

25–27 OCTOBER 2023

# SEPAWA<sup>®</sup> CONGRESS

ECC ESTREL CONGRESS CENTER BERLIN



# 2023

# Congress Report

The 70<sup>th</sup> SEPAWA<sup>®</sup> CONGRESS, the 19<sup>th</sup> European Detergents Conference and the Cosmetic Science Conference from October 25<sup>th</sup> to 27<sup>th</sup>, 2023 in Berlin



# SEPAWA® CONGRESS 2023 – Congress Report

It's clear now: "Participation in the SEPAWA® CONGRESS is essential in our industries".

For the fifth year, the SEPAWA® CONGRESS was held at the ECC Estrel Congress Center in Berlin. It was the 70<sup>th</sup> SEPAWA® CONGRESS. This doesn't mean it's getting old. On the contrary, the SEPAWA® CONGRESS is vibrant and enjoys great popularity within our industry and beyond. Statistics clearly demonstrate this: 3516 participants from 65 countries, 318 exhibiting companies, 155 presentations, and 65 posters.

Allow a moment of nostalgia, as the "congress journey" once led from Bad Dürkheim via Würzburg and Fulda to Berlin. For instance, at the 57<sup>th</sup> SEPAWA® CONGRESS in Fulda, around 1600 participants from 29 countries gathered. The exhibition counted 148 exhibitors, 28 presentations were held in the scientific conference, and 46 short presentations took place in the then new "Forum for Innovation".

The SEPAWA® e.V. board and the SEPAWA® eVent GmbH, as organizers, have once again succeeded in designing and smoothly executing an attractive congress. The congress venue is ideal, and visible expansions regarding on-site accommodation capacities are taking shape. The congress format, combining lectures and a trade exhibition, is coherent, and the distances between them are short.

Research findings of industry-related scientific basic research were presented in up to five parallel sessions within the "European Detergents Conference" (EDC), scientific cosmetics results within the "Cosmetic Science Conference" (CSC) of the DGK e.V., as well as results of application-oriented research and development in detergents, cosmetics, and perfumery.

The session on regulatory topics and sustainability, founded by the SEPAWA® e.V. specialist group "Legislative – Environment – Consumer" and the main committee for detergents of the GDCh, is gaining importance. A session on "Sustainable Packaging" has now become established in the lecture program. Parallel to the lecture program, a poster session takes place on all three congress days.

SEPAWA® CONGRESS has a unique appeal of combining a trade show exhibition with a forum for discussion via conference, posters and many network opportunities under one roof. 318 companies showcased their innovations and many of them presented at the "Forum for Innovations".





Young Researchers' Award winners 2023

## Awarding of the SEPAWA® e.V. Young Researchers' Award

Each year, a highlight is the honoring of exceptional achievements. Dr. Hans Jürgen Scholz, the 1<sup>st</sup> Chairman of SEPAWA® e.V., conferred the awards. The annual **SEPAWA® e.V. Young Researchers' Award** fulfills one of the most important objectives of SEPAWA® e.V., particularly to support the training of young professionals. The prize is awarded to students for outstanding bachelor's, master's, and doctoral theses. From the submitted works, the jury selected seven winners. Specifically, two bachelor's, three master's, and two doctoral theses were evaluated as deserving of the prize.

**The 1<sup>st</sup> prize** in the category "Outstanding University Graduate with a **Bachelor's Degree**" was awarded to **Ms. Carolin Goj**, Hochschule Niederrhein, in cooperation with Henkel AG & Co KGaA, for her work on "Influence of Cations on the Interfacial, Rheological, and Application-Technical Properties of Surface-Active Ionic Liquids". The **2<sup>nd</sup> prize** went to **Mr. Jacob-Nelson Noudem Zombou**, Ostwestfalen-Lippe University of Applied Sciences, in collaboration with Symrise AG, for the work on "Optimization of Water Solubility of Loadable Polymer Matrices".

