

SEPAWA CONGRESS *at its best*

66th SEPAWA Congress & 15th European Detergents Conference
23-25 October 2019, Estrel Congress Center, Berlin, Germany

The 66th SEPAWA Congress took place together with the 15th European Detergents Conference (EDC) at the Estrel Congress Center in Berlin.

It is widely known: the SEPAWA Congress together with the EDC is the most important meeting place for the detergent/cleaning product, cosmetic, and perfume industries in Europe. Berlin has become an established convention site. The wide acceptance is made clear alone by the fact that around 3300 congress and exhibition visitors were registered during these three days. At the same time, participants from more than 60 countries attest to the increasingly international significance of the event. The number of companies increased to 310. These figures show that both the number of persons attending and the number of exhibitors were new records.

The content-related excellence of the congress is also important for acceptance. Thus, within the scope of the European Detergents Conference, conceptualized by the Division of Detergent Chemistry of the German Gesellschaft Deutscher Chemiker (GDCh) eight highly scientific talks were given on the 'Smart Approaches for Detergents in a Fast Changing World'. During the SEPAWA scientific conference, which dealt with the latest research results of relevance for the detergent/cleaning product, cosmetic and perfume industries, including regulatory framework conditions, 32 talks were presented. A permanent part of the congress program is the series of presentation blocks in the forum for innovation. This year there were 69 talks, due to the increasing demand also in parallel sessions, offering the opportunity to present the most recent results of their developments. A total of 43 poster presentations submitted by next-generation scientists from universities and academic institutions together with industrial researchers and institutional bodies of our industries.

Topic groups for the European Detergents Conference were the targeted modification of interfaces, the use of quantum chemical and molecular dynamic methods for the modelling and prediction of the behavioural properties of surfactant-based mixed systems, protein/enzyme engineering for cleaning product investigations of new surfactants with improved ecological profile, and balanced surfactant performance. Hygiene, disinfection and conservation of cleaning and cosmetic applications are issues of interest that are today more and more scientifically based and described. In the area of home care, the search for ingredients for improving the cleaning power and formulation goes on. Both synthetic surfactants with natural (sulfo fatty acid esters, carbohydrates) and bio-synthetically produced components (rhamnose lipids, cellobiose lipids) with partly multi-functional properties are under discussion. For cosmetic applications, new particularly skin-friendly and skin-improving active ingredients are a focus. All embracing issues discussed in the presentation block of the LUV specialist group were product safety and sustainability in the sense of the consumer. In the German Society of Perfumery (DGP) scientific conference four talks dealt with scents, their perception, and the underlying scientific base.

In the interest of fostering qualified young talent, the SEPAWA e.V. conferred six advancement awards for three master's theses and three dissertations. This year three persons were honoured with the SEPAWA Innovation Award for outstanding new developments in the field of detergents and cleaning products, cosmetics, and perfumery.

The GDCh Division of Detergent Chemistry was distinguished with two awards for outstanding scientific work on basic research for detergents and cleaning products.

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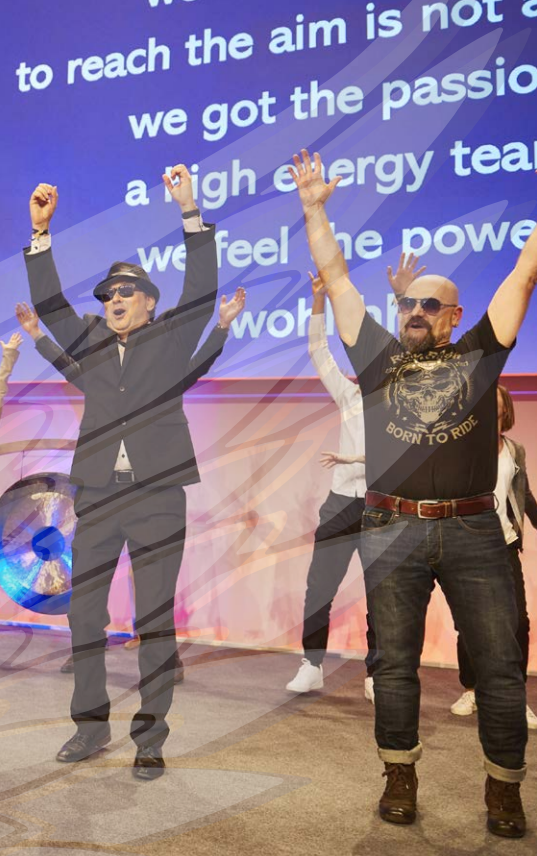
15th European Detergents Conference

Scientific approach with pragmatic perspective, or from molecule to formulation

This year the focus of the annual conference of the GDCh Division of Detergent Chemistry was on "intelligent approaches for cleaning products in a rapidly changing world". The various topics ranged from quantum chemistry through molecular dynamics to the synthesis of innovative photoaddressable polymers and protein engineering. A selection of the talks presented follows:

Prof. Dr. Felix Schacher, Friedrich Schiller University Jena, **Charge-Tunable Polyampholytes as Versatile Materials for Surface Modification.**

Polymer materials featuring charge-tunable groups in the side chain are ideal materials for the design and modification of interfaces in various settings or for controlling and directing self-assembly procedures. The synthesis of polyelectrolytes, polyampholytes, and polyzwitterions using different polymerisation techniques and their pH-dependen-



dent solution and charge characteristics is under discussion. One key building block in the setting is polydehydroalanine (PDha), a polyzwitterion with high charge density and, depending on the pH, tunable net charge. The material has interesting solution properties and is used as a coating material for iron oxide nanoparticles or within polyelectrolyte multilayers. PDha-based graft copolymers feature a polyampholytic backbone and side chains of varying length and polarity and are interesting materials for use as dispersants.

