Hop as a raw material for unusual papers

“Paper & Fibre World 2030” – A joint project for the future
Multi-client projects in the PTS Pilot Plant: the successful programme will continue also in 2014/2015
Transnational research project SELECTPERM: developing food packaging materials with selective permeability
Studies into the setting behaviour of printing inks
PTS Paper & Board Symposium 2014 with lots of highlights
The international paper market is in a state of flux: the future of the print media in particular is under discussion. It is therefore all the more important for the German paper industry to find out about which markets, business areas, customer requirements and needs will be emerging in future for fibre-based materials. Even today there are innovative approaches for paper applications as a building material for houses and furniture, as actuators for robotic systems or as a light-weight construction material for the automotive engineering and aircraft construction sectors.

PTS initiated the futuristic project “Paper & Fibre World 2030” in January 2014 in preparation for forthcoming challenges and changes. The project is being funded by the German Pulp and Paper Association (VDP), the German Employers’ Association of the Paper, Board and Plastics Converting Industry (HPV) and the German Paper Technology Research Association (FPT). The Cluster Paper and Fibre (CPF) is also participating as a project partner. The project is being methodologically monitored by the “flight controller for the future” Thomas Strobel from FENWIS GmbH.

The project is intended to develop futuristic scenarios for the entire paper sector that make business opportunities possible in attractive future markets with high added value. The core team comprises managers and executives from the entire paper value chain. The whole team embarked on a simulated journey into the future in the year 2050. The scenarios that were developed in this way, the controversial discussions that ensued and the logical deductions that were derived by the team make it possible to identify opportunities and risks very early on. This method, known as retropolation, permits the development of new options for action and new business concepts. True to the maxim “Do the thinkable and not think the doable”, the second step involves casting a backward glance into the near future (the period of 2030). The interdisciplinary team defined eight thematic areas such as nutrition, health and hygiene, mobility, logistics and the futuristic city. Based on the documented premises for 2050, representatives from industry, associations, science and students will develop ideas for the “paper of the future” in regional futuristic workshops.

The progress already achieved in the project was presented at the ZELLCHEMING 2014 in Frankfurt/Main and at the congress of the Bavarian Paper Associations and received considerable positive feedback. Additional dates include the 10th International MATERIALICA Congress in Munich and the European Paper Week in Brussels, among other venues.

The FPT Workshop entitled “Perspectives 2030 – The future market for paper” is scheduled to take place at PTS Munich on 21st October 2014. Expert papers on trends in printing, packaging, nutrition and mobility will provide an impetus for new perspectives. The workshop participants will subsequently work in groups developing new applications and business concepts. You are cordially invited to join us in heading for the future! For more details on registration, please refer to the PTS homepage or at http://bit.ly/FPT-Workshop.

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FTP PARTNERING EVENT 2013: SUCCESSFUL AND EFFICIENT
BE SURE TO MAKE A NOTE: 13TH NOVEMBER 2014 AT THE MUNICH AIRPORT CENTRE!

The Forest-based Sector Technology Platform (FTP), with the active contribution of the German National Support Group (FTP-De), COST, EFPRO and Innovawood organised its 8th partnering event on November 15, 2013, at the Munich Airport Center. The event gathered 128 participants, a record. The objective was to offer an opportunity to obtain actual information on tentative topics in the first Horizon 2020 call for proposals. Participants were invited to present ideas for European projects and discuss them with potential partners. They were also offered the opportunity to give feedback and to support and supplement each other's ideas. The event was meant to be the starting point for building consortia and core planning teams in order to submit research and innovation proposals at a later stage. Additionally, participants were invited to present and discuss ideas and proposals for COST Actions within the COST Domain ‘Forests, their Products and Services'.

In effect, it provides tangible proof of the success of the event and the determination of the participants!

The organisers sent participants two successive questionnaires in order to assess the impact and efficiency of the event: the first one just afterwards and the second one 6 months later, after participants had time to elaborate consortia and submit first proposals.

66 participants answered the first questionnaire and indicated having made new contacts. 80% declared their intention to prepare proposals in the calls that were discussed at the event. The event was quoted by all participants as informative, though most had already more or less extensive information on the calls-to-come. However, the higher interest lay in sector-specific information and direct partnering opportunities offered by the event.

