



**IASH 2011**  
12th International Conference on  
Stability, Handling and Use of Liquid Fuels  
Sarasota, Florida USA • 16-20 October 2011

## The Sustainability of Liquid Fuels

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**All Technical Session located in Ballroom South  
Technical Posters & Exhibits located in Ballroom North  
Registration in Convention Center Foyer from 07.30 – 17.00 Daily  
Speaker Ready Room located in the Boardroom**

**SUNDAY 16<sup>th</sup> OCTOBER 2011**

10.00 - 12.00 Board of Directors Meeting in Boardroom (Members & Invited Guests)  
14.00 - 17.00 Registration in Convention Center Foyer – Continues throughout the week  
12.00 - 17.00 Set up Posters and Exhibits in the Salons CDEF

19.00 - 21.30 **OPENING RECEPTION AT HYATT REGENCY POOLSIDE  
SPONSORED BY EXXONMOBIL AVIATION**

**MONDAY 17<sup>th</sup> OCTOBER 2011  
BALLROOM SOUTH**

07.00 – 09.00 Breakfast in the Boathouse

08.20 - 08.30 Welcome and Introduction by Anthony Kitson-Smith, Conference Chairman

08.30 - 09.15 **Keynote Address: Energy Outlook and the Future for Liquid Fuels**  
– Robert Gardner, Manager Corporate Strategic Planning, ExxonMobil Corporation

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09.15 **Session 1. RENEWABLE FUELS AND CARBON NEUTRALITY**  
Pamela Serino, Session Chair  
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09.20 - 09.40 **The Need for Sustainable Liquid Fuel and the Promise of Advanced Biofuels (USA)**  
– Don Scott (Presented by Richard Nelson)

09.40 - 10.00 **Renewable Fuels: DLA Energy Goals, Initiatives and Challenges (USA)** – Daniel Baniszewski

10.00 - 10.20 **BREAK**

10.20 - 10.40 **Overview of US Navy's Ship Renewable Fuels Evaluation (USA)** – Ryan Turgeon, Sherry Williams Richard Kamin, Richard Leung and Dr. Geoffrey Eldridge

10.40 - 11.00 **A Review of Synthetic Fuel Development for Use in Aviation (USA)** – Clifford A. Moses and Stanford P. Seto

11.00 - 11.20 **Alternative Aviation Fuels – Progress and Plans (USA)** – Tim Edwards, Kristin Lewis and Nathan Brown

11.20 - 11.40 **Synergies Between Renewable Kerosene and Fischer-Tropsch Synthetic Paraffinic Kerosene (FT-SPK) (SOUTH AFRICA)** - Mariam Ajam and Carl L. Viljoen

11.40 - 12.00 **Biomass to Liquid Fuels From Non-Food Sources – Life Cycle Assessment with Comparison to Other Alternative Fuels and Processes (USA) – Robert L. Freerks**

12.00 - 12.10 **General Questions Session 1**

12.10 - 13.30 **LUNCH IN BOATHOUSE  
- SPONSORED BY PRATT & WHITNEY**

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**13.30            Session 2.        CHALLENGES IN FUEL DISTRIBUTION, STORAGE AND USE WITH  
   TODAY'S AND TOMORROW'S FUELS  
   Pierre Poitras, Session Chair**  
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13.35 – 13.55 **Progress Made Toward the Use of Jet Fuel in Diesel-Powered Aircraft (USA)  
– Roger G. Gaughan**

13.55 - 14.15 **Bulk Diesel Fuel Filtration – A Sensible Investment (USA) - Christian M. Bauer**

14.15 – 14.35 **In-Line Measurement of FAME Concentrations in Jet Fuels (USA) – Kam Mohajer**

14.35 - 14.55 **Jet Fuel Degradation During Supercritical High Heat Flux Heat Transfer (USA)  
– Zachary J. West, Hua Jiang, Jamie S. Ervin and Dr. Steven Zabarnick**

14.55 - 15.15 **BREAK**

15.15 – 15.35 **Jet Fuel Desulphurisation: An Investigation into the Impact of Hydro-Treatment on Product Quality (UK) – Jeremy Tucker, Christopher Lewis and Alisdair Clark**

15.35 – 15.55 **Investigation on Elastomer Compatibility with Alternative Fuels by Mass Change Study, Stress-Relaxation Test and FTIR Spectroscopy (UK) – Yue Liu, Christopher W. Wilson, Simon G. Blakey and Patrick Theato**

15.55 – 16.15 **Contaminants Found on Diesel Fuel Storage Tank Filters (USA) – Joseph Block, Paul Klick, James Doyle, Philip Johnson, Andrew J. Dallas and Dr. Yehya Elsayed**

