovery Techniques in Energy Efficiency and Reducing CO2 Footprint of Oil Production</b> - R. Farajzadeh<sup>2,3,4*</sup>, A.A. Eftekhari<sup>1</sup>, R. Mjeni<sup>1</sup>, A. Kindi, J. Bruining<sup>2</sup> <sup>1</sup>Technical University of Denmark; <sup>2</sup>Delft University of Technology; <sup>3</sup>Shell Global Solutions International B.V.; <sup>4</sup>Petroleum Development Oman; <sup>5</sup>Imperial College London</p>	<p><b>Best Practices for Pressure Maintenance and Recovery in Reservoirs with Gas Caps</b> - A. AlQasim<sup>1</sup>, S. Kokal, M. Alabdullateef<sup>1</sup>, K. Katterbauer <sup>1</sup>Saudi Aramco</p>
<p><b>An Experimental Study of Steam-Solvent Coinjection for Bitumen Recovery Using a Large-Scale Physical Model</b> - K. Sheng<sup>1*</sup>, R. Okuno<sup>1</sup>, M. Imran<sup>2</sup>, P. Nakutnyy<sup>2</sup>, K. Nakagawa<sup>2</sup> <sup>1</sup>University of Texas at Austin; <sup>2</sup>Saskatchewan Research Council; <sup>3</sup>Japan Canada Oil Sands</p>	<p><b>Polymer Injectivity Learned From 20 Years' Polymer Flooding Field Practices</b> - H. Guo<sup>1*</sup>, K. Song<sup>1</sup> <sup>1</sup>China University of Petroleum-Beijing</p>
<p><b>Direct pore-scale simulation of flowrate effect on multiphase flow under mixed-wet conditions: implication for IOR</b> - S. Zou<sup>1*</sup>, Y. Liu<sup>1</sup>, N. Kang<sup>1</sup>, C. Xie<sup>1</sup>, J. Cai<sup>1</sup> <sup>1</sup>China University Of Geosciences (Wuhan)</p>	<p><b>Theoretical Study on Oil Bank for Chemical Enhanced Oil Recovery</b> - G. Chen<sup>1*</sup>, X. Zhang<sup>1</sup>, M. Ma<sup>1</sup>, K. Lu<sup>1</sup>, X. Su<sup>1</sup>, C. Wei<sup>1</sup> <sup>1</sup>E&amp;D Research Institute, Daqing Oilfield Company Ltd., Petrochina</p>
<p><b>A Deep Investigation of EOR/EGR and Stimulation Enhancement Methods in Unconventional Reservoirs</b> - C. Temizel<sup>3</sup>, C. Canbaz<sup>1</sup>, H. Aydin<sup>2*</sup>, Z. Wijaya<sup>4</sup> <sup>1</sup>Ege University; <sup>2</sup>Middle East Technical University; <sup>3</sup>Saudi Aramco; <sup>4</sup>Hess Corporation</p>	<p><b>Analytical and Numerical Analysis of EOR process in Stratified Reservoirs</b> - H. Al-Ibadi<sup>1*</sup>, K. Stephen<sup>1</sup>, E. Mackay<sup>1</sup> <sup>1</sup>Heriot-Watt University</p>
<p><b>Investigation on the Effect of Micro-structure Difference between Hydrophobic Associated Polymer and Salt-resistant Polymer on Enhance Oil Recovery</b> - X. Chen<sup>1*</sup>, H. Zhang<sup>1</sup>, M. Sui<sup>1</sup>, Z. Liu<sup>1</sup>, X. Tang<sup>1</sup>, Y. Li<sup>1</sup> <sup>1</sup>China University Of Petroleum In Beijing</p>	<p><b>Model for the Diffusion of N-alkane Confined in Nanopores: Effect of the Fluid/Pore-Wall Interaction</b> - J. Bi<sup>1</sup>, J. Li<sup>1</sup>, Z. Chen<sup>2</sup>, K. Wu<sup>1</sup>, Y. Gao<sup>1*</sup>, W. Tian<sup>1</sup>, S. Zhang<sup>1</sup> <sup>1</sup>China University Of Petroleum(Beijing); <sup>2</sup>University of Calgary</p>
<p><b>Low Carbon Foot-print Reservoir Stimulation Technologies for Improved Oil Recovery</b> - A. Alghamdi<sup>1*</sup>, A. Al-Qasim<sup>1</sup>, S. Ayirala<sup>1</sup>, A. Yousef<sup>1</sup> <sup>1</sup>Saudi Aramco</p>	<p><b>Microfluidic Device for Fast Pre-screening of EOR Chemicals at Close to Reservoir Conditions</b> - A. Gizzatov<sup>1*</sup>, W. Wang<sup>1</sup>, S. Chang<sup>1</sup>, G. Thomas<sup>1</sup>, A. Mashat<sup>2</sup>, A. Abdel-Fattah<sup>2</sup> <sup>1</sup>Aramco Americas; <sup>2</sup>Saudi Aramco</p>
<p><b>Polymer Screening to Enhance Oil Recovery at High Salinity/ High Temperature Conditions; Rheology and Static Adsorption Studies</b> - M.S. Mousapour<sup>1*</sup>, M. Simjoo<sup>1</sup>, M. Chahardowli<sup>1</sup> <sup>1</sup>Petroleum and Natural Gas Engineering Department, Sahand University of Technology</p>	<p><b>Maximising Oil Recovery Through Thermally-Activated Polymer Placement</b> - M. Zubia<sup>1*</sup>, A. Beteta<sup>1</sup>, O. Vazquez<sup>1</sup> <sup>1</sup>Heriot-watt University</p>
	<p><b>Cold waterflooding vs. steam injection applicability for heavy oil reservoirs as a secondary stage recovery method</b> - T. Nassan<sup>1*</sup>, M. Amro<sup>1</sup> <sup>1</sup>Freiberg University Of Technology</p>
	<p><b>A cognitive methodology to improve EOR/IOR choice process: from applied approaches to more generic ones</b> - D. Bossie-Codreanu<sup>1</sup>, A. Bouziat<sup>1*</sup> <sup>1</sup>IFF Energies nouvelles</p>