Prof. Dr. Ulrich Schwaneberg, RWTH Aachen University, **Protein Engineering for Sustainable Laundry within HICAST**.

At the Henkel Innovation Campus for Advanced and Sustainable Technologies at the RWTH Aachen, directly funded by the Henkel company (5 years, 5 million Euros), a molecular understanding of interactions between main laundry components (enzymes, polymers, detergents) that govern their performance was generated. The latter achievements were obtained by combining the expertise of the Henkel company and three research groups at the RWTH Aachen, namely in protein engineering (directed evolution and rational

design), biophysical characterization, and chemical synthesis.

Computer-aided design methods provide insight for example for improving the catalytic performance of enzyme-polyelectrolyte complexes, on how anionic detergents enhance the activity of proteases, and how enzymatic hydrolysis is improved by calcium ion induced interactions between polymers and detergents.

Prof. Dr. Andreas Klamt, COSMOlogic GmbH&Co.KG, University of Regensburg, **COSMOplex: From Quantum Chemistry via Fluid Phase Thermodynamics to Micelle Formation**.

COSMO-RS is an alternative approach to the a priori prediction of chemical potentials, activity coefficients and vapor pressures of almost arbitrary chemical compounds in pure liquid solvents and mixtures. In contrast to the known group contribution methods information COSMO-RS obtains the information about the intermolecular interactions from uni-molecular quantum chemical calculations for the solvent and solvate molecules and thus it is far less dependent on experimental data. Hence COSMO-RS is an efficient alternative to group contribution methods on the one hand and to the Monte Carlo and Molecular Dynamics simulations on the other hand. Several large benchmarks as well as the results of almost all blind prediction challenges in this field prove that currently COSMO-RS is the best predictive tool for partition properties and solubilities in the liquid phase. In recent years, we have extended the COSMO-RS method to include non-homogeneous liquid systems, such as interfaces, micellar systems and micro-emulsions.

Our brand-new COSMOplex method, which is four orders of magnitude faster and most likely a factor of two more accurate than comparable molecular dynamics simulations, opens up a broad new range of options for simulating and screening important properties of surfactant and detergent systems on a molecular level. The work was recognized with a SEPAWA Innovation Award.

Prof. Dr. Dirk P. Bockmühl, Rhine-Waal University of Applied Sciences, **I Can't Get No Disinfection – New Challenges in Laundry Hygiene**.

Apart from the cleaning performance, the hygienic efficiency of domestic laundering processes is gaining importance. This can be explained by numerous new challenges originating from different aspects, such as lower washing temperatures to enhance the energy efficiency of laundering, the use of bleach-free liquid detergents or the increased use of man-made fibers instead of wool or cotton. Hence, a deeper understanding of parameters that might affect the hygiene performance of laundering and laboratory methods that are able to resemble a realistic scenario are needed to be able to take necessary actions against future microbial risks and problems, e.g. malodor formation or antibiotic resistances in the domestic environment.

Dr. Stephan Köhler, BASF SE, **Molecular Simulations of Detergents: From Molecules to Formulations**.

After decades of successful innovation, many home and personal care products are finely tuned formulations to achieve the high level of performance customers expect. Only in this way can the high expectations of customers be fulfilled. In a globalized world many companies consequently develop new products in order to meet these high demands. In order to stay competitive in such a rapidly-changing environment BASF uses various digital technologies to speed up the development process and thus to support our customers and partners.

In this talk we will give an overview of how data analysis, high throughput computing, machine learning and coarse-grained simulations can be used to support the development of novel detergent formulations. We will show how a combination of high throughput and machine learning can identify promising molecules. The behavior of these molecules in the detergent formulation can be further investigated using coarse-grained simulation. Such simulations can also be employed to

study the washing performance of new substances. Additionally, machine learning can be applied with historic data to optimize whole formulations.

Vivian J. Spiering, Technical University Berlin, **Adsorption Behavior of Surface-Active CO₂/EO Compounds at the Oil/Water Interface and Their Solubilization Potential.**

Using CO₂ as a resource in the production of materials is a viable alternative to conventional, petroleum-based raw materials and therefore offers great potential for sustainable chemistry. The aim of the studies presented is the characterization of non-ionic dodecyl surfactants with different CO₂ content in the ethylene oxide (EO) head group, in particular with respect to their self-assembly behavior and their adsorption behavior at the oil/water interface and the resulting application potential. The corresponding HLB values of the CO₂-containing surfactants already provide initial information about the application potential. The CO₂ unit plays an important role as an additional tuning parameter to specifically control the surfactant properties. The better understanding of the absorption behavior enables the testing of further application examples. Such surfactants can be effective “solubilizers” of water-insoluble molecules such as oil or pharmaceutical drug molecules. The solubilization potential of the CO₂-containing surfactant as a solubilizer of oil or drug molecules is interesting considering the impact of the CO₂ unit. These practical advantages, combined with a less environmentally damaging production method, demonstrate that CO₂-containing surface-active compounds are a viable alternative to conventional non-ionic surfactants.