16.15 – 16.25 **General Questions Session 2**

18.30 - 20.00 **POSTER RECEPTION IN EXHIBITION SALON  
- SPONSORED BY US NAVAL RESEARCH LABORATORY**

**TUESDAY 18<sup>th</sup> OCTOBER 2011  
BALLROOM SOUTH**

07.00 – 09.00 Breakfast in Boathouse

08.20 - 08.30 Announcements

**08.30 - 09.15 Keynote Address: A Breakthrough Solar Platform for the Direct, Continuous Conversion of CO<sub>2</sub> to Liquid Fuels**  
– Troy J. Campione, PhD, Senior Vice President of Corporate Development, Joule Unlimited

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**09.15 Session 3. AVIATION FUELS TODAY AND TOMORROW**  
**Edwin Corporan, Session Chair**  
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09.15 - 09.35 **Overview of US Navy's Renewable Turbine Fuels Evaluation (USA)** – Andrew McDaniel, Richard Kamin, Sherry Williams, John Buffin, Dr. Geoffrey Eldridge, Jennings Bryant and Glen Fetsch

09.35 - 09.55 **An Evaluation of Synthetic Jet Fuel Containing Aromatics (USA/SO.AFRICA)**  
– Clifford A. Moses, Petrus N.J. Roets, Mariam Ajam, Carl L. Viljoen and George R. Wilson, III

09.55 - 10.20 **BREAK**

10.20 - 10.40 **New Route for Increasing the Aviation Alternative Fuels Production and Optimizing the Biomass Usage: Focus on HRJ (FRANCE/UK)** – Laurie Starck, Ludivine Pidol, Nicolas Jeuland, Thierry Chapus, Paul Bogers and Joanna Bauldreay

10.40 - 11.00 **Selected Engineering Properties of Aviation Turbine Fuels (USA)** – Scott A. Hutzler and George R. Wilson III

11.00 - 11.20 **Evaluation of the Alternative Fuel Thermal Stability Within the European SWAFEA Program (FRANCE/UK)** – Mickaël Sicard, Laurie Starck, Simon Blakey, Jacques Ancelle, Nicolas Jeuland, Aurélie Piperel, Bruno Raepsael, Frédéric Ser, Thomas Spalton and Christopher W. Wilson

11.20 - 11.40 **Analysis of Properties of Jet Fuel Produced by Coconut Oil (CHINA)** – Zhiping Tao, Dongmei Gong and Hongliang Qu

11.40 - 12.00 **Impact of Fuel Composition on Emissions and Performance of GTL Kerosine Blends in a Cessna Citation II (UK/NETHERLANDS/GERMANY)** – Tim A. Snijders, Joris A. Melkert, Joanna M. Bauldreay, Paul F. Bogers, Claus R.M. Wahl and Manfred G. Kapernaum

12.00 – 12.10 **General Questions Session 3**

12.10 - 13.25 **LUNCH IN BOATHOUSE**  
**- SPONSORED BY SHELL AVIATION**





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**13.25            Session 5b.    ANALYTICAL METHODS**  
**Roger Gaughan, Session Chair**

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- 13.30 – 13.50    **Round Robin Test Results for Falex 400, A New Jet Fuel Thermal Oxidation Tester, and Heater Tubes for ASTM D 3241 (USA) – Jim Hepp**
- 13.50 – 14.10    **Resurrection of the Ellipsometer as an Absolute Way to Measure D 3241 Deposits (USA) – George R. Wilson, III for Ervin Schlepp**
- 14.10 – 14.30    **Precision and Reliability of Breakpoint Testing (USA) – George R. Wilson, III**
- 14.30 – 14.50    **Analysis of the Structure of Deposited Materials at Inner Surface of Jet Fuel Injector Feed Arm with Optical and Scanning Electron Microscopy (UK) – Ehsan Alborzi, Simon G. Blakey, Hasan Ghadbeigi, Christopher Pinna, Mohamed Pourkashanian, and Christopher W. Wilson for Ehsan Alborzi**
- 14.50 – 15.10    **Analysis of Large-Scale Thermal Stability Testing (UK) – Simon G. Blakey, Thomas Spalton and Christopher W. Wilson**
- 15.10 – 15.20    **General Questions Session 5b**
- 15.20 – 15.40    **BREAK**

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**15.40            Session 7.        MIDDLE DISTILLATE FUELS AND HEAVY OILS**  
**Paul Bessonette, Session Chair**

