Scientific Program

OMICS Group Conferences
Accelerating Scientific Discovery

2nd World Congress on
Petrochemistry and Chemical Engineering

October 27-29, 2014 Embassy Suites Las Vegas, USA



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Proposals are invited for organizing Symposia/Workshops at OMICS Group Conferences or OMICS Group will sponsor small events at your universities in related areas under the title of your own. These proposals can be sent to respective conference mail ids or to *symposia@omicsonline.org*

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Day 1 October 27, 2014

08:00-08:30 Registrations

Tropicana Ball Room

08:30-08:55

Opening Ceremony

Keynote Forum

08:55-09:00 **Introduction**

09:00-09:25 **Davis L Ford**
Texas A&M University, USA

09:25-09:50 **Ashok Kumar Ray**
CSIR-National Metallurgical Laboratory, India

09:50-10:15 **Mileva Radonjic**
Louisiana State University, USA

10:15-10:40 **S S Amritphale**
CSIR-Advanced Materials and Processes Research Institute, India

Group Photo

Coffee Break: 10:40-10:55 @ Atrium

Track 1: Processing Technologies
Track 2: Petroleum Exploration & Field Management

Session Chair: Ildenize Barbosa da Silva Cunha, University of Campinas, Brazil
Session Co-Chair: Bushra Al-Duri, University of Birmingham, UK

Session Introduction

10:55-11:15 **Novel methods for upgrading heavy petroleum products**
Russell R Chianelli, University of Texas at El Paso, USA

11:15-11:35 **Mass Spectrometry: A pioneer and renewed tool for petrochemical analysis**
Ildenize Barbosa da Silva Cunha, University of Campinas, Brazil

11:35-11:55 **Ethylene–vinyl acetate copolymer-based depressants in marine fuels**
Nataliya Kondrasheva, The National Mineral Resources University, Russia

11:55-12:15 **Heterogeneity of fine grained sediment and its hydrocarbon generation and expulsion: An case from Dongying depression**
Chen Zhonghong, China University of Petroleum, China

12:15-12:35 **High performance oxygen carriers for chemical looping combustion process by using architectural structure of silica nanoparticles**
Yujing Liu, Swiss Federal Laboratories for Materials Science and Technology, Switzerland

12:35-12:55 **Further work on energy-return-on-energy-invested**
J C Jones, Kazakh-British Technical University, Kazakhstan

Lunch Break 12:55-13:25 @ Atrium

13:25-13:45 **Plasma processing of fossil fuels**
Alexandr Ustimenko, Research Institute of Experimental and Theoretical Physics, Kazakhstan

13:45-14:05 **Production of furans (2,5 dimethylfuran) from furfurals (Hydromethoxyfurfural-HMF) as transport fuel molecules**
Bushra Al-Duri, University of Birmingham, UK

14:05-14:25 **Highly active nano-dispersed Ruthenium catalyst for efficient oxidation of p-cymene and cumene C-H bond by molecular oxygen**

Peter R Makgwane, Council for Scientific Industrial Research, South Africa

14:25-14:45 **The Ural-African transcontinental oil & gas belt**

Valentin Stepanov, The National Mineral Resources University, Russia

14:45-15:05 **Surfactants and other factors input for the control of the reservoir interfacial tension (IFT)**

M.S Benzagouta, University Larbi Ben Mhidi OEB, Algeria

15:05-15:25 **Pore volume compressibilities and stress sensitivity of low permeability reservoir rocks in China's oilfield development**

Sun He, China University of Petroleum, China

15:25-15:45 **Selective propping of high conductivity fractures**

David Dogon, Eindhoven University of Technology, Netherlands

15:45-16:05 **Equilibrium calculations in aqueous carbonation of oil shale waste – sulfur compounds**

Kadriann Tamm, Tallinn University of Technology, Estonia

Coffee Break 16:05-16:20 @ Atrium

Track 3: Drilling & Well Completions Challenges
Track 4: Piping and vessel engineering & Transport Phenomena