Scientific Conference: Session Home Care

In the Home Care Session nine talks reported on washing and cleaning concepts and hygiene, new product developments and their properties and applications. Technological aspects re-

lating to detergent and cleaning product manufacture and the optimisation thereof were also addressed. A selection follows:

Prof. Dr. Thomas Müller-Kirschbaum, Henkel AG &Co. KGaA, **60 Years Sinner Circle: The Future of Washing and Cleaning.**

Sixty years ago, Dr. Herbert Sinner, head of detergents development at Henkel, defined chemistry, mechanical power, temperature and time as the four universal factors for all washing and cleaning processes. Chemistry, mechanics, temperature and time are responsible for the washing performance and with their respective fractions must give a full circle, named the Sinner Circle after its inventor. Even if this functional relationship is essentially still true today, the demands for the different factors have significantly changed. The same is true for their content.

Thus, the factor chemistry will need to change the most. Liquid-based product forms are replacing solid product forms, in growth regions as well. The role of biochemistry and biotechnology will catch up with chemistry. Disruptive chemical innovations will derive from the molecular understanding of stains and soiling. Ecotoxicological properties of all ingredients will improve further. Together with the expected innovations in mechanical systems, temperature and time, this results in a visionary outlook into the future of washing and cleaning. (Fig. 1)

Caroline Amberg, Swisstest Testmaterialien AG, **Home Hygiene – Is the Future Green or Clean?**

The growing recognition that our human microbiota (the microbes inhabiting our intestines, respiratory tract, skin, etc.) represents an organ essential to our health has changed our view of the microbial world surrounding us. Contact with some of those ‘old friends’ in early childhood helps us to build a healthy immune system and prevents autoimmune diseases. The buildup and care of a healthy microbiome are therefore important issues. Against this background, the broad use of certain ingredients in cosmetics or cleaning products, for example preservatives or biocides, must therefore be seen critically. On the other hand, infectious diseases are a real burden to society, and some pathogens truly belong to the category ‘bad guys’. The increase in antibiotic resistances makes it already today difficult to treat some infectious diseases and this problem will increase in the upcoming years. Together with an aging society having a higher vulnerability to infections, cleaning and disinfection measures at home will become more important. The use of certain biocidal cleaning products will therefore grow in the future. In this presentation the complex interplay of sustainability needs, health risk, consumer perception and legislation, will be discussed for the example of household laundry. It is shown that green AND clean is not necessarily a discrepancy, and a targeted and coordinated hygiene approach might be a way out of the dilemma.

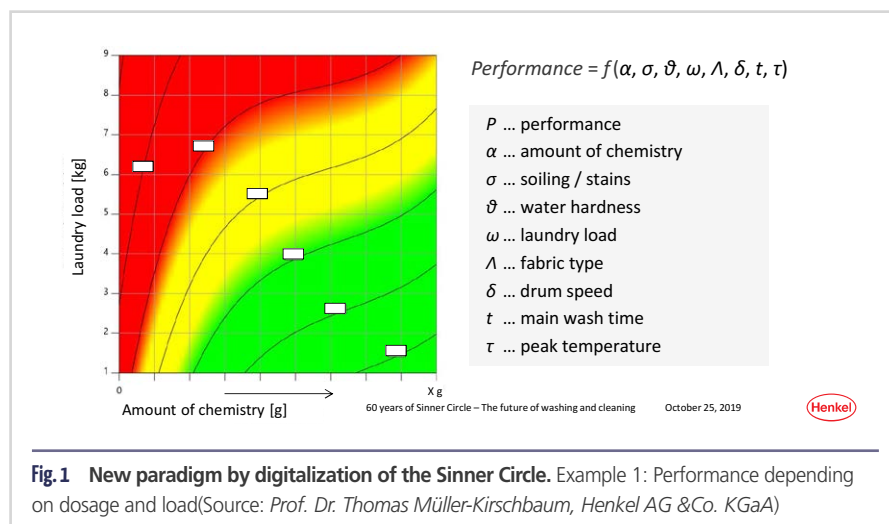
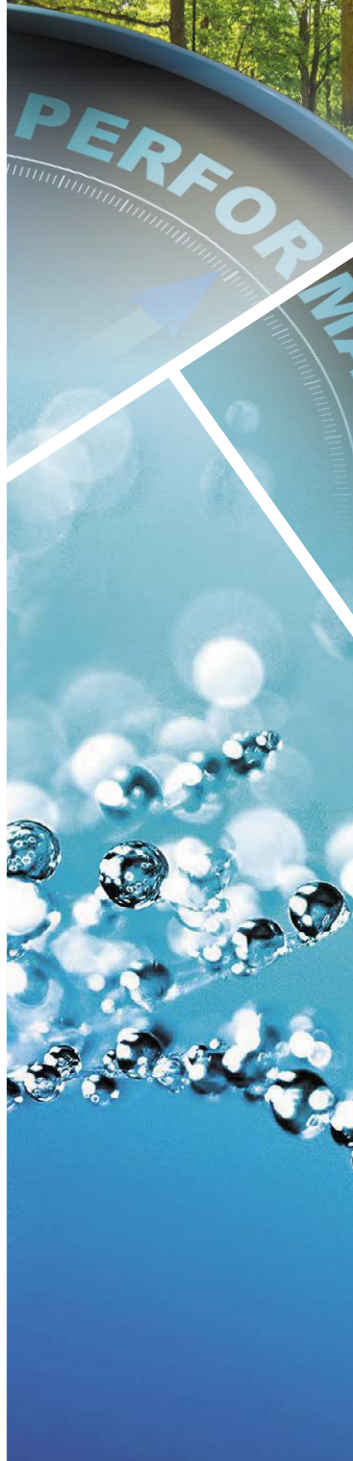


Fig. 1 New paradigm by digitalization of the Sinner Circle. Example 1: Performance depending on dosage and load (Source: Prof. Dr. Thomas Müller-Kirschbaum, Henkel AG &Co. KGaA)

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Scientific Conference: Session LUV

In regard to sustainable chemistry and its transformation, consumer protection and microplastic

The LUV Session consisted of seven talks examining a broad field of current topics.