## Oral Presentations | Wednesday 21 April

Welcome Day III Session			
14:10	<b>Keynote: 'The Power of Microfluidics' - Examples of EOR Related Studies</b> - Y. Alzahid <sup>1*</sup> <sup>1</sup> Saudi Aramco		
14:50	Coffee break		
Session: Fundamental science and mechanisms for EOR/IOR III	Session: Pilot and field experiences III		Session: Fundamental science and mechanisms for EOR/IOR IV
15:00	<b>Efficiency WAG in Carbonate Reservoir: Laboratory Study to Investigate Water Shielding, Cyclic Hysteresis and Trapped Gas</b> - S. Masalmeh <sup>1*</sup> , A. Al-Mesmari <sup>1</sup> , A. Farzaneh <sup>2</sup> , M. Sohrabi <sup>2</sup> <sup>1</sup> ADNOC; <sup>2</sup> Heriot Watt University	<b>Results of the second polymer flooding pilot at East-Messoyakhskoe oil field and future plans</b> - I. Ilyasov <sup>1*</sup> , N. Glushchenko <sup>1</sup> <sup>1</sup> JSC «Messoyakhaneftegaz»	<b>Evaluation of First-Ever Foam Assisted Conformance Control for a Middle Eastern Carbonate Reservoir Offshore Qatar</b> - M. Taha <sup>3</sup> , A. Kumar <sup>1*</sup> , P. Patil <sup>2</sup> , M. Pal <sup>1</sup> , Q.P. Nguyen <sup>3</sup> <sup>1</sup> North Oil Company (NOC); <sup>2</sup> Rock-Oil Consulting Group; <sup>3</sup> University of Texas
15:20	<b>Pore scale observations of wetting alteration during low salinity water flooding using X-ray micro-CT</b> - E. Andrews <sup>1*</sup> , A. Muggeridge <sup>1</sup> , A. Jones <sup>1</sup> , S. Krevor <sup>1</sup> <sup>1</sup> Imperial College London	<b>A Novel Sampling and Testing Procedure to Confirm Polymerflood Viscosity Retention at the Captain Field.</b> - G. Johnson <sup>1*</sup> , M. Hesampour <sup>2</sup> , W. Van Zeil <sup>1</sup> , S. Toivonen <sup>2</sup> , E. Pin <sup>2</sup> , P. Carnicero <sup>1</sup> , S. Hanski <sup>2</sup> , S. Sihvonen <sup>2</sup> , D. Hall <sup>1</sup> <sup>1</sup> Ithaca Energy UK LTD; <sup>2</sup> Kemira Oyj	<b>An Experimental Study of Foam Trapping and Foam Mobility in a Model Fracture</b> - K. Li <sup>1*</sup> , K. Wolf <sup>1</sup> , W. Rossen <sup>1</sup> , M. Slob <sup>1</sup> , J. van Meel <sup>1</sup> <sup>1</sup> Technology University of Delft
15:40	Joint Q&A		
15:50	Coffee break		
16:00	<b>Response of Crude Oil Deposited Organic Layers to Brines of Different Salinity: An atomic force microscopy study</b> - S. Kumar <sup>1*</sup> , A. Rao <sup>1</sup> , M.B. Alotaibi <sup>2</sup> , S.C. Ayirala <sup>2</sup> , A.A. Yousef <sup>2</sup> , I. Siretanu <sup>1</sup> , F. Mugele <sup>1</sup> <sup>1</sup> University Of Twente; <sup>2</sup> The Exploration and Petroleum Engineering Center - Advanced Research Center, Saudi Aramco	<b>Field Testing a Low Shear Valve Suitable for Polymer Flooding in a Mother Solution Injection Scheme</b> - R. Husveg <sup>1</sup> , M. Stokka <sup>1*</sup> , T. Husveg <sup>1</sup> , R. Albustin <sup>2</sup> , S. Jouenne <sup>3</sup> <sup>1</sup> Typhonix AS; <sup>2</sup> OMV E&P; <sup>3</sup> Total E&P	<b>A New Methodology of Robust Surfactant Screening for Foam EOR Applications</b> - M. Almajid <sup>1*</sup> , Z. AlYousef <sup>1</sup> , S. Ayirala <sup>1</sup> , O. Alswaie <sup>1</sup> <sup>1</sup> Saudi Aramco
16:20	<b>Reservoir Simulation of Low Salinity Impact on Polymer Flooding and evaluation of Electrolysis Reversal benefits</b> - U. UMOH <sup>1*</sup> , P. CORDELIER <sup>1</sup> , M. BOURGEOIS <sup>1</sup> , O. GARNIER <sup>1</sup> , C. PRINET <sup>1</sup> , S. JOUENNE <sup>1</sup> <sup>1</sup> TOTAL S.E.	<b>Interpretation of World First Polymer Injectivity Test in a HTHS Carbonate Reservoir Using SW Radial Model</b> - J.M. Leon Hinestrosa <sup>1*</sup> , S.K. Masalmeh <sup>1</sup> <sup>1</sup> ADNOC	<b>Gravity Segregation with CO2 Foam in Heterogeneous Reservoirs</b> - X. Lyu <sup>1*</sup> , D. Voskov <sup>1,2</sup> , W. Rossen <sup>1</sup> <sup>1</sup> Delft University of Technology; <sup>2</sup> Stanford University
16:40	Joint Q&A		
16:50	End of Day 3		