Session Chair: Byoung Yoon Park, Sandia National Laboratories, USA
Session Co-Chair: Arya Shahdi, Islamic Azad University, Iran

Session Introduction

16:20-16:40 **Interbed modeling to predict wellbore damage for big hill strategic petroleum reserve**

Byoung Yoon Park, Sandia National Laboratories, USA

16:40-17:00 **Performance investigation of an experimental shale shaker in filtration of low concentration slurry**

Saeid Ghaniyari Benis, The University of Akron, USA

17:00-17:20 **A robust modeling approach for frictional pressure loss calculation of three phase flow in inclined eccentric annuli**

Arya Shahdi, Islamic Azad University, Iran

17:20-17:40 **Study on gas hydrate blocking mechanism and precaution in wellbore of deep water drilling**

Xiangfang Li, China University of Petroleum, China

17:40-18:00 **Inhibitive properties comparison of different polyetheramines in water-based drilling fluid**

Hanyi Zhong, China University of Petroleum, China

18:00-18:20 **A new understanding on low permeability oilfield development**

Tang Wei, Research Insititute of Petroleum Exploration and Development (RIPED) of CNPC, China

18:30-19:30 Cocktails Sponsored by: Journal of Petroleum & Environmental Biotechnology @ Atrium

Day 2 October 28, 2014

Tropicana Ball Room

Track 5: Chemical Applications in Producing Oil and Gas
Track 6: Coal & Natural Gas
Track 7: Challenges and Safety in Petrochemical Industry
Track 8: Energy Economics

Session Chair: Ahmed El-Nahas, El-Menoufia University, Egypt
Session Co-Chair: Xi Liu, Cardiff University, UK

Session Introduction

08:30-08:50	**Nanoparticle stabilized emulsions and foams for EOR and LNG spill mitigation** **Zhengdong Cheng,** Texas A&M University, USA
08:50-09:10	**Development of porous radiant burners for domestic LPG cooking and industrial applications** **P Muthukumar,** Indian Institute of Technology Guwahati, India
09:10-09:30	**Porous media for improved polymer electrolyte membrane fuel cells** **Aimy Bazylak,** University of Toronto, Canada
09:30-09:50	**Use of sulfide/phosphate based sorbents for mercury removal from natural gas: A focus on the Hg stabilization** **Carla Luciane Manske Camargo,** Federal University of Rio de Janeiro, Brazil
09:50-10:10	**Experimental investigation of polymer adsorption-induced permeability reduction in low permeability reservoirs** **Hyemin Park,** Hanyang University, Korea
10:10-10:30	**First-principles analysis on enzymatic degradation of nylon** **Yasuteru Shigeta,** University of Tsukuba, Japan
	Coffee Break 10:30-10:45 @ Atrium
10:45-11:05	**Effect of miscibility condition for CO_2 flooding on gravity drainage in 2D vertical system** **Jinju Han,** Hanyang University, Korea
11:05-11:25	**Thermodynamic and kinetic hydrate inhibition performance of MEG solution and its synergistic inhibition with PVCap** **Yutaek Seo,** Korea Advanced Institute of Science and Technology, Korea
11:25-11:45	**Dearomatization of straight-run diesel fuel by using adsorbents under magnetic field** **Irana Safarli Almas,** Institute of Petrochemical Processes of Azerbaijan NAS, Azerbaijan
11:45-12:05	**The use of an ultrasonic technology to increase the productivity of oil wells** **Anna Abramova,** Institute of General and Inorganic Chemistry of the Russian Academy of Sciences, Russia
12:05-12:25	**Experimental study of pulverized coal oxycombustion and modelling of devolatilization kinetics** **Romain Lemaire,** Université Lille Nord de France, France
12:25-12:45	**The investigation of catalytic activity of polyoxide catalysts on the base of fiberglass in the reaction of carbon dioxide conversion of methane** **Z A Mansurov,** Institute of Combustion Problems, Kazakhstan
	Lunch Break 12:45-13:15 @ Atrium
13:15-13:35	**LES and RANS of pulverized coal oxy-combustion in swirl burners** **Andrzej Boguslawski,** Czestochowa University of Technology, Poland
13:35-13:55	**Applicability of non-exhaustive extraction procedures using Tenax® and HPCD to estimate biodegradable contaminant fractions in soil** **Kerstin Derz,** Fraunhofer Institute for Molecular Biology and Applied Ecology, Germany
13:55-14:15	**E- Neutron scattering studies of catalyst systems at the ISIS neutron spallation Source** **Martin Owen Jones,** Oxford University, UK
14:15-14:35	**Avoiding gas hydrate problems in Qatar oil and gas industry: Environmentally friendly solvents for gas hydrate inhibition** **Nabila Mohamed,** Qatar University, Qatar
14:35-14:55	**Insitu transesterification of wet activated sludge under subcritical conditions** **Lan Nguyen Phuong Tran,** National Taiwan University of Science and Technology, Taiwan
14:55-15:15	**The development of the methods for processing and using of oil sands as the alternative hydrocarbon feedstock** **Sultanov F,** Al-Farabi Kazakh National University, Kazakhstan