58 answered the second questionnaire, with a good balance between Forest, Wood and Paper & Board. For 15 respondents, the contact they made at the event led to an official partnership in project planning; 17 indicated having joined a consortium as a direct result of the event; most of all, 42 have submitted a project proposal in H2020 or another multinational programme, or intend to do so. This makes 70% of respondents, to be compared to the 80% declaring their intention to prepare a proposal 6 months earlier: a clear resoluteness!

The 2 questionnaires proved what the FTP was already assuming: partnering events are useful and efficient. Last but not least: FTP stakeholders are creative and dynamic and keen on writing proposals!

Learning from participants’ feedback, the organisers will propose the next partnering event with even more focus on specific information and networking. Flash presentations and dynamic brokerage will remain essential features and new possibilities for bilateral meetings will be offered.

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Usefulness of partnering event sessions (64 answers)

Successful workshop on innovative savings potential in the boiler house

A workshop entitled “Using the condensate that accumulates in the dryer section as boiler feed water” was held at PTS Munich on May 22, 2014. The workshop was conducted within the scope of the IGF project 17772N “Condensate” (for an abridged report, refer to PTS homepage) that addresses the problem of increasing energy and water recovery during papermaking by using new concepts for thermal integration and condensate utilisation from moist extract air. The basic underlying idea of the project is to use the hood condensate that accumulates in the dryer section as boiler feed water or as make-up water.

The participants reported on their findings and experience gathered with the current mode of operation and processes as well as on the results from condensate treatment and requirements on the operating conditions. In addition, there was a lively discussion on the impact of a change in feed water quality – due to the use of hood condensate as make-up water – on the operation of the boiler, steam production and the entire steam system.

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HUNTING FOR ELUSIVE STRAYS
MASTER’S DISSERTATION TO REDUCE THE METABOLISM OF STRAY STARCH

A current PTS research project involves reducing the metabolism of stray starch in the process water of paper mills with a view to improving the efficiency of biomass utilisation. One of the project members is Daniel Eze who has just concluded his Master’s dissertation on this topic at PTS Munich.

Mr Eze grew up in Frankfurt and initially studied biochemical engineering at the Frankfurt University of Applied Sciences. He subsequently transferred to the University of Applied Sciences in Rueselsheim to pursue a Master’s degree. When searching for a topic for the thesis, it was his professor who drew his attention to PTS. “I perused many advertisements and found the PTS topic to be the most fascinating”, is how the 25-year-old student ultimately arrived in Munich. In addition, the university reportedly likes to see Master’s theses accompanied by a high degree of practical orientation.

“The research project aims at creating the prerequisites for effectively utilising the starch present in paper for recycling to develop strength”, Christian Bienert, PTS Project Manager, describes the project objective. “In addition, this approach also reduces the COD load of the water circuit.”

In order to achieve this goal, the starch metabolism must be reduced by treating the process water. The Master’s thesis therefore focused on using suitable process engineering solutions and operating conditions in particular to reduce the efficacy of the micro-organisms and enzymes responsible for metabolism.

“First of all, the emphasis was placed on the analytical methods and an optimisation of the laboratory conditions in order to be able to simulate this process at all”, explains Daniel Eze. “We subsequently studied different methods of determining the efficacy, as well as any impacts they might have on the papermaking process. Although the starch concentrations are very low, the volumetric flow rates of the process water are very high. The major challenge is to develop a method of selectively dealing with these large flow rates and still achieve the low starch concentration in the total volume.”

“One of the approaches studied was to heat the process water to 90° C for a few seconds in order to kill off most of the micro-organisms”, the student assistant describes. “This procedure is used in food technology to prevent fermentation processes or mould formation. Waste heat can be used, for example, to provide the required energy. Another method is to treat the process water with sodium hypochlorite that is also used in food technology to keep the equipment sterile” continued Daniel Eze. “This substance has very high efficacy against micro-organisms and has been successfully tested in low concentrations. However, this method does lead to continuous costs for the chemicals. The quantities required, however, are very small and the substance could also be produced on site.”

