5th International Conference on
Advances in Chemical Engineering & Technology
October 4-5, 2018 London, UK

Conference Secretariat
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https://chemicalengineering.conferenceseries.com/europe/
# Program at A Glance

## Day 1

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### NOTE: Program Schedule is subject to change with final allotment of the speaker slots
Major Scientific Sessions

- Chemical Reaction Engineering
- Catalysis Engineering
- Biochemical Engineering
- Thermodynamics Process
- Transport Phenomenon
- Water Technology and Innovations
- Chemical Engineering- Separation process

- Gas Hydrates
- Bio Fuels
- Carbon and Graphene Materials
- Catalysis Engineering
- Oil Exploration
- Chemical Polymer Technology
- Industrial Biotechnology
- Environmental Engineering

Best Poster Award

- You will be given about 5-7 minutes to present your poster including questions and answers. Judges may pose questions during the evaluation of the poster.
- Judges will even evaluate the student’s enthusiasm towards their study, interest and knowledge in the area of their research.
- The winners will be announced at the closing ceremony of the conference. The decision of the winner will be withdrawn if the winner/winners is/are not present at the time of announcement.
- Apart from the judging time you may also be present at the poster to share your research with interested delegates.

Young Researchers Forum

- Present your research through oral presentations.
- Learn about career development and the latest research tools and technologies in your field.
- This forum will give pertinent and timely information to those who conduct research and those who use and benefit from research.
- Develop a foundation for collaboration among young researchers.
- The forum will provide an opportunity for collegial interaction with other young investigators and established senior investigators across the globe.
- Interact and share ideas with both peers and mentors.

General Queries
eurochemengineering@chemseries.com

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**Keynote Forum**

**Introduction**

**Title:** Oil and gas developments and future growth  
**Amarjit Bakshi,** Refining Hydrocarbon Technologies LLC, USA

**Networking and Refreshments Break**

**Title:** Spray Flash Evaporation (SFE): A technique for breakthrough chemical engineering challenges  
**Denis Spitzer,** Director NS3E Laboratory, France

**Sessions:** Chemical Engineering | Catalysis Engineering  
**Session Chair:** P. S. T. Sai, Indian Institute of Technology Madras, India

**Session Introduction**

**Title:** An overview of renewable fuels ethanol from cellulose and bio-diesel from conventional/algae feed status and economic options for ETBE  
**Amarjit Bakshi,** Refining Hydrocarbon Technologies LLC, USA

**Title:** Reforming of toluene with bimetallic catalysts supported on alumina and synthesized by an aqueous sol-gel process  
**Stéphanie D. Lambert,** University of Liege, Belgium

**Title:** Foaming in gas sweetening process: Comprehensive experimental efforts lead to better understanding and predication of amine foaming  
**Emad Alhseinat,** Khalifa University, UAE

**Group Photo**

**Lunch Break**

**Title:** Effect of initial salt concentration on acid and base production from NH₄Cl - NaCl solution by bipolar membrane electrodialysis  
**Sinan Yapıcı,** Inonu University, Turkey

**Title:** Synthesis and application of β-cyclodextrin-based cinchona organocatalysts and their recovery by organic solvent nanofiltration  
**József Kupai,** Budapest University of Technology and Economics, Hungary

**Title:** Mathematical model for the prediction of the dissolution of residual coffee beans for the sustainable production of energy materials  
**José Angel Loredo-Medrano,** University of Nuevo Leon, Mexico

**Sessions:** Biotechnology | Biologically Engineered Systems  
**Session Chair:** Kenji Abe, Ajinomoto Inc., Japan

**Session Introduction**

**Title:** Microbial pretreatment of biomass for renewable energy production  
**Jaron Hansen,** Brigham Young University, USA

**Title:** Biological breakdown of lignocellulose to produce renewable energy  
**Conly Hansen,** Utah State University, USA

**Networking and Refreshments Break**

**Title:** Engineering of *Escherichia coli* to facilitate efficient utilization of isomaltose and panose in industrial glucose feedstock  
**Kenji Abe,** Ajinomoto Inc., Japan

**Video Presentation**
Title: Chemical looping combustion and gasification technologies for production of heat and valuable commodities

Ranjani Siriwardane, National Energy Technology, USA

Panel Discussion

Day 2 November 17, 2017

Sunset 2

Keynote Forum

Title: Biothermodynamics: Bridging thermodynamics with biochemical Engineering
Urs von Stockar, Swiss Federal Institute of Technology, Lausanne (EPFL), Switzerland