Track 9: Renewable Energy & Feedstock

Session Chair: Abdallah S Berrouk, The Petroleum Institute, UAE
Session Co-Chair: Stella Bezergianni, Centre for Research & Technology Hellas, Greece

Session Introduction

15:15-15:35 **Fast pyrolysis of lignin**
Hilkka Kenttamaa, Purdue University, USA

15:35-15:55 **Photosynthetic bioenergy utilizing CO_2: An approach on flue gases utilization for third generation biofuels**
Roberto Parra Saldivir, Monterrey Institute of Technology and Higher Education, Mexico

Coffee Break 15:55-16:10 @ Atrium

16:10-16:30 **Decarbonization of transportation fuels via co-hydroprocessing bio-based feedstocks with petroleum fractions**
Stella Bezergianni, Centre for Research & Technology Hellas, Greece

16:30-16:50 **Evaluation of methylic and ethylic biodiesels from Pequi oil (*Caryocar Brasiliense* Camb.) as possible diesel substituents**
Marcelo Firmino de Oliveira, Universidade de Sao Paulo, Brazil

16:50-17:10 **Combustion heat release models of biodiesels**
Abdullah Abuhabaya, King Abdulaziz University, Saudi Arabia

17:10-17:30 **Biodiesel production from *Acrocomiaaculeata* acid oil by (enzyme/enzyme) hydroesterification process: Use of vegetable lipase and fermented solid as low-cost biocatalysts**
Erika Cristina G Aguieiras, Federal University of Rio de Janeiro, Brazil

17:30-17:50 **Drying of energy wood by compression**
Tuomas Hakonen, Seinäjoki University of Applied Sciences, Finland

17:50-18:10 **Thermochemistry and kinetics of bioalcohols and bioesters as fossil fuel alternatives. Ab initio and DFT studies**
Ahmed El-Nahas, El-Menoufia University, Egypt

18:10-18:30 **Thermogravimetric study of powdered laboratory safety examination gloves**
Nasrollah Hamidi, South Carolina State University, USA

16:30-17:30 Poster Presentations @ Atrium

P-01 **Fischer-Tropsch synthesis reaction in a novel reactor system of cobalt catalyst coated metallic foam and heat-exchanger type reactor**
Jung-Il Yang, Korea Institute of Energy Research, Korea

P-02 **Study of solvent recovery in solvent deasphalting process**
Seonju Ahn, Korea University, South Korea

P-03 **Reforming of methane with carbon dioxide**
Kusman Dossumov, Al-Farabi Kazakh National University, Kazakhstan

P-04 **Green synthesis of Fe nanoparticles for chromate removal**
Christiana Mystrioti, National Technical University of Athens, Greece

P-05 **Investigation of hexavalent chromium removal from polluted soil using electroremediation**
Aikaterini Toli, National Technical University of Athens, Greece