Sustainability criteria for the evaluation of certification systems of renewable raw materials were a subject of discussion, as was also REACH in the present and future, as well as an evaluation of the detergent regulation. The life cycle of a T-shirt and the viewpoint of the German consumer organization Stiftung und Warentest in regard to consumer products were described. A scientific overview of the environmental behaviour of water-soluble PVA film was also presented.

Dr.-Ing. Annetrin Lehmann, Technical University Berlin, Environmental Impacts Along the Life Cycle of a T-Shirt – Where are the Hotspots?

The respectful use of resources and respectful treatment of the environment is gaining increasing importance for consumers, politics and industry. The German Cosmetics, Toiletry, Perfumery and Detergent Association (Industrieverband Körperpflege- und Waschnittel e.V., or IKW) is also working intensively on reducing environmental impacts in its product areas. Against this background, the joint research project “Environmental assessment of the production, care and disposal of a commercially available white cotton T-shirt in Germany” was initiated between the IKW and the TU Berlin.

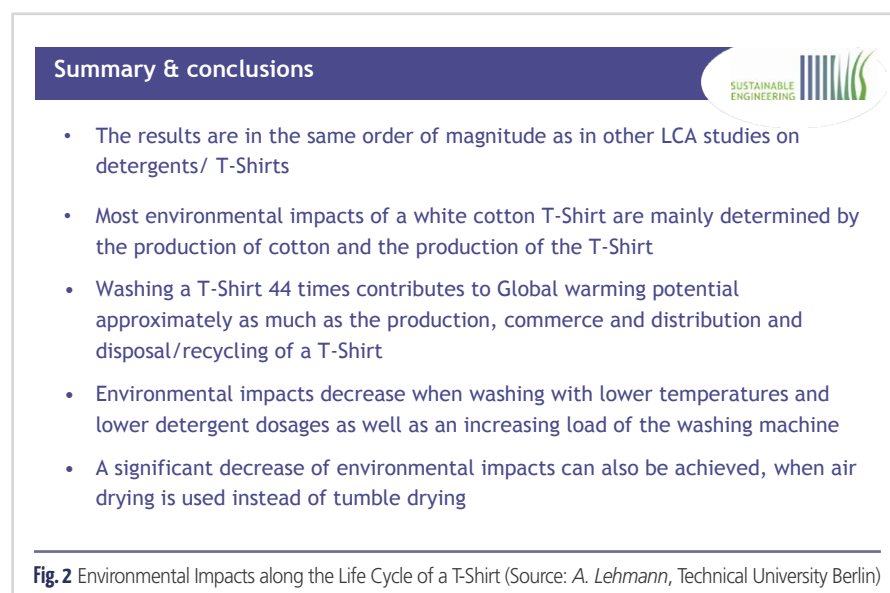
The aim of this project was to analyze potential environmental impacts along the life cycle of a T-shirt on the basis of eco-balance (ISO 14040/44).

The study described shows, for instance, that the environmental impacts of a white cotton

T-shirt are largely determined by the cotton- and T-shirt production. 44 washings are responsible for about 50% of the calculated global warming

potential and contributes around 20% to the acidification and eutrophication potential. Moreover, it will be shown that the environmental impacts in-

crease as expected with rising washing frequency, washing temperature and detergent dosage as well as decreasing loading. (Fig. 2)



The annually announced **SEPAWA Young Researchers' Award** fulfills one of the most important aims of the SEPAWA, namely its support of the education of the next generation. The prize is awarded to students for outstanding, Bachelor, Master's and Doctoral subjects. The expert jury selected six award winners from the works submitted.

In the category “Outstanding college graduate with Master's degree” **Britta Schnitker** was awarded the first prize for her work on the subject “Liquid bleaching system for multi-component dosage and investigation of different influencing factors and mixing strategies”.

The second prize went to **Albert Prause** for his work on the “Structural Arrangement of Microemulsions in Mesoporous Silica”.

Saskia Grunwald received the third prize for her work on the subject “Cultivation of *Pseudozyma* species for the production and structural analysis of mannosylerythritol lipids”.

In the category “Outstanding doctoral thesis” three works with equally high quality were evaluated: The awards were bestowed on:

Dr. Lisa Nahrwold for her work on the subject “Multi-Parameter Characterisation of Polymers for Hair Styling Mousses”

Dr. Lorena Bechtold for investigations of “The Movement Characteristics of Human Hair and its Changes with Ageing and ‘Greying’ Evaluated by Novel In Vitro and In Vivo Analyses”

Dr. Martin Thiele for his work on the subject “Boosting the performance of a protease with polymers and surfactants”.

In the category “Outstanding bachelor thesis” no prize was conferred this year.

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Dr. Sara Wagner-Leifhelm, Stiftung Warentest, **Consumer Safety: The Viewpoint of the Stiftung Warentest.**

The Stiftung Warentest was founded in 1964. As a German public consumer organization, its objective is to provide independent and objective information by means of the comparative investigations of products. This talk presents several current projects from the areas of washing and cleaning products and discusses testing procedures, results and their relevance for the customer. (Fig. 3)



In total, more than 100 chemical manufacturers belong to the association, most of them German-based, but from the Netherlands and Switzerland as well. Today, the association plays a major role outside German borders: In the fields of cosmetics, paper and water treatment the association has long been cooperating with the corresponding organizations in Brussels. The association sees itself as partner of the competent authorities and customer organizations and follows its major objective to moderate different interests among the stakeholders, focussing on the evaluation of pragmatic and standardized practices.

