Impending are the years when easy oil recovery will be behind us, inevitably leading the oil and gas recovery industry to source at **greater depths, higher pressures and temperatures**. Future onshore and offshore operations must utilise **enhanced oil recovery techniques** to source in much higher levels of H2S, CO2, high pressure steam and more potent combinations of corrosive fluids, placing heightened strain on both metallic and non-metallic piping, valves and other equipment.

To sustain critical service in these demanding environmental conditions, the industry calls for a **revolutionary change in material property requirements**, holding massive challenges and opportunity for the non-metals market.

In order to position your business to **take advantage of future opportunities and to innovate effectively**, it is imperative to understand how a range of drivers will co-relate to create the high performance polymers of the future and how the industry can work together to meet future demands.

**High Performance Polymers for Oil and Gas** is a unique opportunity to hear from oil operators and service providers on the challenges that will exist in the future, and to engage with ongoing research, development and qualification of materials that will enable the industry to meet these challenges and open the door to improve or replace existing material selections.

**High Performance Polymers for Oil and Gas 2014 will address:**

- Current and future end-user challenges and polymeric requirements
- The impact of harsh temperature environments
- Influence of fluids in the oilfield
- Applications – the drilling process
- Corrosion and failure
- Polymeric ageing and life prediction
- The impact of nanotechnology on oil and gas recovery

“Very good distribution of expertise with presence of exploration, servicing compliance, end users, raw material suppliers. Excellent opportunities for networking”

**M. Havel**
Arkema
CONFERENCE AGENDA

CONFERENCE DAY ONE
Tuesday 15th April

08.50  WELCOME FROM ORGANISERS
08.55  OPENING REMARKS FROM CHAIRPERSON

OPENING SESSION: THE ROLE OF NON-METALLICS IN FUTURE OF OIL AND GAS EXPLORATION
- Evolving, and more radical demands on polymeric materials
- Challenges involved in “upgrading” to non-metallic materials
- Back to basics - Reviewing applications to address future fundamental requirements

09.15  OPENING KEYNOTE-OPERATOR PERSPECTIVE: CHALLENGES AND POLYMERIC REQUIREMENTS - CURRENT AND FUTURE
Oil Operator - to be revealed shortly!

10.00  OFFSHORE DRILLING: USE OF ELASTOMERIC MATERIALS AND FUTURE CHALLENGES
Nicolas Arteaga, Process Engineer, Cameron

10.30  Networking and refreshment break

11.10  COMPOSITE MATERIALS: INSTALLATION OF THE WORLD’S FIRST SUBSEA REHABILITATION APS SYSTEM BASED ON COMPOSITE MATERIAL
Robert Walters, Founder & Chairman, APS Dubai

CORROSION AND FAILURE: DEVELOPING QUALIFICATIONS AND SPECIFICATIONS FOR FUTURE INNOVATIONS

11.40  MATERIAL FAILURE - OPERATOR CHALLENGES
Speaker Invited

12.10  GENERATION OF PERMEABILITY DATA OF SOUR GAS DIFFUSION THROUGH POLYMERIC MATERIALS
Karin Jacobson, Senior Researcher – Polymeric Materials Group, Swerea KIMAB AB

12.40  Lunch

14.10  RAPID GAS DECOMPRESSION RESISTANCE OF ELASTOMERIC O-RINGS TO SUPERCRITICAL CO2
Peter Warren, Head of Materials Engineering, James Walker

14.40  INDUSTRY STANDARDS - A BLESSING OR A CURSE?
Alexandra Torgersen, Engineering Manager, FMC Technologies

15.10  Networking refreshment break

15.50  CNT TECHNOLOGY AND DISPERSION
Michaël Claes, Global Technical Director, Nanocyl

UNLOCKING THE POTENTIAL IN NANOTECHNOLOGY FOR THE OIL AND GAS INDUSTRY

16.20  ANTI-CORROSION EPOXY COATINGS CONTAINING CLAY IN SMECTIC LIQUID CRYSTALLINE ORDER
Dr H.J. Sue, Professor, A&M University

16.50  GRAPHENE AND NANOMATERIALS
Gobet Advincula, Case Western Reserve University

17.20  PANEL DISCUSSION - WHAT MEANINGFUL CONTRIBUTIONS CAN NANOTECHNOLOGY MAKE TO OIL AND GAS RECOVERY?
PANELISTS: Michaël Claes - Global Technical Director - Nanocyl, Dr H.J. Sue - Professor - A&M University, Gobet Advincula - Case Western Reserve University