P-06 **Selective viscosifying for conformance control**
Joris van Santvoort, Eindhoven University of Technology, The Netherlands

P-07 **Fracture flow control**
Boaz van der Plas, Eindhoven University of Technology, The Netherlands

P-08 **Vapor-liquid equilibria of the binary system 2-methylfuran + 1-butanol, present in the production of 2,5-dimethylfuran from biomass**
Luis A Follegatti-Romero, University of Campinas, Brazil

P-09	**Production of a solid enzymatic preparation by *Rhizomucor miehei* from a low-cost agroindustrial residue** **Jaqueline Greco Duarte,** Federal University of Rio de Janeiro, Brazil
P-10	**Electrical, optical and structural properties of Ga-Al doped ZnO/Copper/Ga-Al doped ZnO multilayer electrode for thin film solar cells** **Kyung Hwan Kim,** Gachon University, Republic of Korea
P-11	**Fracture diagnostics of SRV by well testing and micro-seismic method in tight reservoirs, China** **Xiaoliang Zhao,** China University of Petroleum, China
P-12	**Determination of dynamic deliverability equation for fractured horizontal well in tight gas reservoir** **Xiangji Dou,** China University of Petroleum, China
P-13	**The mechanisms of gas generation during coal deformation** **Rongting Xu,** University of Chinese Academy of Sciences, China
P-14	**The effect of water salinity on silica dissolution rate and subsequent formation damage during chemical EOR process** **Khaled A. Elraies,** Universiti Teknologi PETRONAS, Malaysia
P-15	**Influence of crude oil type and production technology on bitumen fractional composition** **Audrius Vaitkus,** Vilnius Gediminas Technical University, Lithuania
P-16	**Study on chemical properties of some bituminous materials** **Nader Nciri,** Korea University of Technology and Education, Republic of Korea
P-17	**Agricultural machinery problems on fuel consumption, exhaust emissions and their normative assessment** **Antanas Juostas,** Konekesko Lietuva, Lithuania

18:30-19:30 Cocktails Sponsored by: Journal of Chemical Engineering & Process Technology @ Atrium

Day 3 October 29, 2014

Tropicana Ball Room

Track 13: Modeling & Simulation
Track 14: Catalysis Concepts

Session Chair: Renbi Bai, National University of Singapore, Singapore
Session Co-Chair: Joseph Zeaiter, American University Beirut, Lebanon

Session Introduction

08:30-08:50	**Determination of boiling point of petrochemicals by gas chromatography-mass spectrometry and multivariate regression analysis of structural activity relationship** **Sayo Fakayode,** North Carolina A&T State University, USA
08:50-09:10	**Feedback control over the chlorine disinfection process at a wastewater treatment plant using a smith predictor, a method of characteristics and odometric transformation** **Feridun Demir,** Osmaniye Korkut Ata University, Turkey
09:10-09:30	**CFD and process simulations of air gasification of plastic wastes in a conical spouted bed gasifier** **Abdallah S Berrouk,** The Petroleum Institute, UAE
09:30-09:50	**Modelling approaches for the estimation of irreducible water saturation and heterogeneities of the commercial Ashtart reservoir from the Gulf of Gabès, Tunisia** **Fatma Taktak,** UMS University, Dubai
09:50-10:10	**Liquid phase oxidation of cyclohexane using supported novel metals: Catalytic oxidation or autoxidation?** **Xi Liu,** Cardiff University, UK
10:10-10:30	**Mathematical modelling of the aqueous phase reforming of sorbitol** **Joseph Zeaiter,** American University Beirut, Lebanon

Coffee Break 10:30-10:45 @ Atrium

10:45-11:05 **Fixed-bed catalytic wet peroxide oxidation of phenol with titania and Au/titania catalysts in dark**
Miron Landau, Ben-Gurion University of the Negev, Israel

11:05-11:25 **Process simulation-based optimization of a commercial amine gas sweetening unit**
Abdallah S Berrouk, The Petroleum Institute, UAE