“The use of cavitation is also very promising, since in this case the process water does not need to be heated nor treated chemically. The very high localised forces created during cavitation can rupture the cell walls,” the Master’s candidate from Frankfurt summarised. “The instrument that was used, however, was unable to produce the high pressures required, so that the effect was ultimately too small to be statistically significant.”

“Another possibility would be to test the combination of different procedures. The use of ultrasound would potentiate the efficacy of biocides, for example. However, this must first be studied and verified.”

The trials were conducted in a practice-oriented manner in a paper mill laboratory. “Being able to work right in a paper mill was of course a particularly impressive experience”, Daniele Eze was pleased to say. All in all, he commended the very good possibilities at PTS and the colleagues who always lent a helping hand.

Daniel Eze can now put his research into practice, as a position as a project engineer for plant construction in the sectors of chemistry, pharmacy and the beverage industry now awaits him in an engineering firm in Frankfurt. We wish him all the best and every success in his future career.

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Paper and Imaging Symposium 2014

Participants of this symposium will gain an insight into current developments in printing methods. Outstanding problems will be pointed out with a view to identifying the paper-related causes and finding ways to avoid them.

Contents
- Current trends in coated paper and board and in printing methods
- Problem-solving strategies for offset, gravure, flexo and digital printing

Examples taken from
- the development of pigments, binders and additives
- papermaking on laboratory and industrial scales
- the sectors printing, printing inks and printing press construction

25 - 26 November 2014 at PTS in Munich / Germany

www.pts-academy.com
To achieve maximum synergy at minimal cost, companies from different areas join forces with PTS to work on so-called multi-client projects. Project aims and work programmes are defined jointly by the partners, and expenses are shared. The members of the project consortium have the exclusive right to exploit the results. The next round of multi-client projects will get under way in September. Each project will be launched by a kick-off meeting the date of which is agreed on by the partners involved. PTS proposes the following subjects for multi-client projects:

**No. 01/14 Application potential of state-of-the-art synthetic specialty fibres for product optimization and product development**

Besides conventional papermaking fibres, the market offers a growing spectrum of special-purpose synthetic fibres that can greatly enhance the performance of paper materials. The focus will be on bonding fibres, reinforcement fibres, fibrides, fibres based on biopolymers, and functionalized fibres. All of them will be assessed in terms of morphology, property spectrum and suitability for wet processing. Based on the results, it will be possible to recommend starting points for optimization and product development.

**No. 02/14 Replacement fibres obtained from plant residues**

By-products or residues from agriculture and food production can be used to replace part of the fibrous raw materials currently used in papermaking. Straw, grass, pomace or husks, for example, can easily be treated to become suitable for paper production. This enables cost savings, modified product characteristics and ecological benefits. Between 5 and 8 replacement fibres will be chosen jointly by the partners to be treated and tested on their suitability for papermaking. The results will show if it is feasible to use them for selected paper grades. Based on this, the partners can decide on further developments.

**No. 03/14 Paper-technological production of natural fibre-reinforced composites for moulded parts**

Aim of this project is to investigate the suitability of thermoplastic fibres obtained from renewable raw materials, among other, for improving the formability and other converting properties of papers, and to prepare suitable sample materials.

**No. 04/14 Improving the formability of paperboard**

The deep drawing of paperboard materials to obtain increasingly complex shapes is becoming ever more important in paper converting. If at all, fillers have rarely been used in these segments so far. Fillers interacting with fibres and additives can, however, specifically contribute to the forming process if the anisotropy of fibres and sliding properties of individual plies as well as the friction coefficients between plies are suitably adapted.

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Transnational research project: SELECTPERM
Developing food packaging materials with selective permeability to oxygen and carbon dioxide

The CORNET project SELECTPERM was launched by a kick-off meeting at PTS Munich in June 2014. The project is a European co-operation including partners from Poland (ZUT, PIO and COBRO), Wallonia (CELABOR and CERTECH) and Germany (IVV, IVLV, LBF, FGK, PTS), and is co-ordinated by Papiertechnische Stiftung in Munich. It will be funded with 1.7m € over a period of two years.