In the first part of the presentation *Alex Föller* will present the current activities of the association. Supply-chain activities will be mentioned, but the clear focus will be laid on regulative challenges. In the second part *Katrin Schwarz*, current spokeswoman of the TEGEWA expert group on product responsibility, will demonstrate how the association works together with the European surfactant industry's association (CESIO) in order to meet political and societal challenges in the sector of household detergents and cleaners. Currently, topics such as classification and labelling and the intended EU restriction on microplastics

are in the focus of interest. Concerning renewable resources, a European surfactant standard has been developed – with a significant contribution of the surfactant manufacturers. In future “REACH and polymers” will gain increasing importance for the work of the association. (Fig. 4)

Scientific Conference: Session Personal Care CAT/DGK

Facets of the development of personal care products

In the ten talks of the DGK/CAT Session the topics covered included e.g. new surfactants and emulsifiers, renewable raw material – based oils, antiperspirants, and preservatives. Furthermore, polymer-stabilised formulations, handling advantages for the customer, and a view to the medial cosmetics world were discussed.

Dr. Friedericke Bönisch, Universität Hamburg, **Improved Active Cosmetic Ingredients by Enhancement of Natural Compounds via Site-selective Rhamnosylation.**

Glycosylation, the conjugation with sugar residues, is a natural modification of secondary metabolites influencing their water solubility, bio-activity, and toxicity, as well as their stability, bio-availability and color. Thus, glycosylation may increase the efficacy of natural compounds in cosmetic applications.

Scientific Conference: Session TEGEWA

For the first time at a SEPAWA congress the TEGEWA Association, represented by *Dr. Alex Föller* (TEGEWA) and *Dr. Katrin Schwarz* (BASF SE) took part in the professional discussion:

European Chemical Regulations and their Impact on the Surfactant Supply Chain – Activities of the Association TEGEWA.

The major activities of the association are the representation of the members vis-à-vis regulators in Berlin and in Brussels on the one hand and, on the other hand, the moderation of its members' positions and interests in the supply-chains for cosmetics, household detergents and cleaners, textile, leather and paper manufacturing, biocidal products and water treatment.

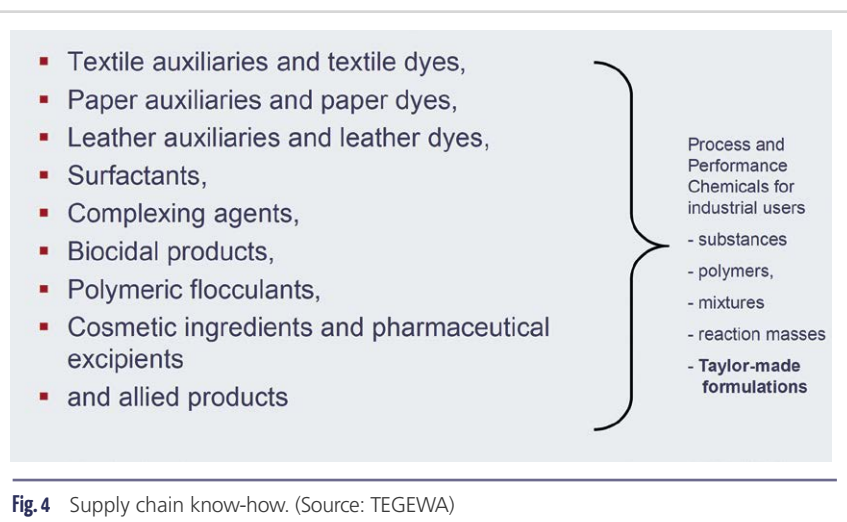


Fig. 4 Supply chain know-how. (Source: TEGEWA)

Specifically, the transfer of rhamnose is promising since small-molecule rhamnositides often show useful bio-activities. But until now efficient rhamnosylation has been a huge challenge and was not feasible either chemically or biotechnologically on an industrial scale.

Within the spin-off project GLYCONIC we developed a unique biotechnological glycosylation platform that enables the efficient production of rhamnositides. Furthermore, we created novel enhanced active cosmetic ingredients (ACI) of natural origin. The rhamnosylated ACI possess improved bioactivities as well as optimized physico-chemical properties in comparison to their precursor compounds.

Our patented ACU candidate GA-AA shows very promising for anti-aging, anti-wrinkle and anti-pollution applications. GA-AA is a whitish rhamnositide of hesperetin from natural orange peel extract with exceptional water solubility. GA-AA clearly reduces multiple inflammatory cytokines resulting from

environmental noxae and scavenges oxidative stress induces by UV-light. Additionally, GA-AA triggers collagen synthesis and pathways regulating skin regeneration.

Another rhamnositide is GA-HG, a natural flavonoid also occurring in Himalayan wild cherry used for other applications in Ayurvedic medicine. We

developed GA-HG for hair applications as it triggers multiple hair cycle specific biomarkers that stimulate hair growth and improve hair follicle nourishment. Simultaneously, GA-HG reduces inflammatory cytokines and enhances hair follicle anchoring to prevent hair loss.

