



INNOVATION NEWSLETTER

++++ September 2011 +++++

INNOVATION

ENERGY EFFICIENCY IN PROCESS INDUSTRIES

ON the Hanseatic Conference in May 2011 in Hamburg, Professor Fieg presented research results in the field of energy efficiency in processing industries.

The course of chemical reactions for production of products is decisively influenced by catalysts. The key advantage of the use of catalysts is to increase the reaction rate by lowering the activation energy and the selectivity of a chemical reaction. Nevertheless, chemical reactions are carried out usually at high temperatures, which in turn often adversely affects the mentioned selectivity and it often involves high energy consumption. The approach of the Institute for Process Engineering and Investment (TU Harburg, Germany) in the area of reaction is to find alternative catalysts that reduce both the temperature level in the reactor and the selectivity increase. In turn, energy-intensive processes are generally not necessary due to the increased selectivity. The research work has been focused for years on the use of enzymes as alternative catalysts. This type of catalysis allows carrying out synthesis even at moderate process parameters and, thus, achieves direct energy savings compared to conventional synthesis routes in the process industries. In addition, there is a rising market interest at sustainably produced "green" products and the – widely accepted – requirements of the "green chemistry" and

"green engineering". Since enzymes are relatively expensive, a high level of attention should be paid for the recycle-ability of the enzymes (reduction of the production costs) and a suitable type of reactor.

As part of research projects, the Institute for Process and System Engineering has been engaged in the research and of the so-called loop reactors for years.

The product ester is currently produced with chemical catalysts in the process industry. The process runs in batch reactors at temperatures around 230-240°C. The innovative approach is to perform this reaction in another type of reactor. To this the aforementioned loop reactor was chosen. Furthermore, the conventional catalyst was replaced by carrier-fixed enzymes. The immobilizing of the enzymes (*Candida antarctica* lipase B (Novozym[®] 435) ensured that multiple use of the catalyst is possible. This reduces manufacturing costs and is environmentally friendly. Another advantage of the new catalyst is that the reaction temperature has been significantly reduced amounting to only about 60 °C. This results in significantly reduced energy requirements, which in turn significantly increases the energy efficiency of the equipment type compared to conventional solutions.

FURTHER INFORMATION:

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WINDMILLS

Professor V.S. Severjani from the Brest State Technical University has constructed windmills. The main goal pursued during their creation was the reduction of their overall cost. A low power unit (100-500 W) is a horn with a fan working on the inverse air flow principle where the fan motor acts as a generator. A medium power unit (1...5 KW) is a set of turning blades rotating around a vertical axis; the absence of a reducing gear simplifies the design and the operation of the unit. A high-power windmill (about 1MW) has not been built yet; it is a system of wind-driven modules moving on circular rail. These units can be manufactured by both – specialized small enterprises and by individual consumers.

The Brest State Technical University offers their advice in designing and implementing the above mentioned technical proposal. They will take care of all legal and patent aspects will develop and disseminate promotional material.

FURTHER INFORMATION:

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INNOVATIVE ADVERTISEMENT FOR THE BAKERY SECTOR

The German publisher Carlsen produces, among others, small children books on different topics (e.g. "I have a friend who is a policeman/ gardener/..."). For a new book "I have a friend, who is a baker" the publisher asked

the German baker Thomas Effenberger to be the model for the new book. Effenberger supported the author of the book with insight information about his bakery, baking bread and cakes, and about marketing channels. In turn, Thomas Effenberger uses this book as innovative business card. Information about the bakery of Thomas Effenberger is available on the book's back cover.



Picture: front and back cover of the book "I have a friend, who is a baker"

FURTHER INFORMATION:

Effenberger Vollkornbäckerei

<http://www.effenberger-vollkornbaeckerei.de/>

SME FINANCIAL FORUM

The European Commission has established the SME Finance Forum, which brings together on a regular basis organisations which represent SMEs, banks and other financial institutions to reflect on how to best address both the current challenges and long-term structural issues in access to finance for SMEs.

FURTHER INFORMATION:

http://ec.europa.eu/small-business/funding-partners-public/nance/index_en.htm

WOMEN'S ENTREPRENEURSHIP IN THE BALTIC SEA REGION

The Baltic Development Forum and the Danish Enterprise and Construction Authority have



recently published a study on “National and Cross-National Policies on Women’s Entrepreneurship in the Baltic Sea Region- A comparative Perspective”. The report gives an overview about the situation of female entrepreneurs in the Baltic Sea Region. It summarizes policies focussing on women’s entrepreneurship from by comparing the individual countries.