SELECTPERM is a transnational project aimed at developing materials for food packages that are selectively permeable to oxygen and carbon dioxide. The packages are intended for natural and fresh convenience foods like fruit salad, Camembert cheese or freshly cut vegetables. The motivation behind the project was that despite the steadily growing popular demand for convenience foods like freshly cut fruit, vegetables and cheese, there continues to be no efficient packaging solution for these products. Packaging solutions currently available on the market are perforated films and closed conventional packages. Both have drawbacks: in the first case, it is not possible to adjust modified atmospheric conditions inside the package. This can lower the shelf life of the packed goods. In the latter case, the barrier effect against oxygen and carbon dioxide is too big, which can promote anaerobic microbial growth inside the package.

Main aim of the project is therefore the systematic development of a cost-effective, environment-friendly package that is selectively permeable to oxygen and carbon dioxide. Its permeation characteristics are to be adjusted to the specific requirements of respiring goods. Ideally, the package will make it possible to optimally regulate the gaseous atmosphere in its interior for the packed food (see figure), thus increasing the shelf life and quality.

For this purpose, project partner IVV will develop a numerical simulation model. The model will then be used to calculate the selective permeability of the package required for specific foods with the help of respiratory data available from literature. Aim is the adjustment of optimal storage conditions for each specific food within the package.

The simulation model will be verified by...
laboratory tests, pilot trials and, finally, two case studies. The latter will investigate different packaging solutions: food packaging board coated with a layer that is selectively permeable to oxygen and carbon dioxide, and packages based on (bio)plastics (compounding, extrusion). At the same time, the project partners will compile a data pool containing the permeation parameters of oxygen, carbon dioxide and water vapour for different materials for further developments.

The project will roughly be subdivided into three stages:

Stage 1: Identifying the gas exchange requirements of studied foods, and modelling their gas exchange processes

Stage 2: Development and verification of packaging materials that are selectively permeable to oxygen and carbon dioxide

Stage 3: Profitability study

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Packaging material with controlled gas exchange

Permeation through the package

Model of a package that is selectively permeable to oxygen and carbon dioxide, enabling its gaseous atmosphere to be systematically controlled to ensure optimum storage conditions for fresh and natural convenience foods.

Thanks to Versaperm for the illustration of the selective permeability: www.versaperm.com

PTS installs ALBA pilot plant in a paper mill

Having frequently reported on the results of ongoing research in the field of „green“ wastewater treatment by means of symbiotic algae-bacteria biomass (ALBA), PTS has now added a larger, continuously operating plant to the existing laboratory facilities.

In the scope of the ALBAPRO project, PTS scientists were able to do long-term trials in a paper mill in summer 2014. The photograph gives a first impression of the new plant. Attendees of the seminar on “Biological wastewater treatment plant operation” to be held on 8 and 9 October 2014 will be able to see the ALBA plant on a technical visit.

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PTS active in Dresden runners event

With more than 11,000 registered runners, the 6th REWE Team Challenge on 21 May was the greatest street race the Saxon state capital has ever seen. Two PTS teams – the “Paper Express” and “Paper Runners” – had been on the starting list as well. The city at sunset and summer temperatures provided the ideal backdrop for the race: After the start at 8:00 p.m., the runners had to cover a distance of 5 km through the old town of Dresden to the finishing line in the Glücksgas stadium. The seven runners from PTS were in a great mood – as can be seen in the photo taken directly after the finish (front row, from left: Jenifer Singer, Antje Harling, Yvonne Gierth, Birgit Kießler; back row: Gert Meinl, Björn Zimmermann, Timo Arndt).

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PTS ENHANCES ANALYTICAL COMPETENCE IN FOOD PACKAGING
GAS CHROMATOGRAPHY, FOOD PACKAGING, FOOD AND CONSUMER GOODS LAW

Papiertechnische Stiftung has strengthened its analytical competence in the fields of gas chromatography, food packaging as well as food and consumer goods law by hiring the food chemist Ms Dr Antje Harling (who had previously worked for the chemical and veterinary investigations office in Stuttgart) and purchasing a second gas chromatograph (GC-FID). Mineral oil content measurements by means of GC-FID and migration tests became firmly established at PTS three years ago. Apart from being used in research projects, the measurements are offered as analytical services to customers and for contract research. The analysis of mineral oils in paper or paperboard intended for food contact is becoming increasingly important – especially in view of the expected amendment of the Act on Foods and Commodities by the Federal Ministry of Food and Agriculture, the so-called Mineral Oil Ordinance. Preventing migration or – alternatively – proving the existence of a reliable barrier against migration could soon become essential prerequisites for obtaining certificates of compliance under the pertinent food law. This refers to the migration of unacceptable amounts of both mineral oil and other potentially migrating substances.