17.50  Grand Drinks Reception

CONFERENCE DAY TWO
Wednesday 16th April

HARSH TEMPERATURE ENVIRONMENTS - CHALLENGES AND SOLUTIONS

08.50  OPENING REMARKS FROM CHAIRPERSON

9.00   CHALLENGES OF TEMPERATURE EXTREMES FOR ELASTOMER MATERIALS
Glyn Morgan (Sector Manager, Oil & Gas) Element Materials Technology

08.30  COLD TEMPERATURE EFFECTS ON POLYMERS - CRYOGENIC SPILL PROTECTION
Sebastien Viale, Ph.D., Polymer Specialist - Advanced Subsea Architecture, Technip Innovation & Technology Centre

10.00  ARLON 3000XT
Kerry Drake, Greene, Tweed & Co

10.30  Networking refreshment break

MECHANISMS AND MANIFESTATIONS OF POLYMER AGEING AND FATIGUE, TECHNOLOGICAL SOLUTIONS, AND FUTURE OUTLOOK

11.10  GENERATION OF POLYMER FATIGUE DATA FOR THE OIL & GAS INDUSTRY
Andrew Holme, Principal Consultant, Smithers Rapra

11.40  DRILLING FLUID INFLUENCE ON ELASTOMERS
Helmut Benning and Marcus Davidson, Research & Development, Baker Hughes

12.10  Lunch

DEVELOPING AND MODELLING MATERIALS FOR THE FUTURE OF THE INDUSTRY

13.40  MODELING AND DESIGN OF REINFORCED ELASTOMERIC PRODUCTS
Dr Stuart Brown, Managing Partner, Veryst Engineering

14.10  DEVELOPMENT OF MATERIALS FOR SEALING SOLUTIONS IN HPHT CONDITIONS
Mathilde Leboeuf, R&D manager Europe, St-Gobain Seals

14.40  HNBR RUBBER IN CO2
Daniel L Hertz III, Founder and CEO, Seals Eastern, Inc.

15.10  CLOSING COMMENTS FROM CHAIR

15.40  CONFERENCE CLOSE

*Agenda sessions and speakers subject to change.

“Excellent opportunity for networking and gaining a better understanding of the needs for non-metallics in the oil and gas industry”

R. Kiser
Materia
**Venue**

Crowne Plaza – The Roxburghe, Edinburgh

Centrally located on Edinburgh’s famous Charlotte Square a UNESCO World Heritage Site, The Roxburghe stands proudly in the fashionable Edinburgh city centre, within two minutes walk of Princes Street, and overlooking Charlotte Square Gardens. Crowne Plaza Edinburgh - The Roxburghe is one of the most iconic hotels of this stunning city and a magnificent example of the city’s charming Georgian architecture.

Guests have convenient access to Edinburgh Waverly and Haymarket Train Stations and also an express bus to Edinburgh Airport.

**How to book your accommodation**

Special accommodation rates have been negotiated with the Crowne Plaza – The Roxburghe and reservations should be made by individual attendees.

To book a room at the negotiated rate please visit [www.conferenceinitiatives.co.uk/booking](http://www.conferenceinitiatives.co.uk/booking)

If you require any assistance when making your reservation or after you have booked please contact Claire Aitken, Conference Initiatives at claire@conference-initiatives.co.uk or on +44 (0)1483 520101.

Rooms are subject to availability and allocations expire on the 20th March.

**Book your conference place**

High Performance Polymers for Oil and Gas 2014 is a must-attend for anyone involved in the non-metallics industry.

Pricing for the conference is phased, there are great deals to be had if you register early. Leave it until the last minute, and you’ll pay more for your ticket.

**Earlybird** (valid until 14th February) **£849**

**Standard** (valid until 4th April) **£999**

**Late fee** (valid from 5th April until event) **£1049**

Register now at [www.oilgasconference.com](http://www.oilgasconference.com)

**Sponsorship at this conference**

Sponsorship provides the perfect opportunity to showcase your products and services to oil operators, service operators and technology providers in the oil and gas recovery industry. To get unrivaled access to key industry players all under one roof contact Bill Allen on +44 (0)1372 802086 or at ballen@smithers.com.

“The conference provided a full range of information from research fundamentals to suppliers to applications”

**S. Glend**

**POLYGON**

“Very enjoyable event with good coverage of state-of-the-art technology”

**Imrie**

**University of Aberdeen**