## Poster Presentations | Thursday 22 April

DAY 4	
Poster Session IV	
12:00	<b>Potential of Foam Enhanced Oil Recovery Process for a Strongly Oil-Wet and Heterogeneous Carbonate Reservoir</b> - L. Ding <sup>1*</sup> , S. Jouenne <sup>2</sup> , O. Gharbi <sup>2</sup> , M. Pal <sup>3</sup> , H. Bertin <sup>4</sup> , M.A. Rahman <sup>1</sup> , C. Romero <sup>2</sup> , D. Guerillot <sup>1</sup> <sup>1</sup> Texas A&M Qatar; <sup>2</sup> Total S.A.; <sup>3</sup> North Oil Company; <sup>4</sup> University of Bordeaux
	<b>Well location determination in a shale gas reservoir using advanced data-driven analysis</b> - E. Bahonar <sup>1</sup> , M. Chahardowli <sup>1*</sup> , M. Simjoo <sup>1</sup> <sup>1</sup> Sahand University of Technology
	<b>Hybrid Nanoparticle-Surfactant Stabilized Foams for CO2 Mobility Control at Elevated Salinities</b> - A. Soyke <sup>1*</sup> , B. Benali <sup>1</sup> , T. Føyen <sup>1,2</sup> , Z.P. Alcorn <sup>1</sup> <sup>1</sup> Department of Physics and Technology, University of Bergen; <sup>2</sup> SINTEF Industry
	<b>Huff n Puff EOR Optimization by using Different Cyclic Gases in Unconventional Shales</b> - C. Temizel <sup>3</sup> , C. Canbaz <sup>1*</sup> , H. Aydin <sup>2</sup> , V. Kudrashou <sup>4</sup> <sup>1</sup> Ege University; <sup>2</sup> Middle East Technical University; <sup>3</sup> Saudi Aramco; <sup>4</sup> Slippery Rock University
	<b>Monitoring of methane nonionic foam flooding processes in low-permeability heterogeneous cores using saturation dynamic monitor</b> - Z. Yang <sup>1,2*</sup> , X. Yue <sup>1,2</sup> , M. Shao <sup>1,2</sup> , Y. Yang <sup>1,2</sup> , R. Yan <sup>1,2</sup> <sup>1</sup> State Key Laboratory of Petroleum Resources and Prospecting; <sup>2</sup> College of Petroleum Engineering, China University of Petroleum (Beijing)
	<b>Analytical solutions for shale gas production in compressible porous media and time scale of production</b> - P.Ø. Andersen <sup>1*</sup> <sup>1</sup> University of Stavanger