As a reliable partner and provider of consultancy and analytical services for scientific and industrial projects, PTS develops customized solutions by incorporating suitable barrier films and coatings into packaging materials. The newly purchased analytical instruments have considerably raised our capacity for sample processing. PTS plans to broaden its spectrum of analytical services also in future, by offering e.g. the detection of phthalates (plasticizers), disisopropyl naphthalenes (DIPN), benzophenones and other volatile organic substances in accordance with relevant standards, or by testing the effectiveness of barriers against further substances. This will enable us to directly analyse and evaluate products from pilot and full-scale trials in terms of chemical quality and food law compliance.

Our service spectrum includes:
- Developing barriers to prevent the migration of undesirable ingredients (preparation and testing of samples on lab and pilot scale), detection of unwanted substances like mineral oil in paper, paperboard and board
- Determining the migration of ingredients like mineral oil from paper and paperboard into food simulants (Tenax migration); migration analyses of foodstuffs
- Determining the barrier effects of films, foils, coatings and absorbents against mineral oil hydrocarbons and other ingredients
- Determining the influence of creases, folds and cut edges on the migration properties of carton packages.

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Manifold scenarios and sources of migration from food packaging

Covering box (transport box, tray)
Printing ink, lacquer, adhesives
Folding box
Interior package, barrier coating
Food

MATERIALICA 2014
Lightweight Design for new Mobility!
Visit our booth at MATERIALICA in Munich

Continuing the fruitful cooperation of the past, PTS will present at Materialica in Munich on 21- 23 October its new fibre-based materials at a joint booth with Bayern Innovativ. The recent addition of an inclined wire module and extruder to the pilot plant facilities in Heidenau has opened up completely new opportunities for development work in the field of fibre and other material composites. First results will be presented at the trade fair.
Make an appointment with our experts using the contact forms provided at: http://www.ptspaper.com/tradefairs erwin.polmann@ptspaper.de
The paper industry has become ever more interested in alternative, non-wood raw materials in recent years. One reason for this is that these raw materials enable paper properties which are very difficult to achieve by means of conventional papermaking fibres, another that they broaden the industry’s raw material base. Yet another advantage is that their origin can be cleverly turned into a selling point when marketing the paper products – especially in the case of packages that are to be associated with the packed good. A good example of this is residues from hop processing, which have recently been investigated by scientists from PTS.

Talks with representatives of the company Hopsteiner had quickly revealed that hop growing and processing operations involve several raw materials that could be of interest to packaging paper production: First of all the hop plant itself, a species that belongs to the Cannabaceae family and contains strong, stable fibres. How to optimally treat these fibres for packaging production will be the subject of future research. Another potential raw material for papermaking comes from the extraction of hop pellets: it would take no more than a simple grinding step to incorporate the extracted pellets in paper. Papers containing 25 weight% ground residues from hop extraction were successfully produced on the pilot paper machine of the PTS Pulp and Paper Pilot Plant in Heidenau (see Fig. 1).

The papers had strength and converting characteristics making them highly suitable for package production. To demonstrate this, the 42 cm wide parent rolls were cut into 11.5 cm wide rolls. These were then spirally wound into cores having an inner diameter of 84 mm and length of 286 mm, and covered with a metal lid to serve as containers for common half-litre beer bottles and the like (see Fig. 2) – yet another good example of the aforementioned synergistic link between package and packed good.

Moreover, the papers exhibited very favourable ecological properties, meeting all requirements and test criteria for recyclability and composting behaviour. The level of greenhouse gas emissions is relatively low as well. The slightly antimicrobial activity of the papers caused by the preservative effect of hop is worth mentioning as well, making them an interesting option e.g. for pharmaceutical packaging. The application spectrum of papers made with treated residues from hop extraction goes far beyond core-shaped packages: they could as well be converted to bags, sacks and all kinds of boxes.