**The 1<sup>st</sup> prize** in the category "Outstanding **Master's Thesis**" was awarded this year to **Mr. Robin Benedix**, University of Stuttgart, for the work on "CO<sub>2</sub>-Switchable Additives and Surfactants". The **2<sup>nd</sup> prize** was given to **Ms. Annika Greupner**, University of Hamburg & Henkel AG & Co. KGaA, for her work on "The Role of Enzymes in Natural Hair Colouration Exemplified by Hair Dyeing Mechanism of Henna Plant (*Lawsonia inermis* L.)". The **3<sup>rd</sup> prize** was awarded to **Ms. Kathrin Ludwig**, University of Hamburg & Henkel AG & Co. KGaA, for work on "Method Development for Determination the Antioxidant Activity of Raw Materials with Potential Effects on Hair".

**The 1<sup>st</sup> prize** in the category "Outstanding **Doctoral Thesis**" was awarded to **Dr. rer. nat. Albert Prause**, Technical University of Berlin, for the title: "Structural Investigation of Hydrophobically Modified Thermoresponsive Polymers and Their Influence on the Rheology of Microemulsions". The **2<sup>nd</sup> prize** went to **Dr. rer. nat. Tamara Schad**, University of Stuttgart, for her work on: "Innovative Cleaning Concept for Art Objects and Cultural Assets".



Winners of the SOFW Awards 2023

## SOFW Award

For the fourth time, measured against the 150-year history of the journal, a "young tradition", the "SOFW Award" was presented at the SEPAWA® CONGRESS for the three best articles in the SOFW Journal of the previous year. Following the recommendations of a 9-member expert jury, three winners were selected and honored from 51 articles.

**The first prize** was awarded to the authors A.J. Hoekstra, E. Care, and T.P. Graycar of the **company IFF Health & Biosciences** for the article on "Advancements in Enzyme Engineering Open Opportunities for More Sustainable Detergents".

**The second prize** was awarded to S. Christian and V. Krug from **GloryActives GmbH**. The article's topic is: "Protective Beauty – Comprehensive Skin Protection through Enzymes".

Authors J. Heuer and P. Arbter from **COLIPI GmbH** received the **third prize** for the publication on the topic "Sustainable Yeast Oil – How Fat is That?".



SEPAWA® e.V. Innovation Award 2023: Winners of the first prize (Worlée-Chemie GmbH)

## Awarding of the SEPAWA® e.V. Innovation Award

Innovations are crucial for growth and competitiveness in our markets and form the basis for successful and sustainable business. For the ninth time this year, the SEPAWA® e.V. Innovation Award was presented to three winners in the fields of cosmetics and detergents. The award aims to provide impulses for active idea management in the member companies of SEPAWA® e.V. and raise public awareness for successful innovations.

A neutral and independent jury, consisting of 7 members of the advisory board, the scientific advisory board, and the board of SEPAWA® e.V., selected 4 winners from 26 submissions. The prize consists of a certificate and a wooden trophy, stylized in the form of the SEPAWA® e.V. wave.

**The first prize** went to **Worlée-Chemie GmbH** for their work titled: “Product Innovation WorléeSuspens ECO: Sustainable Biopolymer for Environmentally Friendly Product Solutions”. The **second prize** was awarded to **Seppic France** for the work titled: “SAGACIOUS™ – The Biomimetic Anti-Sagging Ingredient”. A **third prize** was presented to **Inolex GmbH** with the title “AminoSensyl™ Ultra MB – Breakthrough Cationic Amino Lipid Technology for Sustainable Hair Care”. **Another third prize** was awarded to **Symrise AG** for the title: “Multifunctionals as Innovative Solutions for Formulating Modern Home Care Products”.

The award ceremony took place at the beginning of the After Event. There’s no more fitting moment than the award ceremony attended by around 950 guests, even if they have to wait a little longer.

## Awarding of the GDCh Division of Detergent Chemistry

Traditionally, the GDCh Division of Detergent Chemistry honors young scientists for excellent scientific work with particular relevance to the development of detergents and cleaning agents.

This year, the sponsorship award for an **outstanding doctoral thesis** was given to **Dr. Susanne Jacksch**, Institute of Precision Medicine, Furtwangen University, Villingen-Schwenningen, Germany. The title of the work is: “Investigations on the structure and function of the microbiota in household washing machines, kitchen sponges, and on laundered textiles”. The work was sponsored by Justus Liebig University Giessen and Henkel AG & Co. KGaA.



