

10th World Congress of Chemical Engineering – WCCE10

incorporating the 11th European Congress of Chemical Engineering (ECCE11) and the 4th European Congress of Applied Biotechnology (ECAB4)

Barcelona, Spain, 1-5 October 2017
(EFCE Event No. 741)

Theme: Chemical and Biochemical Engineering in a Global World: "Solutions 4 Global Challenges"

The Congress Theme *Chemical and Biochemical Engineering in a Global World: "Solutions 4 Global Challenges"* is based on the UN's Sustainability goals that address issues such as an increasing world population in a world of finite natural resources, which require ever more innovative chemical engineering to solve problems and produce new, better products. Many economic and ecological challenges of the 21st century can only be solved on a global scale and chemical engineering and related sciences will play a key role in meeting future societal needs. This event will offer the opportunity to discuss, debate and present applicable solutions.

The Call for Abstracts is now open for the congress and its many specialised joint events. Deadline for abstract submission: 30 January 2017

Please note that it is absolutely necessary to pre-register in order to obtain the "password" and "user" before submitting your abstract. Please **click here** to pre-register to the congress or submit your abstract online.

The scientific and technical programme is structured in three branches:

- Chemical and Biochemical Engineering Core (Topics)
- Grand Challenges for the 21st Century (Industrial Programme)
- Specialised joint events

The Chemical and Biochemical Engineering Core includes seven main topics and 35 subtopics, covering cutting-edge research, new technologies, and emerging growth areas in chemical and biochemical Engineering. The Grand Challenges covers the four wide and



well-known priority areas for the 21st Century: energy, water, health & well-being, and food & nutrition. Every congress day will focus on one of these Grand Challenges, which will be closely related to the industrial programme to make it relevant for the real life and the current industrial scenarios.

Topics

- **TOPIC 1** – KNOWLEDGE, EDUCATION & TRAINING
- **TOPIC 2** – UNIT OPERATIONS & SEPARATION PROCESSES
- **TOPIC 3** – CHEMICAL REACTION ENGINEERING

Welcome to the final 2016 issue of the EFCE News. If you have any comments on the newsletter please get in touch.

Rafiqul Gani
EFCE President

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- **TOPIC 4** – PROCESS SYSTEM ENGINEERING
- **TOPIC 5** – PRODUCT ENGINEERING & ADVANCED MATERIALS
- **TOPIC 6** – APPLIED BIOTECHNOLOGY (integrated in ECAB4)
- **TOPIC 7** – ENVIRONMENTAL & SUSTAINABLE CHEMICAL ENGINEERING

Specialised joint events

The Congress offers a variety of joint events for professionals and students seeking to delve further into specific knowledge of processes and technologies. Fifteen joint events have already been announced as follows:

- **ESCAPE27** – 27th European Symposium on Computer-Aided Process Engineering
- **IPIC1/EPIC6/APSPI3** – International Process Intensification Conference / European Process Intensification Conference / Asia-Pacific Symposium on Process Intensification and Sustainability
- **ICOSSE'17** – International Congress on Sustainability Science and Engineering
- **PARMAT2017** – International Conference on Processing, Handling and Characterization of Particulate Material
- **AOPs Symposium** – Advanced Oxidation Processes Symposium
- **CFD-Symposium** – Computational Fluid Dynamics in chemical engineering: Process Design
- **Fibre Suspensions** – Fibre Suspensions in Process Engineering Symposium



- **Industrial Use Thermodynamics** – 4th Symposium on Industrial Use of Thermodynamics Electrochemical Engineering
- **Electrochemical Engineering** – 2nd Workshop on Electrochemical Engineering: new bridges for a new knowledge on electrochemical engineering
- **IntSympLignCellMat 2017** – International Symposium on Lignocellulosic Materials
- **Gas Hydrates** – Workshop on Gas Hydrates and Applications
- **ISSB-7** – 7th International Symposium on Spouted Beds
- **Nanocelluloses** – Symposium on Nanocelluloses: Engineered Applications and Sustainability
- **Energy Storage** – Symposium on Opportunity and Challenge for Energy Storage Engineering
- **PSS** – Process Safety Symposium

Sponsorship opportunities

WCCE10-ECCE11-ECAB4 is a unique opportunity for companies, organizations and governments to contribute to the advancement and development of up-to-date and progress scientific and technical issues related to chemical engineering and proposing solutions for global challenges. Partnering with WCCE10, ECCE11 and ECAB4 represents a unique opportunity to engage with the chemical and biochemical engineering community and industry, and to be seen at the most important event in this sector.