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Fig. 1: Pilot paper machine (web width of 42 cm) of the PTS Pulp and Paper Pilot Plant

Fig. 2: Paper made with 25 % raw material from hop processing (left: paper roll, centre: two cores, right: commercial beer bottle)
STUDIES INTO THE SETTING BEHAVIOUR OF PRINTING INKS

There are numerous applications where paper gets in contact with liquids that penetrate it completely or to some extent. A typical example is printing: Details about the penetration processes involved are of major importance to the quality of all print processes, but in many cases only roughly known. Printers usually optimise the penetration parameters empirically, i.e. by many trials. However, the economic trend towards achieving higher product quality at higher speeds but with fewer misprints makes it increasingly necessary to understand the penetration phenomena in detail.

Against this background, PTS scientists have investigated printing and gluing processes in several research projects. Having focused on ink setting in inkjet, offset and flexography processes at first, they are now investigating the setting behaviour of pigment inks during inkjet printing as well as the penetration behaviour of starch-based adhesives during liner application in corrugated board production.

All previous studies focused mainly on the:
- effects of capillary-driven penetration into paper structures
- extremely fast processes and short intervals prevailing in practice (< 1 second)
- small application quantities typical of print processes and their boundary conditions

The work included both metrological and model-based evaluations of the penetration phenomena investigated, the metrological part focusing on the specific issues of high-speed inkjet printing.

The project work has led to methods being available at PTS that can be used for detailed analyses in the measurement and modelling of liquid penetration into paper structures.

To assess the setting behaviour of liquids into paper, a measuring station was developed comprising a high-speed camera with magnification lenses and a piezoelectric drop generator. The camera measurements make it possible to investigate the penetration behaviour of liquid volumes typically used in practice to obtain detailed information about individual penetration phenomena. Main advantage of the method is the possibility to use the extremely small fluid volumes typical of industrial print processes, which helps prevent oversaturation of the pore structures.

The same aim was pursued in modelling – limiting the ink volumes applied to the amounts typically used in industrial print processes. This distinguishes the models from other simulation and measuring techniques published in literature. The new approach makes it possible to estimate the magnitude of penetration periods and to identify the effects of modified coating characteristics or of liquids on the overall development of penetration properties in all common print processes. One of the modelling approaches is based on a differential equation set up by Bosanquet in the year 1923. For the purpose of our studies, it was implemented in Matlab. Furthermore, we have developed several FEM algorithms to study penetration processes into various geometries including complex coating structures. The models make it possible to differentiate between coating or paper variations and printing inks or calculate the magnitude of setting times. The non-linear influence of different ink quantities can be estimated with adequate accuracy as well.

The excellent conformity of the measurements with model calculations in terms of both magnitudes and trends confirms the plausibility of both the measuring method and the modelling approach.

Further work is under way to
- find alternative measurements for the assessment of penetration properties and printability,
- develop calculation models for specific penetration processes, and
- implement realistic particle geometries and structures in the models.

The results were achieved in different research projects of the cooperating research association PTS and Fogra funded by the German Federal Ministry of Economic Affairs and Energy (BMWi) within the InnoKOM programme and the programme promoting “pre-competitive joint research (IGF)” carried out under the umbrella of the German Federation of Industrial Cooperative Research Associations (AiF) in Cologne. We would like to express our sincere thanks for this support. daniel.weinzierl@ptspaper.de gert.keller@ptspaper.de

Intrusion curves of an inkjet ink quantity typically applied in practice (7 g/m²) into three different pre-coats representing typical recipes for offset (R1), flexographic (R2) and inkjet (R3) printing papers

Fluid front inkjet ink (variation of coating)

**Gefördert durch:**

[Support logos and text]
The best way to master a change is helping to create it. Paper and board products continue to sell – as can be seen in the highly dynamic packaging market. The PTS Paper & Board Symposium will therefore be devoted entirely to the future of paper as an innovative material.

Find inspiration in lectures delivered by high-ranking experts, discuss fresh ideas with professional peers, find out what’s going on in the exhibition. The symposium is the only event of this type that brings together partners from all parts of the value chain: suppliers, paper producers, converters and their customers.

Based on analyses of the present situation, Dr H.-P. Sollinger and Dr M. Lucia-no will present ideas and scenarios of our industry’s future. Dr J. Rothermel will add thoughts about the immediate effects of the turnaround in energy policy. And as a special treat, Markus Gürne, head of the stock market news division of the German TV channel ARD, will chair a round-table discussion on “Paper – a product for the future”.