Keynote Lecture 2023 – Dr. Theo Waigel

## Keynote Lecture

This year’s keynote speech was delivered by **Dr. Theo Waigel** under the title: “**Politics and Economy in Unsteady Times**”. A broad audience gathered in the auditorium, eagerly anticipating the insights of one of the most experienced figures in German politics on the aforementioned topic. He himself describes the facts, makes observations, and outlines the questions as follows:

“They are blind guides. If a blind man guides a blind man ...” (Matthew 15:14). A world in transition! Inflation, war, power shifts, threatened democracy! What does history teach us? Has this all happened before? How were these challenges overcome? Can we learn from this? Do we need more sighted people? Quo vadis genus humanum? Should we be confident or fearful?

# The Lecture Event – a Compilation of Selected Focus Topics

The lecture event reflects both the scientific foundation and the breadth of technical applications of our detergent/cleansing, cosmetic, and perfume industries comprehensively.

Within the **European Detergents Conference (EDC)**, founded by the “Division of Detergent Chemistry” specialist group of the Gesellschaft Deutscher Chemiker, 14 scientific presentations were held on the theme “Polymers in Water – Quo Vadis?”. It delves into the future role of water-soluble polymers, focusing on issues such as self-organization, modern production methods, water treatment, use in existing and new application areas, and the general biodegradability of such materials. The presentations were supplemented by theses on the awarded doctoral work by the laureate. The EDC presented 21 science-oriented posters.

During the **Scientific Conference of SEPAWA® e.V.**, which covers the latest research results of our industries – detergent/cleansing, cosmetic, and perfume – and their regulatory framework, 64 presentations were delivered. The main topics in the “Personal Care Session” carried by the CAT specialist group included inflation and pricing, green chemistry and biotechnology,

natural ingredients in formulations, and product-related carbon footprint. In the Home Care Session, the focus was on circular economy and plastic reuse, color protection for textiles, and modeling the stability of dispersed systems. The LUV specialist group is responsible for selecting the presentations, always focusing on the most current topics. For example, the selection included critical degradation products of aminopolyphosphonates in the environment, plastic and microplastic issues, the factual discussion on 1,4-dioxane by TEGEWA in light of upcoming legislative initiatives to limit it, and the aimed simplification of the European Detergents Regulation. In addition, 46 posters were exhibited.

This year, 88 speakers presented the latest in their developments in the “**Forum for Innovation**” and 19 posters with application-oriented content were displayed. The posters were represented on-site throughout the congress by the presenters, mainly by young scientists from universities and academic institutes, as well as by employees of industrial research and institutional facilities in our industries.

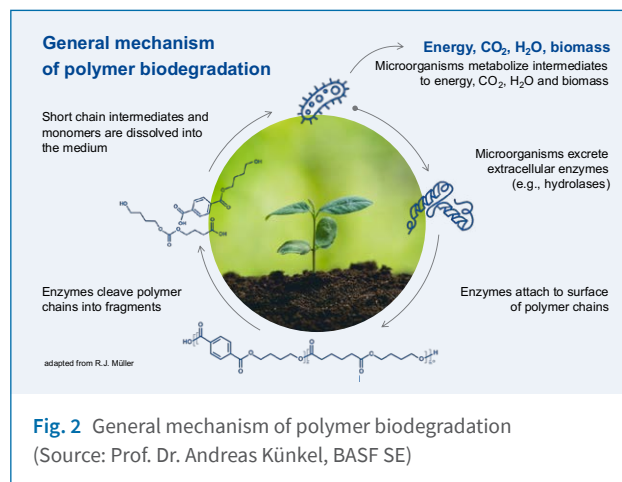
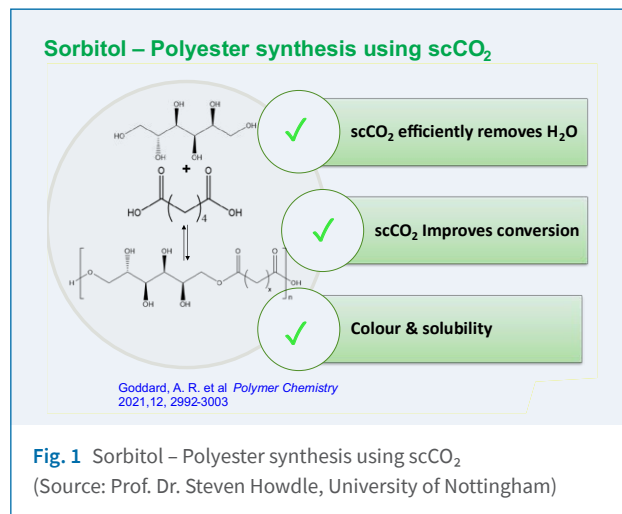
**The Cosmetic Science Conference of the DGK e.V.:** “The Scientific Foundations of Cosmetics”. The aim of this conference is to present the development of cosmetic sciences through impressive background information. Modern formulation technologies using new ingredients are the focus. The CSC comprised a total of 19 presentations this year. The topics mirror the breadth of cosmetic science. New active ingredients are highlighted for their physiological effects; biotechnologically based processes and active substances are introduced, focusing on the energetic and temporal optimization of emulsion production, as well as the selection of suitable emulsifiers for cold production. Moreover, studies on the photostability of UV filters and their realistic efficacy are presented.