## Oral Presentations | Thursday 22 April

Welcome Day IV Session		
Session: Maximising vs optimising hydrocarbon recovery	Session: Sustainability challenge / CO2 footprint of EOR/IOR	Session: What's next for IOR
<b>13:10</b> <b>A Deep Investigation of EOR/EGR and Stimulation Enhancement Methods in Unconventional Reservoirs</b> - H. Aydin <sup>2*</sup> , C. Canbaz <sup>1</sup> , C. Temizel <sup>3</sup> , Z. Wijaya <sup>4</sup> <sup>1</sup> Ege University; <sup>2</sup> Middle East Technical University; <sup>3</sup> Saudi Aramco; <sup>4</sup> Hess Corporation	<b>Carbon footprint forecasting of IOR activities via an intelligent NARX framework for promoting greener reservoir management</b> - K. Katterbauer <sup>1*</sup> , A. Marsala <sup>1</sup> , A. Sofi <sup>1</sup> , A. Yousif <sup>1</sup> <sup>1</sup> Saudi Aramco	<b>One Approach to Waterflood Conformance Control in Carbonate Reservoirs</b> - A. Andrianov <sup>1*</sup> , J. Hou <sup>2</sup> , E. Li <sup>3</sup> , E. Liu <sup>2</sup> , L. Yang <sup>3</sup> <sup>1</sup> ZL EOR Chemicals; <sup>2</sup> ZL EOR Chemicals; <sup>3</sup> ZL EOR Chemicals
<b>13:30</b> <b>Pushing Oil Recovery Technical Limits For Liquids-Rich Shales</b> - R. Fassih <sup>1*</sup> , A. Kocscek <sup>2</sup> <sup>1</sup> BHP <sup>2</sup> Stanford University	<b>Using Polymer EOR to Reduce Carbon Intensity While Increasing Oil Recovery</b> - G. Dupuis <sup>1*</sup> , P. Al-Khoury <sup>1</sup> , J. Nieuwerf <sup>1</sup> <sup>1</sup> SNF	<b>Development of a Thermogel for the Treatment of Fractured Reservoir</b> - L. Hernando <sup>1*</sup> , N. Martin <sup>1</sup> , A. Zaitoun <sup>1</sup> , E. Read <sup>2</sup> , O. Braun <sup>2</sup> <sup>1</sup> Poweltec; <sup>2</sup> SNF
<b>13:50</b> <b>Joint Q&amp;A</b>	<b>Toward smarter oilfield chemicals for EOR/ IOR</b> - N. AlJabri <sup>1</sup> , A. Gizzatov <sup>2</sup> , H. Shateeb <sup>1</sup> <sup>1</sup> Saudi Aramco, PE&D; <sup>2</sup> Aramco Services Company	<b>SmartWater Based Synergistic Recovery Technologies – The Next Era of EOR</b> - S. Ayirala <sup>1*</sup> , A. AlSofri <sup>1</sup> , Z. AlYousef <sup>1</sup> , J. Wang <sup>1</sup> , M.A. Al-Saud <sup>1</sup> , A. AlYousef <sup>1</sup> <sup>1</sup> Saudi Aramco
<b>14:00</b> <b>Coffee break</b>	<b>Joint Q&amp;A</b>	<b>Joint Q&amp;A</b>
<b>14:10</b> <b>Using surfactant at ultra-low concentration to unlock polymer field projects</b> - A. Klimenko <sup>1*</sup> , V. Molinier <sup>1</sup> , N. Passade-Boupat <sup>1</sup> , M. Bourrel <sup>1</sup> <sup>1</sup> Total E&P France S.E.		
<b>14:15</b>	<b>End of day 4</b>	<b>End of day 4</b>
<b>14:30</b> <b>Pushing the Envelope of Polymer Injectivity in Low Permeability Sandstones</b> - P. Ghosh <sup>2*</sup> , M. Ould Metidji <sup>3</sup> , G. Dupuis <sup>3</sup> , R. Wilton <sup>2</sup> , R. Ravikiran <sup>2</sup> , A. Bowers <sup>2</sup> , R. Seright <sup>1</sup> <sup>1</sup> New Mexico Tech; <sup>2</sup> SNF HC; <sup>3</sup> SNF SA		
<b>14:50</b> <b>Joint Q&amp;A</b>		
<b>15:00</b> <b>Coffee break</b>		
Closing Session		
<b>15:15</b> <b>Keynote: Looking Back Over my 35 Years Working in IOR/EOR</b> - S. Goodyear <sup>1*</sup> <sup>1</sup> Shell		
<b>15:55</b> <b>Coffee break</b>		
<b>16:05</b> <b>Prize Ceremony</b>		
<b>16:15</b> <b>Closing Comments</b>		
<b>16:25</b> <b>End of Conference</b>		

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