Further information: <http://www.wcce10.org/index.php/sponsorship-exhibit>

Please also follow the announcements for the industrial, student and social programmes.

Subscribe to the WCCE10 Newsletter and visit the World Congress website at <http://wcce10.org>

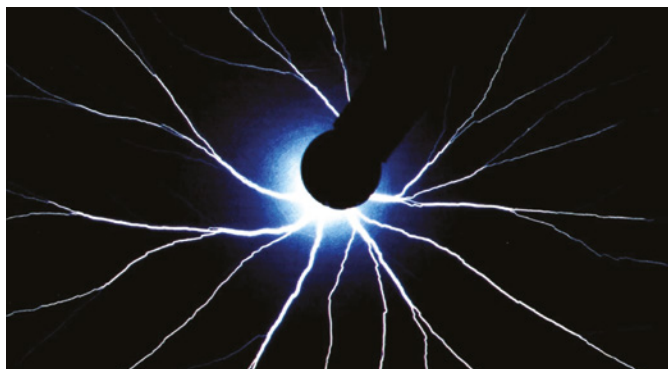
Join us in Barcelona!

EFCE Events

**Specialised events organized
by/on behalf of EFCE:**

Electrostatics 2017

**Frankfurt am Main, Germany,
10-13 April 2017
(EFCE Event No. 735)**



Online registration is open!
**The preliminary programme is online
available in the Congress Planner**
Congress website: <http://www.dechema.de/en/electrostatics2017.html>

11th European Symposium on Electrochemical Engineering – ESEE Prague, Czech Republic, 4-8 June 2017(EFCE Event No. 740)

**Motto: Today's research for tomorrow's
technologies**

The main target of the 11th European Symposium on Electrochemical Engineering (ESEE) is to provide a focused forum for researchers and users of electrochemical technologies in a broad spectrum of existing and emerging fields of applications and thus to trigger an intense exchange of ideas and information. The Symposium is organised by University of Chemistry and Technology Prague in cooperation with the EFCE Working Party on Electrochemical Engineering.

Topics: Green technologies for sustainable development; Electrocatalysis and electrochemical technologies; Safe water and air; Energy conversion processes; Bioelectrochemistry - a launch-pad for new frontiers in electrochemical technologies;

EFCE Awards

Call for Nominations - Thermodynamics and Transport Properties

The European Federation of Chemical Engineering (EFCE) is pleased to announce the call for nominations for the fifth EFCE Excellence Award in Thermodynamics and Transport Properties. The Award recognises a PhD thesis and associated papers published in the preceding two-year period, which demonstrate an outstanding contribution to research and/or practice in thermodynamics and/or transport properties.

The award consists of a certificate, a cash prize of EUR 1,500, a travel grant (not exceeding EUR 500) and fee waiver to attend the 29th European Symposium on Applied Thermodynamics - ESAT 2017. The Symposium will be held in Bucharest, Romania, from 18 to 21 May 2017, where the award will be presented.

Nominations may be submitted by any PhD supervisor at a PhD-awarding institution in an EFCE Member Country or by a member of a national member association of EFCE.

The nominated PhD thesis and publication(s) must address a topic relevant to the field of thermodynamics and/or transport properties. The thesis must have been completed and published and the PhD degree examined and awarded between 1 January 2015 and 31 December 2016.