**Sustainable Packaging:** The topic of “Sustainable Packaging” is highly relevant and therefore a consistent part of the congress program. In 11 presentations of the session, participants were informed about the current regulations of packaging solutions, as well as their latest practical implementations. Topics included the reuse of packaging and associated challenges and risks, novel bioplastics, and aerosols.

### Clean and Green – New Approaches to Commercial Polymers

Prof. Dr. Steven Howdle  
(University of Nottingham)

Steve Howdle reported on the development of new monomers and polymers derived from renewable resources. A number of different sources to create a wide range of monomers and polymers have been utilized. These sources include sorbitol, lactide,  $\epsilon$ -caprolactone and fatty acids that are derived directly from nature, including from tree bark and oils from waste seeds. The group has developed significant expertise in utilizing supercritical carbon dioxide ( $scCO_2$ ). In particular, there had been exploited the low viscosity and high diffusivity of  $scCO_2$  to create a highly efficient and reversible plasticizer. This *in-situ* plasticization allows to perform polymerisation reactions at temperatures as low as 40°C; much lower than is possible under conventional operating conditions. In some cases, these lower temperature operating conditions have opened up the opportunity to use enzymatic catalysts to yield new polymeric materials from renewable monomers. It had also been reported on the preparation of a range of new monomers derived from terpenes that we have utilised to create new di and terblock copolymers. These have shown wide application as surfactants, coatings, consolidants for archaeological materials and as hard-soft-hard block materials that can act as pressure sensitive adhesives. New applications and opportunities in 3-D printing had also been demonstrated. (Fig. 1)



Thanks to their unique properties, water-soluble polymers (WSPs) find application in many products, such as in home and personal care or agricultural formulations [1]. In this presentation, we show, how the gained know how of biodegradation for structural biodegradable polymers can be adapted and transferred to WSPs. • Structural polymers as role model for the investigation of polymer biodegradation. Kunkel pointed out: "Different technologies have been developed over the past years together with our cooperation partners to elucidate the fate of polymeric materials in soil. 13C-labelling combined with different analytical techniques allowed to quantitatively track the polymeric material during the biodegradation process and to close the mass balance [2]. Evidence was provided that carbon from synthetic biodegradable polymers is incorporated in the active biomass of microorganisms during the biodegradation process [3]. Microorganisms and enzymes from different soils have been identified showing that a broad variety of fungi and bacteria." • Biodegradation of WSPs: key considerations, status and path forward. A deep understanding of the environmental fate of WSPs can only be achieved with a holistic approach to the topic, from the chemical structure to the test methods, from the environmental factors to the biology (microbes, enzymes). Testing of the biodegradation of WSPs in laboratory can build on the existing test methods developed for small molecules (e.g. OECD 301 B and F) and plastics (e.g. ISO 14851) whereas adaptation might be needed, due to the different nature of the material under investigation. In addition, 13C-labelling and microbial enrichments can provide valuable insight into the biodegradation processes. Preliminary results had been presented as well as a proposal for biodegradation testing scheme for WSPs. (Fig. 2)