Products with efficient barrier functions (M. Mühlhauser), for high-speed inkjet printing (Dr. G. Drexler, Dr. K. Hornig), paper composites for e.g. lightweight construction, innovative manufacturing processes (dry manufacturing of MDF panels, foam forming) will be presented for discussion - prior to their commercialization.

But also the traditional issues of papermaking will be adequately dealt with: making processes more efficient, e.g. by implementing suitable control engineering strategies or saving raw materials and energy. Novel approaches to the strength enhancement of paper products developed in the transnational EU project “Powerbonds” will be presented exclusively to the audience of the Paper and Board Symposium.

Join the Paper & Board Symposium to draw inspiration for your company’s strategic know-how and discuss challenging future issues. We look forward to seeing you! For further details, the updated programme and our registration form, please visit www.paper-board-symposium.com.

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PTS team in Munich B2Run street race

Around 30,000 runners from 1,500 companies had been at the start of Munich’s B2Run street race on 15 July, including also a small but powerful team from PTS. The weather was perfect when the starter’s gun was fired in the Olympic Park at 7:30 p.m. The 6.4 km course through Munich’s beautiful Olympic grounds finished in the Olympic stadium. All five PTS employees (Markus Kleebauer, Heike Lorenz, Karin Männel, Anastasia Vanpopyrenge and Pauline Zandl) braved the cramped conditions of the mammoth event and crossed the finishing line safe and sound.

This was also owed to the enthusiastic support of their faithful fans Ursula Buhl, Gisela Gerstner and Dieter Schulte, who had cheered them on loudly throughout the race.

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SUCCESSFUL FTP STAKEHOLDER WORKSHOP ON THE NEW GERMAN RESEARCH AGENDA

With around 60 participants, the stakeholder workshop on the “New German research agenda for the future of the forest-based sector: the sector’s research demand” held at PTS Munich on 8 and 9 July was really well-attended. Representatives from politics, science and trade associations of the forest-based sector had got together to discuss how to formulate the sector’s research agenda. In several sub-workshops, participants identified a multitude of important research subjects directly related to Germany’s forest-based sector. These provide an extensive and valuable basis for development of a concrete research agenda. The first draft of the German Research Agenda is expected to be available for public consultation by October 2014.

Shortly before the workshop, FTP had presented itself for the very first time with a booth at the ZELLCHEMING exposition, which met with a very positive response. Their message – safeguarding the future of paper and fibres in manifold applications – was well received by the audience. The campaign is intended to show that research for the forest-based sector is a sound investment in the future of our society. The most important thing is to mobilize the sector to take a key role in a future bio-based economy. What really appealed to the audience was the booth’s direct vicinity to the stands of Materials Gate and PTS, which made it possible to illustrate the somewhat dry subject of the German Research Agenda by material samples and live discussions with designers and development engineers. The future has already arrived.

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Saxony forms industrial research association

To combine the strengths of its 21 industrial research institutions, Saxony founded its Industrial Research Association (SIG) in Dresden on 30 April 2014. SIG ensures that its members have equal access to funding earmarked for research infrastructure development. SIG is committed to preserving and strengthening Saxony’s multi-faceted and extensive research landscape to develop it as the fifth column of research - transfer-oriented and leading to marketable products - besides other programmes like IGF (pre-competitive joint research) or Fraunhofer research, also in order to keep Saxony in the premier league of German research.

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Zellcheming Technical Sub-Committee Microbiology meets at PTS

Microorganisms are responsible for a whole string of manufacturing and occupational safety problems in paper mills. Besides causing the decay of raw materials and process aids, they can give rise to biofilm formation, malodours, corrosion or hygiene problems in processes or products. This may lead to production and quality losses or even health problems such as allergic reactions or respiratory diseases. These were the reasons why the members of the Zellcheming technical sub-committee Microbiology decided to compile technical information sheets to be able to counteract and prevent damage in good time. On 3 April 2014, the members of the sub-committee met to put the finishing touches to the extensive results they had achieved in the previous two years, and to prepare the final version of the sheets.

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