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- 15.45 – 16.05    **Controlling the Sterol-Glucosides and Saturated Monoglycerides Impurities in Biodiesel (CANADA) - Marc-Andre Poirier and Charles Lund**
- 16.05 – 16.25    **H<sub>2</sub>S In and Above Fuel Oils – Analysis and Control (NETHERLANDS) - Ivo J. Dijs, Willie Schermer, Remon te Velthuis, Arjen Nieuwhof, and Koen Steernberg**
- 16.25 – 16.45    **Abatement of Hydrogen Sulphide from Asphalt Storage Tanks (USA) – Jennifer Draper and Joseph Stark**
- 16.45 – 16.55    **General Questions Session 7**
- 18.05 – 18.10    **Meet in Hyatt Lobby for bus transportation to Ringling Museum & Estate**
- 18.30 – 22.00    **GALA DINNER AT CA' D'ZAN ON RINGLING ESTATE**  
**- SPONSORED BY FUEL QUALITY SERVICES, INC.**

**THURSDAY 20<sup>th</sup> OCTOBER 2011  
BALLROOM SOUTH**

07.00 – 09.00 Breakfast in Boathouse

08.20 – 08.25 Announcements

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**08.25            Session 8.    PERFORMANCE ENHANCEMENT – ADDITIVES AND PROCESSING**  
**Gary Bessee, Session Chair**  
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08.30 – 08.50 **Studies of Low-Temperature Operability Additives for Biodiesel Blends of 20% and Lower (USA) - Steven R. Westbrook**

08.50 – 09.10 **Evaluation of Cold Flow Improvers in a Multi-Functional Additive System Designed for Use in North American Diesel Fuel (USA) – J. Andrew Waynick**

09.10 – 09.30 **The Use of MBO for the Prevention of Microbial Influenced Corrosion in Steel Pipelines and Tanks (GERMANY) - Wolfgang Siegert**

09.30 – 09.50 **Corrosion Mitigation in Contaminated Fuel: Activity of Pipeline Corrosion Inhibitors (USA) - Matthew Barnes, Ksenija Babic and Joseph Stark**

09.50 – 10.00 **General Questions Session 8**

10.00 – 10.20 **BREAK**

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**10.20            Session 9.    LONG TERM STORAGE STABILITY OF LIQUID FUELS**  
**Steve Westbrook, Session Chair**  
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10.25 – 10.45 **Assessment of the Effectiveness of Antioxidant Additives to Jet-A Fuel Downstream at Point of Use (USA) – Janet M. Hughes, Robert E. Morris, Nathan J. Begue and Kristina M. Myers**

10.45 – 11.05 **Reactive Sulfur Management in Petroleum Storage Facilities (USA) – Joseph Stark, Jennifer Draper and Nadjmeh Doostdar**

11.05 – 11.25 **Creating and Maintaining National Stocks and Strategic Reserve (POLAND)  
– Arkadiusz Majoch**

11.25 – 11.45 **Measurement of Trace Elements in Processed Fuel Oils Produced from Recycled Lubricating Oils (UK) – Jim Crighton**

11.45 – 12.05 **Student Award Paper: Thermal Oxidative Stability of Middle Distillate Fuels – Part 1: Chemistry of Deposit Formation (USA) – Christopher G. Kabana, Victor Fiorina, Colin Schmucker and Bruce Beaver**





**TECHNICAL POSTER SESSION & EXHIBITOR RECEPTION**  
**MONDAY EVENING, 17<sup>th</sup> OCTOBER 2011**  
**BALLROOM NORTH**  
**18.30 – 20.00**

**\*\*\* SPONSORED BY: US NAVAL RESEARCH LABORATORY \*\*\***

**Anthony Kitson-Smith, Session Chair**

- 1. Air BP (UK)**  
Magnetic Filtration – A Pipe-Line Trial (UK) - *Presented by Alisdair Q. Clark*
  
- 2. Defense Logistics Agency-Energy (USA)**  
Comparison of Neat and Worst-Case FAME-Contaminated Aviation Turbine Fuel  
– *Presented by Pamela M. Serino*
  
- 3. Defence Science & Technology Organisation (AUSTRALIA)**  
Novel Approaches to Enhanced Fuel Stability: Polymer Supported Antioxidant Systems  
- *Presented by David Evans*
  
- 4. Defence Science & Technology Organisation (AUSTRALIA)**  
A Novel Qualitative Technique for the Identification of Metal Deactivator Additive  
– *Presented by Paul Rawson*
  
- 5. MOD / Israel Institute of Biological Research / IDF / Israel Institute of Energy and Environment (ISRAEL)**  
Hydrogen Sulfide Diffusion in Jet Fuels and Its Fate During Fuel Transport and Storage  
- *Presented by Rephael Fass*
  
- 6. PDVSA Intevep (VENEZUELA)**  
Math-Chemical Adjustment of the Indexes RON and MON of Gasoline Components Hydrocarbons  
- *Presented by César Pernalet*
  