**References:** [1] Zumstein et al., (2022), <https://doi.org/10.1021/acs.accounts.2c00232> [2] Nelson et al., (2022), *Nature Communications*, 13(1), 5691. [3] Zumstein et al., (2018), *Sci. Adv.* 2018;4: eaas9024

## Microplastics in the Environment

Prof. Dr. Christian Laforsch  
(University Bayreuth)

The ubiquitous contamination of the environment with microplastics (MP) and the associated potential risks perpetually attracts a great deal of public, political, economic, and scientific attention. However, the problem is very complex, as MP represents a very heterogeneous group of particles with a wide range of chemical and physical properties, which also constantly change due to various environmental impacts and the resulting aging processes. This can lead to altered environmental behavior as well as to different biological effects. The goal of SFB 1357 is therefore to gain a fundamental understanding of the processes and mechanisms that condition biological effects of MP in limnetic and terrestrial ecosystems as a function of the physical and chemical properties of the particles, influence the migration behavior of MP particles and cause the formation of MP starting from macroscopic plastics. These findings provide a scientifically sound basis for assessing the environmental risks of MP, as well as for developing environmentally friendly plastics and processes to prevent the emission of MP into the environment.

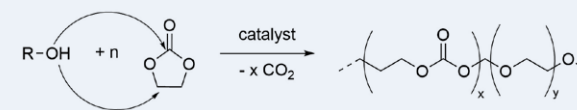
## Production of CO<sub>2</sub>-Containing Non-Ionic Surfactants by Ring-Opening Polymerisation, a Modern Controllable Synthesis Alternative

Daniel Brüggemann (TU Berlin)

Surfactants are an important component of the chemical industry and are used in many economic sectors. From cleaning agents to auxiliary materials for chemical reactions, such as emulsion polymerisation, there are almost no limits to these surface-active substances. In 2016, a total of approximately 1.29 million tonne of surfactants were produced in Germany for applications in households and industrial processes. Of these, 1.10 million tonne are cationic, anionic and non-ionic surfactants [1]. About 41% is accounted for by non-ionic surfactants alone, of which a significant proportion is produced from long-chain fatty alcohols and ethylene oxide (EO). With a sales value of 894 million euros, non-ionic surfactants are among the most important chemical products [1, 2]. A modern way to make them more ecological is to use CO<sub>2</sub>-containing surfactants. Producing them and at the same time controlling the product properties is possible by using a CO<sub>2</sub> building block such as cyclic ethylene carbonates (cEC). If one understands the control parameters of the ring-opening polymerisation and thus the understanding of the control parameters of a ring-opening polymerisation of cyclic ethylene carbonates (cEC), one can produce functional non-ionic surfactants that are both environmentally friendly due to good biodegradability and that are recyclable. For example, these surfactants have already been proven to purify microplastic contaminants from water [3]. (Fig. 3)

### Why we make CO<sub>2</sub>-containing surfactants?

- Surfactants designed for recycling and biodegradability.
- Equal or better properties than their commercial equivalents.
- Option for controlling molecular weight and CO<sub>2</sub> content.



**Fig.3** Why we make CO<sub>2</sub>-containing surfactants?

(Source: Daniel Brüggemann, Technical University Berlin)

**References:** [1] Statistisches Bundesamt, Statistisches Bundesamt Produzierendes Gewerbe, 2016. [https://www.destatis.de/DE/Publikationen/Thematisch/IndustrieVerarbeitendesGewerbe/Strukturdaten/Kostenstruktur2040430107004.pdf?\\_\\_blob=publicationFile](https://www.destatis.de/DE/Publikationen/Thematisch/IndustrieVerarbeitendesGewerbe/Strukturdaten/Kostenstruktur2040430107004.pdf?__blob=publicationFile). [2] M. Patel, A. Theiß, E. Worrell, Surfactant production and use in Germany: resource requirements and CO<sub>2</sub> emissions, *Resour. Conserv. Recycl.* 25 (1999) 61–78. [https://doi.org/10.1016/S0921-3449\(98\)00063-9](https://doi.org/10.1016/S0921-3449(98)00063-9). [3] D. Brüggemann, T. Shojamejer, M. Tupinamba Lima, D. Zukova, R. Marschall, R. Schomäcker, The Performance of Carbonate-Modified Nonionic Surfactants in Microplastic Flotation, *Water*. 15 (2023) 1000. <https://doi.org/10.3390/w15051000>.