(Fig. 5)

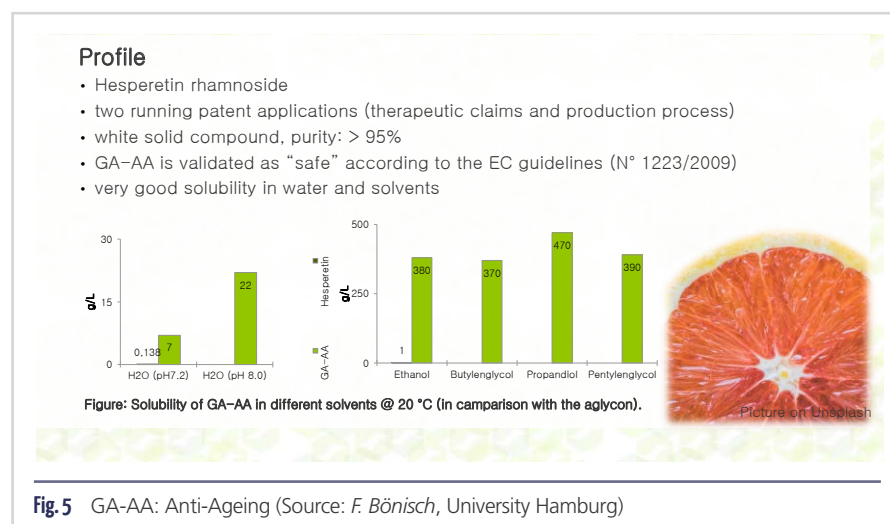


Fig.5 GA-AA: Anti-Ageing (Source: F. Bönisch, University Hamburg)

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Dr. Claudia Brunn, BASF Personal Care and Nutrition GmbH, **Fatty Acid Sulfonate – Redesigning a Surfactant for the Future.**

Surfactants based on fatty acid methyl esters (MES) have been known for a long time. The corresponding fatty acid sulfonates were only known as by-products in MES and their potential as surfactants has not been leveraged yet.

A new process for the manufacturing of these fatty acid sulfates (alpha sulfo fatty acid) was developed to provide a light colored product with high yield which can be offered in different product forms (paste, mixture, powder).

The new product has unique properties, e.g. an excellent temperature and pH stability, low CMC, micellar thickening ability and a very low irritation potential for skin and mucous membrane. This makes it useful for several industries. We will present examples of how this and in personal-care rinse-off applications (e.g. shampoo, shower gel and soap bars). **(Fig. 6)**

Dr. Holger Seidel, Azelis Deutschland Kosmetik GmbH, **Multifunctional Ingredients for the Preparation of Stable Cosmetic Pickering Emulsions.**

Emulsifier-free emulsions are increasingly used in cosmetics. Their stabilization is essentially based on the use of synthetic or natural polymer compounds. Emulsifier-free emulsions are valued for their good skin compatibility, light texture and good water resistance.

Multifunctional, emulsion-stabilizing solid particles are interesting alternatives to polymer compounds. These include silica, titanium dioxide, layered silicate and starch products, as well as microcrystalline cellulose. Their product properties, such as UV absorption capability, dispersibility, mattifying etc. can be used specifically for product developments. Natural thickeners, such as carrageenans, succinoglycan, starch products and dehydroxanthan gum are predestined to adjust the flow properties of such emulsion gels. Suitable manufacturing methods and personalized formulations will be presented.

Gina Lisseth Marin Velasquez, INCI-Experts GmbH, KRÜSS GmbH, Universität Hamburg, **The Influence of Thickener Agents in Different Surfactant Systems on Foaming Behavior and Foam Structure.**

The polymers Guar gum, cationic Guar gum and Xanthan Gum investigated here belong to the gelling agents and are used as thickeners or stabilizers of emulsions. Gel formers are often used in conjunction with complex surfactant systems, such as shampoos and shower gels. The rheology changed by the polymer-based gelling agents used also influences the foam properties as well as the stability of the product. Therefore, the compatibility of several natural polymers with two different surfactant systems (anionic-non-ionic surfactant system and

amphoteric-non-ionic surfactant system) was analyzed for specific application parameters such as foaming behavior, foam stability, foam structure and aging. In addition, the influence of electrolytes was analyzed using the example of sodium chloride (NaCl) and subsequently compared with the foam properties of polymer-based gelling agents. The foam analysis was carried out with the Dynamic Foam Analyzer DFA100 (KRÜSS GmbH).

The addition of polymer-based gelling agents to the surfactant systems resulted in a significant improvement in foam formation and foam stability. Xanthan gum showed the strongest effects. It was also shown that the influence of individual gelling agents on the foaming behavior also depends strongly on the characteristics of the particular surfactant system.

Young Scientists' Award of the GDCh Division of Detergent Chemistry

The GDCh Division of Detergent Chemistry honoured two young scientists for outstanding scientific work with particular relevance for the development of detergents and cleaning products.

The prize for the best dissertation went to **Dr. Martin J. Thiele** (RWTH Aachen) – **"Boosting the performance of a protease with polymers and surfactants"**.

The prize for the best Master's thesis was awarded to **Friederike Dehli** (University of Stuttgart) – **"Generation and characterization of gelatin-based hydrogel foams with defined pore sizes"**.



Friederike Dehli

Dr. Martin J. Thiele

Summary

The Sulfonated Fatty Acid (Disodium 2-Sulfolaurate) is a new surfactant that fully meets EHS and performance requirements.

- It is based on a natural, renewable certified raw material
 - It is produced with a clean, safe and efficient process
 - It is safe and mild
 - It is biodegradable
 - It features an excellent stability
 - It is suitable for versatile formats (solid, liquid) and ideally combined with co-surfactants for highest performance (e.g. foam)
 - It is versatile and applicable in different industries
- And it is for the first time commercially available in the market!