- 7. IFP Energies Nouvelles / Laboratoire de Chimie-Physique (FRANCE)**  
Flash Point Predictions for Fuel Compounds Using QSPR Methods  
– *Presented by Laurie Starck*
  
- 8. ONERA Fundamental and Applied Energetics Department (FRANCE)**  
Fuel Long-Term Storage Stability Evaluated by Mildly Accelerated Test Conditions  
– *Presented by Mickaël Sicard*
  
- 9. Real-Time Analyzers, Inc. (USA)**  
A Raman-Based Portable Fuel Analyzer – *Presented by Stuart Farquharson*

## TECHNICAL POSTERS - Continued

### 10. KiOR Inc. (USA)

Properties of Gasoline and Diesel Fuels Containing Renewable Drop-In Biofuel Blend Stocks Prepared by the Thermo-Catalytic Conversion of Lignocellulose – *Presented by Jeff Trewella*

### 11. Universidade Federal do Rio Grande do Sul, Ipiranga Produtos de Petroleo, Instituto Nacional de Tecnologia (BRAZIL)

Monitoring of Effectivity of Biocides During Storage Simulation of Diesel (B0), Biodiesel (B100) and Blends (B7 and B10) – *Presented by Roberta Miranda Teixeira*

### 12. PETROBRAS (BRAZIL)

Simplified Methodology for Determining Stability in Mixtures of Crude Oils – *Presented by Marcelo Vieira Alves for Luciano Messina Stor*

### 13. Air Force Research Laboratory / University of Dayton Research Institute (USA)

Alternative Jet Fuels – Turbine Engine Emissions Characteristics – *Presented by Edwin Corporan*

### 14. University of Dayton Research Institute / Encore Logistics Systems / Air Force Research Laboratory (USA)

Overview of Efforts to Determine Minimum Required FSII Use and Procurement Limits for USAF Aircraft – *Presented by Matthew DeWitt*

### 15. University of Dayton Research Institute / Battelle Memorial Institute / Air Force Research Laboratory (USA)

The US Air Force's Assured Aerospace Fuels Research Facility Fischer-Tropsch Liquids Upgrading Reactor – *Presented by Heinz J. Robota*

### 16. University of Dayton Research Institute / Air Force Research Laboratory (USA)

The Effect of Aromatic Type on the Volume Swell of Nitrile Rubber in Selected Synthetic Paraffinic Kerosenes – *Presented by John Graham*

### 17. PAC L.P. (USA/NETHERLANDS)

Determination of FAME Contamination in Aviation Turbine Fuel Using Gaschromatography – *Presented by Larry Spino*

### 18. D-2 Incorporated / Stanhope-Seta (USA/UK)

A Novel New MSEP Determination Instrument – *Presented by Alan Fougere*

### 19. Integrated Sensing Systems, Inc. (USA)

An Innovative Density Measurement Technology for Monitoring the Quality of Liquid and Gaseous Fuels – *Presented by Wesley Sund*

## EXHIBITORS

**\*\*\* CYBER CAFÉ SPONSORED BY AIR BP \*\*\***

Air BP – Presented by [Steve Anderson & Alisdair Clark](#)

Bruker Optics – Presented by [Dick Merk](#)

D-2 Incorporated – Presented by [Alan Fougere & Dean Fougere](#)

ECHA Microbiology Ltd. – Presented by [Graham Hill & Gareth Williams](#)

Emcee Electronics, Inc. – Presented by [Chris Papastrat & Dan LeClair](#)

Energy Institute – Presented by [Victoria Dodd & Martin Hunnybun](#)

ExxonMobil Aviation – Presented by [Dennis Hoskin & Anthony Kitson-Smith](#)

Falex Corporation – Presented by [Jim Hepp & Mike Croudace](#)

Fuel Quality Services, Inc. – Presented by [Howard & Debra Chesneau, Angie Coley-McClure, Ed English & Rhonda Rande](#)

Intertek Commodities – Presented by [Brent Mackin & Deanna McGraw](#)

KAM CONTROLS, INC. – Presented by [Kam Mohajer & Vicky Garza](#)

PAC – Presented by [Larry Spino & Kevin Kyle](#)

PAMAS GmbH – Presented by [Ed Bielo](#)

Parker Hannifin - Presented by [Matt Fielder & Shuan Skilton](#)

Seta Analytics – Presented by [Martin Verity & Ian Mylrea](#)

University of Dayton Research Institute – Presented by [Matt DeWitt & Steve Zabarnick](#)

US Defense Logistics Agency-Energy – Presented by [Pam Serino & Dan Baniszewski](#)

US Naval Research Laboratory – Presented by [Gayle Fullerton & Robert E. Morris](#)