Networking and Refreshments Break

Title: Bio-based chemistry in water: Future perspectives in catalysis
Christophe LEN, Sorbonne Université, France

Sessions: Petroleum Engineering

Session Chair: Amarjit Bakshi, Refining Hydrocarbon Technologies LLC, USA

Session Introduction

Title: Change refinery gasoline economics by breakthrough smart technologies: RHT-alkylation and RHT-isooctene and iso-octane technology
Amarjit Bakshi, Refining Hydrocarbon Technologies LLC, USA

Title: How can augmented reality change the future of the oil and gas Industry
Mohammad A. AlKazimi, Kuwait Oil Company, Kuwait

Title: Optimization of delay coker unit by using of artificial neural network
Ali Shaeri, The National Iranian Oil Engineering & Construction Co., Iran

Title: Increasing research octane number in a catalytic reforming unit by employing artificial neural network
Ali Shaeri, The National Iranian Oil Engineering & Construction Co., Iran

Lunch Break

Title: Temperature sensors position in chemical reactors: The use of CFD.
Valentina Busini, Politecnico di Milano, Italy

Title: New types, halogen-free, eco-safe, inexpensive fire-extinguishing and fire-protective materials
Lali Gurchumelia, TSU Rafael Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgia

Title: Modeling and simulation of coal gasification in internally circulating fluidized bed
P. S. T. Sai, Indian Institute of Technology Madras, India

Title: The performance of dual-bed system of MoS$_2$/Al$_2$O$_3$ and Co-MoS$_2$/Al$_2$O$_3$ catalysts in ULSD production from the mixture of rapeseed oil and SRGO
Irina V. Deliy, Novosibirsk National Research University, Russia

Title: Investigating the effects of inlet gas velocity on the operation of multi-zone circulating reactors: A CFD study
Reza Marandi, National Petrochemical Company, Research and Technology, Iran

Networking and Refreshments Break

Young Researchers Forum

Title: Study of the retention of hydrophobic actives from cosmetic emulsions on optimized human skin mimics
Georgios Gkotsis, University of Birmingham

Title: Potential of dry fermentation using novel reactors
Regina J. Patinvoh, University of Borås, Sweden

Title: Amino Acids as gas hydrate inhibitors for offshore oil and gas industry
M. Fahed Qureshi, Qatar University, Qatar

Poster Presentations

ECH-01

Title: Numerical simulation of the mass transfer in hydrophobic hollow fiber using the finite volume method
Carlos Zambra, Universidad de Talca, Curico, Chile
Title: Kinetic model and simulation of Fischer Tropsch (FT) reactor with iron catalyst: state of art and FASTCARD alternative.

Irene Rapone, Eni SpA, Italy

Title: First principle Study of the magnetic properties of SnO$_2$ slab

Mahmoud Jafari, K. N. Toosi University of Technology, Iran

Title: Effect of synthesis process variables on morphological and mechanical properties of vitreous carbon scaffolds for tissue engineering applications

Natalia Terán-Acuña, Universidad Industrial de Santander, Colombia

Title: Adsorption of oxytetracycllin on modified bentonites

Faroudja Mohellebi, Ecole Nationale Polytechnique, Algeria

Title: Computational Study of thermal properties of TiC Nanowires

Maryam Jafari, University of Tehran, Iran

Title: Synthesis, characterization and reactivity of mesoporous materials Fe-TUD-1

Saliha HADDOUM, Ecole Nationale Polytechnique, Algeria

Title: Effectiveness of Pyrrolidinium Ionic Liquids as gas hydrate inhibitors

M. Fahed Qureshi, Qatar University, Qatar

Panel Discussion

Award & Closing Ceremony
3rd International Conference on

Chemical Engineering

October 02-04, 2017 | Chicago, USA
Day 1        October 02, 2017

ZURICH

Panel Discussions
Sessions: Chemical Engineering | Electrochemistry and Electrochemical Engineering | Biochemical Engineering
Session Chair: Ignacio Gracia, University of Castilla-La Mancha, Spain
Session Co-chair: Jong Moon Park, Pohang University of Science and Technology, South Korea

Session Introduction
Title: Opportunities for innovation in chemical industry
Anil Oroskar, Orochem Technologies Inc., USA

Lunch Break

Group Photo @ ZURICH

Panel Discussions
Title: Preventing thermal runaway propagation in li-ion batteries
Said Al-Hallaj, University of Illinois, Chicago, USA
Title: Identifying electrochemical limitations of solar energy storage
Luca Gael Bertoluzzi, Stanford University, USA
Title: Enhancement of cyanobacterial ethanol production by co-factor engineering
Jong Moon Park, Pohang University of Science and Technology, South Korea