Further information about the nomination procedure, selection of candidates, eligibility, and supporting documentation, can be obtained from the Working Party on Thermodynamics and Transport Properties' website at: **<http://www.wpttp.dk>** or from: **<http://www.efce.info/ExcellenceAwardTTP.html>**. **Closing date for nominations: 13 January 2017.** The Award is generously sponsored by Bayer.

The following calls for EFCE Awards are still open:

- **Carl Wagner Medal of Excellence in Electrochemical Engineering**
Deadline for nominations: **20 January 2017**
- **EFCE Student Mobility Award 2017**
Deadline for applications: **28 February 2017**

A listing of EFCE Awards and Medals is available at: **<http://efce.info/EFCEawards.html>**

Surface treatment and corrosion engineering.

The Call for Papers is open. Deadline for abstract submission: 31 December 2016
Symposium website: <http://www.electrochemical-engineering.eu/2017/>

International Symposium Reliable Flow of Particulate Solids V - RELPOWFLO V

Skien, Norway, 13-15 June 2017
(EFCE Event No. 734)

RELPOWFLO V will enable the participant being updated and enriched with recent developments and investigations in the field of powder technology, while providing excellent academic and industrial networking possibilities.

Topics: Drying of Particulate Materials; Environmental Aspects; Industrial Case Studies; Measurements, Controls & On-line monitoring; Mechanical Conveyor & Feeders; Modelling and Fundamentals of Powder Systems; Particle & Bulk Characterization; Pneumatic, Hydraulic & Capsule Conveying; Powder Coating; Process Analytical Technology in Powder Applications; Production & Handling of Nanoparticles; Production of Particulate Solids (crystallization, precipitation, etc.); Sample Taking/Sampling in Powder Systems; Segregation & Mixing; Separation & Classification; Size Enlargement; Size reduction (crushing, grinding, milling); Solids Processing; Storage of Bulk Solids.

Register now. Deadline for early registration: 15 April 2017
Symposium website: <http://www.relpowflo.no>

6th European Drying Conference - EuroDrying 2017

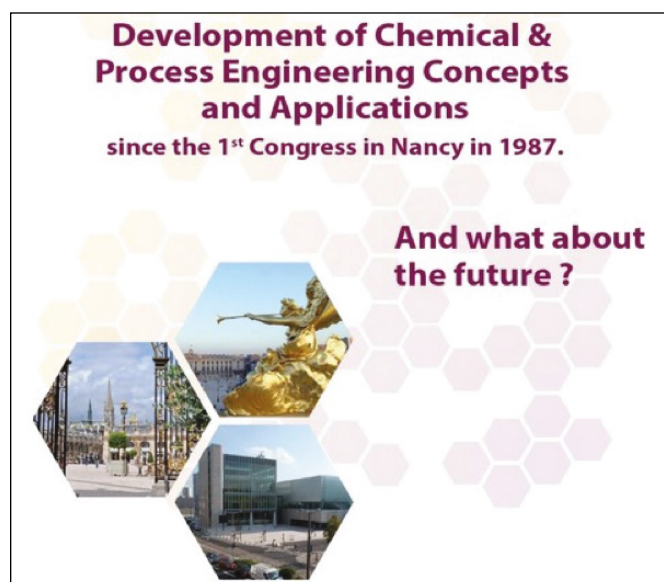
Liège, Belgium, 19-21 June 2017
(EFCE Event No. 738)

Theme: Innovations in drying: bridging the gap between academia and industry
The European Drying Conference series is supported by the Working Party on Drying (WPD), within the framework of the EFCE. The 6th edition, EuroDrying'2017, will be jointly

organized by University of Liège, Free University of Brussels, with the support of the Dutch Working Group on Drying (NWGD).

Topics: Contributions from entire spectrum of drying and dewatering science and technology are eligible as: Fundamentals of drying; Modelling and simulation; Physical properties; Chemical and polymer materials; Food and agricultural materials; Pharmaceutical and biomaterials; Measurement and process control; Industrial processes and equipment; Innovative technologies; Energy and environmental implications; Industrial case studies.