11:25-11:45 **The features of structural transformations of asphaltene molecules during hydro conversion of vacuum residue in the presence of nanosized molybdenum disulfide particles**
Olga Zaitceva, Gubkin Russian University of Oil and Gas, Russia

11:45-12:05 **New catalyts for biodiesel of 1st and 2nd generation**
Wolfgang F Hoelderich, TCHK Holderich-Consultancy, Germany

12:05-12:25 **Foamability and foam stability of several surfactants solutions: The role of salinity and oil presence**
Abdulrahman AlQuraishi, King Abdulaziz City for Science and Technology, Saudi Arabia

12:25-12:45 **A four coefficient model for extending the heptanes-plus fraction for gas condensate systems**
Raffie Hosein, The University of The West Indies, West Indies

Lunch Break 12:45-13:15 @ Atrium

Track 11: Chemical Reaction Engineering & Applications
Track 12: Processing Technology & Separation Techniques
Track 15: Reservoir Engineering

Session Chair: Romain Lemaire, Université Lille Nord de France, France
Session Co-Chair: Erik Von Harbou, University of Kaiserslautern, Germany

Session Introduction

13:15-13:35 **Operational behavior and reforming kinetics over Ni/YSZ of a planar type pre-reformer for SOFC systems**
Van Nhu Nguyen, Forschungszentrum Jülich GmbH, Germany

13:35-13:55 **Analysis of oil sands bitumen pyrolysis based on thermogravimetry and Py-GC/MS**
Sangcheol Shin, Korea University, South Korea

13:55-14:15 **Tuning photocatalytic activity of carbon-based asemblies by their morphology and surface functionalization**
Grigoriy A Sereda, University of South Dakota, USA

14:15-14:35 **Non-equilibrium modellingof simulated moving bed processes for separation of Xylenes in petrochemical industry**
Ahmet R Ozdural, Hacettepe University, Turkey

14:35-14:55 **Morphological analysis and optimisation of heterogeneously catalysed reactive distillation of complex chemical systems**
Erik Von Harbou, University of Kaiserslautern, Germany

14:55-15:15 **Experimental investigation of the transport mechanism of several gases during the CVD post-treatment of nanoporous membranes**
Anastasios Labropoulos, NCSR Demokritos, Greece

Coffee Break 15:15-15:30 @ Atrium

15:30-15:50 **Novel hydrophilic and oleophobic hollow fiber membrane for effective and low fouling oil/water separation applications**
Renbi Bai, National University of Singapore, Singapore

15:50-16:10 **Experimental analysis of the sooting tendency of different oxygenated molecules used as additives in a diesel surrogate**
Romain Lemaire, Université Lille Nord de France, France

16:10-16:30	**Coarse-grained simulations of Multiphase distribution in porous media, with application for oil and for gas hydrates** **David Wu,** Colorado School of Mines, USA
16:30-16:50	**Behavior of oxidative amorphous alloy $Co_{72}Nb_{24}B_4$ on catalytic cracking of methanol to olefin production** **Luciano Nascimento,** University Pernambuco-UFPE, Brazil
16:50-17:10	**Use alloy quasicrystalline $Al_{62,2}Cu_{25,3}Fe_{12,5}$ for steam reforming of methanol** **Lourdes Cristina Lucena Agostinho Jamshidi,** University Pernambuco-UFPE, Brazil
17:10-17:30	**Enhanced oil recovery by injection of nanoemulsion systems** **Tereza Neuma de Castro Dantas,** Federal University of Rio Grande do Norte, Brazil
17:30-17:50	**Multivariable constrained predictive control of main steam temperature in ultra-supercritical coal-fired power unit** **Shi-He Chen,** Guangdong Electric Power Research Institute, China

Award Ceremony @ Tropicana Ball Room

Bookmark your dates

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3rd World Congress on Petrochemistry and Chemical Engineering

November 30-December 02, 2015 Atlanta, USA



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