Networking & Refreshment Break

Title: Highly efficient oxygen-deficient reduced TiO$_{2-x}$ for sunlight-induced water splitting for H$_2$ generation
Jong-Sung Yu, Daegu Gyeongbuk Institute of Science & Technology, South Korea
Title: An ultra scale-down method to predict diafiltration performance during formulation of concentrated mAb solutions
Lara Fernandez-Cerezo, University College London, UK

Panel Discussions

Day 2        October 03, 2017

ZURICH
Keynote Forum

Session Chair: Ying Liu, University of Illinois, USA

### Panel Discussions

#### Sessions:
- Chemical Polymer Technology
- Thermodynamics
- Environmental and Sustainable Chemical Engineering

#### Session Introduction

**Title:** Colloidal methods for the fabrication of advanced electrodes for electrochemical supercapacitors  
*Igor Zhitomirsky,* McMaster University, Canada

**Title:** Reduction on water consumption on a cooling tower with the application of a novel biocide  
*Anderson Beber,* Solenis Water Technologies, Brazil

**Title:** Pre-and post-combustion NOx control system with hydrogen assistance and using microwave technology for biogas engines  
*Valentino Tiangco,* Sacramento Municipal Utility District, USA

#### Poster Presentations

**Title:** The definition of the integral characteristics of the process of formation of cavitation bubbles when operating the control valve  
*Anna Kapranova,* Yaroslavl State Technical University, Russia

**Title:** The study of the volume fraction of key component in the second phase of the portion mixing by means of the device of gravity type  
*Anna Kapranova,* Yaroslavl State Technical University, Russia

**Title:** Electrochemical carbon dioxide conversion system  
*Md Obaidullah,* Chungbuk National University, South South Korea

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**Day 3**  
**October 04, 2017**  
**ZURICH**
Introduction
Title: Description of the molecules of heavy oil cuts and their thermodynamic properties to improve physical and chemical kinetic modelling
Melaz Tayakout Fayolle, University of Lyon, France

Networking & Refreshment Break

Sessions:
- Petroleum Refining and Petrochemicals
- Chemical Reaction Engineering
- Chemical Industry and Market Analysis
- Biofuels

Session Chair: M. Angeles Martin Luengo, Consejo Superior de Investigaciones Científicas (CSIC), Spain

Session Introduction
Title: Sustainable chemical engineering of renewable resources
M. Angeles Martin Luengo, Consejo Superior de Investigaciones Científicas (CSIC), Spain

Title: Biomolecular engineering of elastin protein for cell transplantation
Mr. Won Bae Jeon, Daegu Gyeongbuk Institute of Science and Technology, South South Korea

Title: Theory and application practice of the binary mixtures sol-gel transition concept for fire and explosion prevention
Denis S Kuprin, Saint Petersburg State University, Russia

Title: The shift of raw materials from oil, coal and natural gas to biomass and residues
Daniela Almeida Streitwieser, Universidad San Francisco de Quito USFQ, Ecuador

Lunch Break
Title: Nanocomposite of polyacrylamide-rGO-Ag-PEDOT/PSS hydrogels by photo polymerization method
Yoon Kuk Ro, Hannam University, South Korea

Panel Discussions
Title: Hybrid metal-Cu$_2$S nanostructures as efficient co-catalysts for photocatalytic hydrogen generation
Jong-Soo Lee, Daegu Gyeongbuk Institute of Science and Technology, South South Korea

Title: Smart bioactive compounds: Their synthesis and potential application in biodiesel oxidation stability enhancement
Anuchaya Devi, Tezpur University, India

Title: Comparison of pid parameter using multiple dominant pole placement technique with other techniques for stable third order processes
Ch V Naga Sowjanya, Sri Venkateswara University, India

Networking & Refreshment Break

Closing and Award Ceremony
International Conference on

Chemical Engineering

September 12-14, 2016   Phoenix, USA

Scientific Program

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## Keynote Forum

**Introduction**

**Title:** Frontiers in chemical engineering for sustainable earth  
**Ravindra Pogaku,** University Malaysia Sabah (UMS), Malaysia

**Refreshments and Networking Break**

**Title:** Stimuli-responsive and nanostructured polymer films for modulating surface properties: Fabrications, applications and limitations  
**Suzanne Giasson,** Université de Montréal, Canada