The Call for Papers is open. Deadline for abstract submission: 15 December 2016
Conference website: <http://events.ulg.ac.be/eurodrying2017/>



Development of Chemical & Process Engineering Concepts and Applications
since the 1st Congress in Nancy in 1987.

And what about the future ?

16ieme Congrès de la Société française de Génie des Procédés (SFGP 2017 Conference)
Nancy, France, 11-13 July 2017
(EFCE Event No. 742)

SFGP 2017 Conference, celebrating the 30-year jubilee of this Society, will be a privileged opportunity for engineers and scientists, from university and industry to share their experience in advanced aspects in chemical and process engineering in view to prospects in the area. The event will be for us the opportunity to make you

An extended list of events is available at <http://www.efce.info/events.html>

discover Nancy, its history-rich old town and the well-known Place Stanislas.

Topics: Chemical engineering in view to energy transition; Product engineering, from the molecule to consuming properties ; Chemical engineering as an answer to environmental challenges in 21st century; Chemical engineering for innovation in bio-compounds production; Focus on specific transverse areas.

The three-day meeting will consist of: Plenary lectures on broad scientific domains in Chemical Engineering will be given, also with illustration on the progress accomplished since the first devoted congress held in Nancy in 1987; Keynotes and Poster sessions Four parallel sessions in accordance to the four first above topics; Tutorials dedicated to specific topics will be given in the morning, mainly as an introduction to engineers and scientist on promising, emerging aspects in chemical engineering. After an introduction to the scope, the state of the art will be presented, before interactive exchanges between the tutorial leaders and the attendance could be held.

Besides a German-French day will be organised on July 12th. This very day, the plenary lecture will be given by a German colleague. Integrated in the program of the sessions, oral or poster contributions may be presented in English: in addition to the contributions given by German scientists, some papers from French attendants will be given in English. Furthermore, a session dedicated to teaching, education, and institutional programmes in the countries will be organised, with introductory presentations and a round table.

Call for Papers is open. Deadline for abstract submission: 1 February 2017
Conference website: <http://www.sfgp2017-nancy.com>

Save the date!

Distillation & Absorption 2018
Florence, Italy, 16-19 September
2018 (EFCE Event No. 737)

The call for papers will open in June 2017.
Website: <http://www.aidic.it/da2018/index.php>

Event Report

XXII International Conference on Chemical Reactors
CHEMREACTOR-22
19-23 September 2016, London,
United Kingdom
(EFCE Event No. 736)

XXII International Conference on Chemical Reactors CHEMREACTOR-22 was organized by Boreskov Institute of Catalysis of the Siberian Branch of the Academy of Sciences together with University College London (UCL). London hosted CHEMREACTOR-22 from September 19 till September 23. The event took place in Mary Ward House Conference Center, which is located in the heart of Bloomsbury area, traditional center of intellectual life of London. The conference was held under the auspices of the European Federation of the Chemical Engineering (EFCE). The important role in the event organizing was played by the Scientific Council on Theoretical Fundamentals of Chemical Technology RAS.

The CHEMREACTOR conference has a long history. The first extended sessions dedicated to the subject of chemical reactors were organized in the 1960s. The idea belonged to Mikhail Slin'ko, one of the most distinguished scientists in the field of catalysis and mathematical modeling of chemical processes and reactors, one of the founders of Institute of Catalysis, corresponding member of RAS. In a few years the session acquired the scale of conference and after a few years more it became international, taking place in different countries and cities of the world, in the large scientific centers engaged in the development of innovation chemical technologies.

Now CHEMREACTOR is a full-scale well-known conference. It is conducted biennially and traditionally gathers the internationally recognized scholars as well as the representatives of the large industrial companies, thus creating the platform for exchanging new ideas and discussing the last achievements by science and industry.