Fig. 6 Surfactants of the future. (Source: C. Brunn, BASF Personal Care and Nutrition GmbH)



Ocean Vibes

Planet Lover

Australian Inspiration

FRAGRANCE TRENDS 2020/21

Our awareness of the environment continues to grow. In the current fragrance trends, Bell Flavors & Fragrances EMEA takes up this trend and focuses on some of the most intriguing facets of our planet. The trend topic **Ocean Vibes** represents the origin of all life on Earth. **Australian Inspiration** is a tribute to the land down under, which is still a wild, magical place of longing for many people. The third topic, **Planet Lover**, is dedicated to fragrances that help preserve all this so that our Earth remains a breathtaking place for generations to come.

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get-together and the scent of season



The president of the German Society of Perfumery, *Dr. Edison Diaz*, opened the Get-together, under this year's motto "The Scent of Season – Taste and Feel" on Wednesday evening.

For every season a fitting perfume was created and a shot with a taste tailored to this served, addressing the sense of taste and the sense of smell simultaneously. In addition, background music, candlelight and exquisite snacks provided a relaxed atmosphere

The twittering of birds and green ceiling light introduced the spring fragrance "**Alster Spring**" of Düllberg Konzentra. Mediterranean touches, e.g. bergamots and tangerine together with green-floral scents, combined to awaken feelings of spring.

With sunglasses on, Mr. Naraschkéwitz of FREY & LAU presented the summer fragrance "**Mojito Darling**" – a whiff of mint and eucalyptus, ennobled with scents of citrus.

"**October Road**" from Kurt Kitzing stands for a fall stroll through the forest: aromatic, warm, earthy scents, incense, a hint of citrus, juniper and cedar.

LUZI fragrance compounds expressed winter with "**Atmospheric White Frost**". Elements of frosty wind and snow were combined with warm notes of a fire and the woody scent of different woods.



Scientific Conference: Session German Association of Perfumers (DGP)

Thursday afternoon was also devoted to a series of talks on fragrance and smelling.

Prof. Dr. Andrea Büttner of the Fraunhofer Institute for Process Engineering and Packaging and the Friedrich Alexander University Erlangen Nuremberg shed light on the question "How does our Sense of Smell Fit in to Our Overstimulated Contemporary World"?

In the course of the history of human development the sense of smell has clearly fallen behind the sense of vision, but together with all other senses still plays an important role for the integrated perception of our environment. Many modern products and materials convince or irritate the consumer due to their odor. Here, the scientific clarification of the odor-causing molecules typical for a fragrance plays an important role. For childrens' toys or other products it is recommended to test with the nose also before buying! Currently the olfactory challenges relevant to plastic recycling are also highly topical. At the Campus of the Senses of the University of Erlangen Nuremberg a research goal is the digital modeling of the complex human perception. This requires the interconnection of technical sensor and actuator systems – to an "Internet of the senses".

In his closing address Dr. Edison Diaz expressed his thanks to the four perfume manufacturers and presented each of them with a bottle of champagne.



Under the title "Make it My Way – Personalization in Fragrances and Personal Care" *Margaux Caron* from Mintel showed strategies for addressing woman consumers more individually, deriving from studies of consumer

behavior. Here it is decisive that the personality of the customer is in the foreground and not necessarily the entire individual with all her characteristics.

For personalization it is not necessary to make a personal offer tailored to the individual customer. Far more, it is recommended to directly address certain groups, for example according to age or value judgments. For cosmetics and fragrances, individual needs should be considered and this entirely individual interaction between product and user emphasized, for example with the development of a fragrance on the body or the individual skin microbiome. Analytical tools in the Internet enable the collection of individual customer data. This, as well as the reinforcement of sensitivity by belonging to a special group, give the customers assurance and bolster their sense of uniqueness.

In the third talk, under the title “**The Scent of Genes – What is Actually Decisive for Mate Choice**” **Prof. Dr. Manfred Milinski** (Max Planck Institute for Evolutionary Biology) presented an overview of his research. Studies with different approaches showed that the diversity of the immune system has

a pronounced influence on the choice of a life partner. It was shown that certain peptides (which are part of the human immune system) are responsible for an “appealing” or an “aversive” effect when these are applied to T-shirts worn by male test persons and evaluated by female test persons on the basis of the sense of smell alone.

The Fragrance Sessions concluded with **Prof. Dr. Dr. Torsten Zuberbier** (Charité Universitätsmedizin Berlin), with the talk “**Fragrance and Skin: What do we Need, What do We Want, What Are We Allowed to Do?**” This explained when cosmetic

ingredients exhibit allergenic potential, how sensibilization takes place, and how some fragrances are condemned by different media as unnecessary ingredients. Only few aromachemicals exhibit allergenic behavior. However, in lower concentrations the immune system is far from stimulated, so that even allergenic fragrance molecules can definitely be used. Here, not only correct communication with the patient, but also in relation to the critical media, is important. An irritative potential with cosmetics depends not only on the ingredients, but also on the skin type, skin condition, temperature, humidity, or the use of other products.



Fragrance Lounge

In the **DGP Fragrance Lounge** those interested in fragrances could ask the advice of experts on all three days.