## Panel Discussion

**Sessions:**  
Advances in Chemical & Process Engineering | Advances in renewable chemicals | Thermodynamics | Separation process

**Session Chair:** Amarjit Bakshi, Refining Hydrocarbon Technologies LLC, USA  
**Session Co-Chair:** Aymn Abdulrahman, University of Jeddah, Saudi Arabia

### Session Introduction

**Title:** Change refinery gasoline economics by breakthrough smart technologies: RHT- alkylation and RHT-iso-octene and iso-octane technology  
**Amarjit Bakshi,** Refining Hydrocarbon Technologies LLC, USA  
**Title:** Acetic acid removal from pre-pulping wood extract  
**Aymn Abdulrahman,** University of Maine, USA  
**Title:** Selective removal of boron from solutions using radiation grafted microfibrous and nanofibrous adsorbents containing glucamine ligands  
**Mohamed Mahmoud Nasef,** Universiti Teknologi Malaysia, Malaysia

**Lunch Break**

**Title:** Application of Acti-Zyme in wastewater treatment for recovering biogas  
**Daniel Ikhu-Omoregbe,** Cape Peninsula University of Technology, South Africa  
**Title:** Production of high value added petroleum additives by esterification of carboxylic acids using solid acid catalyst zeolite Hβ  
**Vaishali Rakesh Umrigar,** Sardar Vallabhbhai National Institute of Technology, India  
**Title:** Use of distillery spent grains in fermentative lactic acid production  
**Dragomir Yankov,** Bulgarian Academy of Sciences, Bulgaria  
**Title:** Treatment of an alternative water source for drought relief  
**Talbott G. Howard,** ECT Services & Solutions Inc., USA

**Refreshments and Networking Break**

**Panel Discussion**
Keynote Forum

Introduction
Title: Controlling the morphological and property development in network-forming multiblock ionomers
Richard J Spontak, NC State University, USA

Refreshments and Networking Break

Title: Process intensification using catalysis for renewable fuels and chemicals
Haresh Manyar, Queen's University Belfast, UK

Panel Discussion

Sessions:
Chemical Polymer Technology | Petroleum Refining and Petrochemicals | Applications of Chemical Technology | Biomolecular Engineering

Session Chair: Ravindra Pogaku, University Malaysia Sabah (UMS), Malaysia
Session Co-Chair: Haresh Manyar, Queen's University Belfast, UK

Title: Impact of biopolymer's chemical heterogeneity on drug release from matrix formulations – An experimental study combined with simulations of the drug release
Anette Larsson, Chalmers University of Technology, Sweden

Title: Gold based catalyst for low temperature water-gas shift reaction
Jehad Abu-Dahrieh, Queen’s University Belfast, UK

Title: Study of non-isothermal crystallization kinetics of polypropylene and acrylonitrile butadiene styrene (ABS) blends
Bader Albusairi, Kuwait University, Kuwait

Lunch Break

Title: Chemical Engineers: Untold contributions to humanity
Tony Green, Speaking Green Communications Livermore, USA

Title: Removal of sulfides and oil from produced water
Ana Karla Costa de Oliveira, Federal Institute of Rio Grande do Norte, Brazil

Title: Systematic and knowledge-based invention in science and industry - 1; context, problematics, and research strategy
Ali Taheri, Exaura Artefact Inc., USA

Workshop Session

Title: Biofuels 2016
Ravindra Pogaku, University Malaysia Sabah (UMS), Malaysia

Panel Discussion

Refreshments and Networking Break

Poster presentations

CME-1
Title: Energy efficiency of a fuel cell for environmental purposes
Dragomir Yankov, Bulgarian Academy of Sciences, Bulgaria

CME-2
Title: Synthesis and characterization of a photoluminescent Zr-based metal-organic framework with controllable UV-induced structural variation and ultrahigh hydrostability
Bohan Shan, Arizona State University School for Engineering of Matter, USA

CME-3
Title: Effective reduction of aromatic rings of phenols and anisoles as lignin-like compounds using iron powder and Rh/C in sulfuric acid
Daiki Yokoyama, Prefectural University of Hiroshima, Japan

Day 3 September 14, 2016

Staghorn

Sessions:
Electrochemical Engineering | Biochemical engineering | Renewable energy & Environment

Session Chair: Daniel Ikhu-Omoregbe, Cape Peninsula University of Technology, South Africa
Session Co-Chair: Ali Taheri, Exaura Artefact Inc., USA