FURTHER INFORMATION:

http://www.bdforum.org/cmsystem/wp-content/uploads/files/thematic_reports_women_entrepreneurs_2011.pdf

A GUIDE TO CORPORATE RESPONSIBILITY

The Confederation of Norwegian Enterprise (NHO) developed a guide to corporate responsibility. The purpose of this guide is to motivate leaders and employees in the private sector to integrate corporate responsibility into business practice by clarifying

- a) What is corporate responsibility
- b) Why is corporate responsibility important for business
- c) How can be worked with corporate responsibility in a systematic manner.

The guide has been developed particularly for small and medium-sized enterprises.

The guide provides a brief introduction to the topic. More information, guidance material and case studies are available on NHO’s website.

FURTHER INFORMATION:

Guide to corporate responsibility:

http://www.nho.no/getfile.php/bilder/RootNY/filer_og_vedlegg1/A%20matter%20of%20trus%20revidert%20desember%202010.pdf

Website of NHO: www.nho.no/

PROJECTS

Baltic Innovation Policy Seminar - Showcasing Regional Contribution to Europe 2020

As a closing event of a very successful project led by the Baltic Institute of Finland, the BSR InnoReg consortium organised the Baltic Innovation Policy Seminar in Brussels 16 June 2011. Around 100 representatives of regional and EU level decision makers and stakeholders from the fields of regional and economic development and innovation policy attended the seminar.



In the seminar, both current and future challenges in economic development and innovation

promotion in the Baltic Sea region were discussed. The Baltic Innovation Policy Memorandum and its recommendations to further enhance economic development and foster effective innovation support measures in the Baltic Sea region served as a basis for discussion.

Speakers like Ms Pauliina Haijanen from the Committee of the Regions, Mr Anders Lindholm from DG Regio, European Commission, and Ms Anneli Pauli from DG Research & Innovation, European Commission, welcomed the work of BSR InnoReg as very valuable for reaching the goals of Europe 2020 and its Innovation Union flagship. The Memorandum encourages nonmetropolitan regions to invest in smart, sustainable and inclusive growth and



to make longterm commitments to regional innovation cooperation.

BSR InnoReg is also appreciated to be the first finalised project co-financed by the EU Baltic Sea Region Programme 2007–2013 that has been prepared and implemented fully in line with the EU Strategy for the Baltic Sea Region.

FURTHER INFORMATION:

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Baltic Innovation Policy Memorandum:
www.baltic.org/bsrinnoreg/mou

FULL EXAMPLE PROJECT PROPOSAL FOR FP7-PROJECT

The NCP SME network has developed full examples for project proposals in FP7. All required information has been filled in and additional information and assistance has been included. The example proposals are for the FP7-programme capacities “Research for the benefits of SMEs” as well as for “Research for the benefits of SME associations”.

FURTHER INFORMATION:

Example Proposal for Research for the benefits of SMEs: <http://www.ncp-sme.net/publications/EDIPAC.pdf>

Example Proposal for Research for the benefits of SME associations:
<http://www.designbyhuman.com/EDIPAFF.pdf>

UPCOMING EVENTS

**NOVEMBER 9, 2011 IN ESBJERG (DK):
OWIB – THE OFFSHORE WIND INTERNATIONAL BUSINESS2BUSINESS EVENT**

OWIB is an annual network event dedicated towards making contacts and contracts within the offshore wind industry. It’s an alternative to traditional conferences and exhibitions, where the right people can often be difficult to find. At OWIB, participants have the opportunity to pre book meetings with participating companies, maximizing efficiency.

OWIB is visited by businesses from all levels in the supply chain. Developers, turbine manufactures, engineering companies, construction, installation and service companies etc. Participants are primarily from Europe with some participation expected from other regions as well.

FURTHER INFORMATION:

<http://www.owib.dk/>

**OCTOBER 11 – 13, 2011 IN HANNOVER (DE):
BIOTECHNICA 2011**

The BIOTECHNICA is Europe's leading trade fair for biotechnology and the life sciences and covers key categories such as Enabling Technologies, Bioanalytics, Bioinformatics, Services and Biotech Applications.

At the same time BIOTECHNICA examines major trends for the future with three focus themes: BioServices, Biotechnological Innovation in Food and Industrial Biotechnology. You'll also be able to see all the latest products and innovations from the market leaders in our exhibition, and hear distinguished experts speaking at our conferences. And you'll find all the contacts you need to further your career at jobvector, the career platform hosted by BIOTECHNICA.