CHEMREACTOR has its own strong traditions. Since 2006 the conference is opened by an Honorary Lecture in the memory of its founder Prof. Mikhail Slin'ko. The Honorary Lector is elected by the International Scientific Committee of the conference which consists of 35 recognized experts of over the world headed by the Scientific Adviser of Boreskov Institute of



XXII International Conference on Chemical Reactors CHEMREACTOR-22



London, UK



September 19-23, 2016

Catalysis SB RAS Academician Valentin Parmon. In 2016 the honor to give the Lecture was awarded to the distinguished Belgian researcher Professor Gilbert Froment.

Nearly 200 experts from 29 countries participated in the event. The scientific program was comprised of 6 plenary lectures, 9 keynote lectures, 67 oral and about 100 poster presentations. A distinctive feature of the CHEMREACTOR scientific program is the combining the deep fundamental presentations with the works having crucial practical significance. It was focused on the following trends:

- **Advances in Chemical Reactor Fundamentals** (Chemical Reaction Kinetics; Energy & Mass Transfer in Chemical Reactors and first principles calculations; Fundamentals of Hydrodynamics and Fluid Flow in Chemical Reactors)
- **Chemical Reaction Engineering and Reactor Design** – Novel Experimental Approaches, Modeling, Scale-Up and Optimization (Mathematical Simulation: Multiscale Analytic and Computational Studies of Chemical Reactors; Development of Chemical Reactors and Flow-Sheeting of Reactive Processes; New Chemical Reactor Designs; Process Intensification and Novel Approaches in Multifunctional Reaction Processes)
- **Chemical Reactors and Technologies for Targeted Applications** (Environmental Protection and Utilization of Waste; Reactors for Polymers and Other Novel Materials with Targeted Properties; Processing of Biomass and Renewable Feedstocks; Electrochemical and Photochemical Reaction Engineering; Engineering and Use of Novel Structured Catalytic Materials; Biochemical Engineering; CO₂ Sequestration and Utilisation)
- **Advanced Processing of Conventional and Unconventional Hydrocarbon**

Feedstocks (Modern Reactive Technologies for Natural Gas, Oil and Coal Processing; Chemical Processes for Intensification of Fuel Production; Chemical Reactors for In Situ Processing of Oil and Coal in Deposits; Chemical Reactors and Processes for Treatment of Heavy Hydrocarbon Feedstock and Shale Oil)

The especially highly recognized level of the plenary and keynote sessions was provided by the such well-known scientists in the field of the chemical technology as Vice-President of Chinese Academy of Science Professor Jinghai Li (Institute of Process Engineering CAS, China), Professor David West (Sabic Company, USA), Professor Lynn Gladden (University of Cambridge, UK), Professor Murray Moo-Young (Waterloo University Canada), Professor Sotiris E. Pratsinis (Swiss Federal Institute of Technology in Zürich, Switzerland), Professor Michail Stamatakis (University College London, UK), Professor Frerich Keil (Hamburg University of Technology, Germany), Professor Ruud van Ommen (Delft University of Technology, the Netherlands), Professor Ian Metcalfe (Newcastle University, UK), Professor Mike Harold (University of Houston, USA), Professor Menka Petkovska (University of Belgrade, Serbia), Professor Enrico Tronconi (Politecnico di Milano, Italy), Professor Andrey Zagoruiko (Boreskov Institute of Catalysis SB RAS, Russia), Professor Xing-gui Zho (East China University of Science and Technology, China).

At the closing ceremony the authors of the best poster presentations were awarded the diplomas and prizes of the media-partners of the conference, the Royal Society of Chemistry (RSC, UK) and American Chemical Society (ACS Publishing).

The Proceedings of the conference CHEMREACTOR will be published in Chemical Engineering Journal (Elsevier Science) and Chemical & Engineering Processing: Process Intensification (Elsevier Science).

The organizers have already received the invitations from the participants to host the next CHEMREACTOR conference in their cities and universities.



Best wishes for the festive season and a peaceful, prosperous and fulfilling New Year!



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Ines Honndorf, e-mail:
honndorf@dechema.de

Claudia Flavell-While, e-mail:
claudia@icheme.org

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