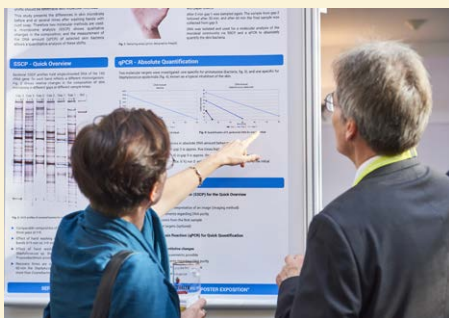
Poster Exposition

**Scientific Poster
(SEPAWA e.V. & GDCh e.V.)**

Within the scope of the SEPAWA Congress the SEPAWA e.V. and the GDCh Division of Detergent Chemistry also featured a scientific poster session. The authors had the opportunity to give a short presentation of their posters.

Application-oriented Poster

The Forum for Innovation offered exhibitors the opportunity to also introduce their new developments in the detergent/cleaning product, cosmetic and perfume industry with a poster presentation.



Keynote Address



The Digital Revolution and the Future of How We Work– Philosopher *Dr. Richard David Precht*.

The fact that the world is changing at a breath-taking place is common knowledge. But how are we reacting to it? Some people are welcoming the digital future with appalling naivety and expect changes as with the weather. Politics does not appear to take this upheaval seriously. They continue, so to say, to decorate the lounge chairs on the Titanic. Others are vociferous in their warnings about the dictatorship of digital companies in Silicon Valley. And then there are those who would rather pull the blanket over their heads and go back to the past.

Richard David Precht, on the other hand, sketched out a picture of a desirable future in the digital age. Would we lose out if the achievement-oriented society we know now were to come to an end? As far as Precht is concerned, it would be an opportunity for us to live more fulfilled and self-determined lives in the future. For this to happen, however, we must set the course now for a systematic change of our social system. Because working, shaping something, and self-fulfilment are all part of human nature. Sitting in an office from nine to five for pay is not!

Richard David Precht wants to show where we have to pave the way to this future correctly. After all the future doesn't come by itself – we have to shape it! The question is not: How are we going to live?, but rather How do we want to live?



The Forum for Innovation and the SEPAWA Exhibition



The talks of the Forum for Innovation, in total 69, and the exhibition are a unit together. It is the draw companies exhibiting who can attention to their newest developments in short specialist- and marketing-oriented contributions and so promote the visiting of their company booth. The exposition, with 310 companies exhibiting, gained further popularity and recorded a record attendance. New was the reservation of Thursday afternoon as 'prime time' for visiting the exposi-

tion. The cleverly chosen allocation of the stands fostered lively activities on all stands. Everywhere one could observe talks and discussions among specialist colleagues. More than 90% of the exhibition areas are already reserved for 2020.

Bottom line

The SEPAWA congress increased in its attractiveness and is following a successful path. The Executive Board of the SEPAWA e.V. expressed its thanks to all companies exhibiting, the members of the association, and professional colleagues of the industries represented for their participation in the 66th SEPAWA Congress 2019. Particular thanks were due to the staff members of the Verlag für Chemische Industrie for their perfect organization of the Congress. This included for the first time a SEPAWA Congress-App for personalized use which, for example, contained all important information about the program and the exposition.



By the way: A reusable, and therefore long lasting ceramic cup with the SEPAWA logo was offered at the Congress.





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SEPAWA Innovation Award



Innovations are decisive for growth and competitive position and are the basis for our economy. Innovations are thus an important prerequisite for successful competition on the market. This year the SEPAWA Innovation Award for outstanding achievements in the cosmetic and detergent fields was conferred for the seventh time. The prize serves to provide impulses for active idea management in the member companies of the SEPAWA and enhance public awareness of the valued innovation. A neutral, independent jury of seven persons from the Scientific Advisory Council of the SEPAWA and the SEPAWA Executive Board chose three prize winners from 30 proposals submitted. The prize embodies a certificate and a trophy depicting the SEPAWA wave in stylized form.

The first prize went to Givaudan France SAS for the work **“Darkenyl™, for Advanced Hair Pigmentation Recovery”** received by *Mathias Fleury*.

The second prize was conferred on *Jessica Welzel* of Henkel Beauty Care Technologies for her work on the subject **“New technologies for specific antiperspirant actions”**.

The third prize was awarded to *Prof. Dr. Andreas Klamt* of the COSMOlogic GmbH & Co. KG for innovative achievement on the subject **“COSMOplex: A revolutionary new method for the simulation of surfactant systems”**.



AFTER EVENT

Legendary, top class, extraordinary, delicious, fantastic, gigantic, delicious, breathtaking...

These are some of the adjectives we have heard from our visitors at the After Event 2019.

After the official part, which was opened by the SEPAWA e.V.'s First Chairman *Dr. Hans Jürgen Scholz*, and the award ceremonies of the SEPAWA Innovation Awards, the evening really kicked off.

Once again *Peter Griebel*, kitchen director of the Estrel Hotel, presented the truly extraordinary journey through international delicacies. Onsite cooking by over 20 chefs, six of whom were awarded stars, so the quality of the food presented was second to none.

Synergy Beats, a percussion band with a “We make music together and celebrate” philosophy led over to the proper party bit of the evening just like in previous years. Here the SEPAWA visitors proved their partying skills and stamina. And for the 66th anniversary, there was a stage surprise of a special kind. The *SEPAWA board* and the organization team performed a dance choreography to the **SEPAWA song** in the style of “Let’s Dance”. The dance floor did not empty until the early hours of the morning when the music was finally turned off. We will definitely do that again in 2020, and there is sure to be one or two surprises.





MARK YOUR CALENDAR

28 – 30 OCTOBER 2020

SEPAWA® CONGRESS

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www.sepawa-congress.com

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