FURTHER INFORMATION:



<http://www.biotechnica.de/home>

**OCTOBER 26, 2011 IN DUESSELDORF (DE):
CAREER MARKET RUSSIA**

The Deutsch-Russisches Forum e.V. (German-Russian Forum) organises a career market in Duesseldorf/Germany on October 26, 2011 at 14.00-19.00. You will get in contact with highly qualified students and young experts from Eastern Europe from the network of the Deutsch-Russisches Forum and the Universities in Nordrhein- Westphalia.

The fee is 500,- Euro. It includes

- stand with a table and two chairs and electricity
- possibility to set up their own roll-ups and screens
- an A5 page in the catalog for the career market (short profile or an own ad in DIN A5 upright format, 4-colour)
- soft drinks and snacks

In order to register for a stand please contact Sebastian Nitzsche (Deputy Manag. Director).

CONTACT DETAILS:

Sebastian Nitzsche
Deutsch-Russisches Forum e.V.
030/ 263 907-0

sekretariat@deutsch-russisches-forum.de

**OCTOBER 20-23, 2011 IN RIGA (LT):
ENVIRONMENT AND ENERGY 2011**

The "Environment and Energy" trade fair is the largest event for energy efficiency and environmental technologies in the Baltic countries yearly gathering more than 100 participating companies from 10 countries. The fair is complemented with different side events – conferences, seminars and presentations – that at-

tract attention of professional visitors and general public.

The exhibition will cover a wide range of issues related to energy efficiency solutions, will offer a comprehensive survey of the latest energy-saving and green technologies, necessity of implementation and application in practice.

Along with exposure of renewable energy, energy efficiency and their topicality, the exhibition will highlight the issues of environment protection and quality improvement, the prudent use of natural resources, and will promote the examples of eco-friendly management to society.

FURTHER INFORMATION:

<http://www.bt1.lv/bt1/ee/>

**OCTOBER 21-22, 2011 IN PANEVĖŽYS (LI):
BUSINESS- FORUM ON CONSTRUCTION
TECHNOLOGY**

The business forum aims at directors, leaders and employees of small and medium- sized enterprises in order to

- initiate international business contacts between companies and

- provide information about new technologies.

SMEs from all over the Baltic Sea Region are invited to this event. Language skills are not necessary (simultaneous translations). The participation is free of charge. Participants must carry travel and accommodation costs.

FURTHER INFORMATION AND REGISTRATION:

Secretary of the Hanseatic Parliament:
www.hanse-parlament.eu

Email: info@hanse-parlament.eu



NOVEMBER 29 – DECEMBER 1, 2011 IN AMSTERDAM (NL):

EWA OFFSHORE 2011

The EWA OFFSHORE is the world's largest offshore wind energy event. The EWEA OFFSHORE 2011 conference and exhibition will build on the huge success of the 2009 edition, which attracted over 260 exhibitors and 4,850 participants in total.

This year's event will set a new record: Combining a high quality conference programme with a large, international, cross-sector exhibition, it will be the biggest and busiest ever.

It represents an unmissable opportunity to:

- Discover the latest industry best practices
- Create new business opportunities with global contacts in a flourishing market
- Network with international leaders shaping tomorrow's energy market

FURTHER INFORMATION:

<http://www.offshorewind2011.info/>

NOVEMBER 22 – 25, 2011 IN POZNAN (PL):

POLEKO – INTERNATIONAL FAIR FOR ENVIRONMENTAL PROTECTION

The latest solutions in the field of environmental protection, representatives of international industry leaders, special areas, specialised conferences and business meetings - all of these will be included in POLEKO International Trade Fair of Environmental Protection, which will be held in Poznan from 22 to 25 November 2011.

POLEKO is a meeting platform for professionals from the environmental protection industry from Poland and abroad. It is also a place for

promotion of innovative solutions in this field. The extensive display includes separate thematic sectors:

- Water, sewage
- Waste, recycling
- Energy, renewable energy
- Air, noise, vibrations
- Climate change
- Revitalisation, reclamation
- Municipal and energy construction
- Control and measurement equipment
- Environment security systems
- Flood protection
- Environmental protection consultancy and institutions
- Ecological education

Just like last year, POLEKO Fair will include the following four exhibitions: Clean Energy Exhibition, Recycling Exhibition, Control and Measurement Equipment Exhibition and Science for the Environment Exhibition.

FURTHER INFORMATION:

<http://poleko.mtp.pl/en/>

Part-financed by the European Union (European Regional Development Fund and European Neighbourhood and Partnership Instruments).