### The EU’s New Packaging Regulation: Challenges and Opportunities for the Cosmetic Industry

Judith Fiedler  
(oneRD GmbH)

The EU’s new packaging regulation presents a significant challenge for companies in the cosmetics and detergents industry. However, it also offers opportunities for sustainability and innovation. The goal of this presentation is to provide an overview of the requirements of the regulation, highlight the challenges and opportunities it presents, and offer recommendations for companies in the industry. The presentation will first examine the key requirements of the regulation. It will then explore the challenges and opportunities it presents for the cosmetics industry, including the need to develop sustainable packaging strategies, the potential for innovation in packaging materials and design, and the opportunity to communicate sustainability initiatives to consumers. The presentation will conclude with practical recommendations for companies in the industry and lay out timelines based on latest regulation draft. These recommendations will include a step-by-step approach to developing sustainable packaging strategies, including the identification of optimization opportunities, the development of innovative, sustainable packaging concepts and materials, and the implementation of sustainable supply chains. (Fig. 4)

#### Conclusion/ Take Aways

Embracing sustainability and innovation

- Sustainability becomes a key criterion in every decision
- Products must be evaluated individually for compliance
- Safety and environmental significance/impact go hand in hand
- Design is not regulated but becomes a challenge since products will likely look more similar
- Recycling material quality is essential. At the moment only mechanical recycling in the draft considered.
- Traceability of recycling content to be established- go hand in hand with supply chain law
- Packaging Dossier to be established for evidence (Weight, material, size, PCR-content, recyclability)
- Labelling of material to be aligned throughout Europe

Fig. 4 Conclusion/ Take Aways – Embracing sustainability and innovation (Source: Judith Fiedler, oneRD GmbH)

#### Substitution options for bioplastics

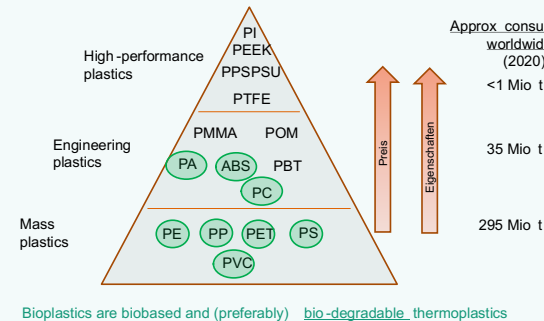


Fig. 5 Substitution options for bioplastics (Source: Dr. Jens Balko, Fraunhofer IAP)

Dr. Jens Balko  
(Fraunhofer IAP)

Plastic materials offer unique combinations of properties and are irreplaceable for all areas of our lives such as packaging. However, the annually increasing production volumes combined with the high durability of the materials also cause problems. On the one hand, there is the dependence on fossil raw materials. On the other hand, there are disposal problems and the unavoidable entry of macro- and microplastics into all areas of the environment. A promising class of plastics, the so-called bioplastics, is currently beginning to establish itself on the plastics market to an increasing extent. They have processing properties that are comparable to those of classic petroleum-based plastics, and they are suitable for a large number of different uses, often items for everyday use. The most important bioplastic types are polylactic acid (PLA) and polybutylene succinate (PBS). PLA is already established on the market, however for many applications in packaging and technical areas more flexible materials such as PBS are needed. The presentation will cover current developments of a value chain of PBS from plant residues, solutions for the hurdles of a market entry for bioplastics and the qualification of PBS for additional demanding fields of application. Within a large eastern and central German consortium, solutions are being developed for building the value chain and for increasing the multiplicity of both properties and types of PBS materials. (Fig. 5)



## Adapting to the Green Future: Minimising Production Errors by Assessing Material Compatibility for Sustainable Packaging

Dr. Andrew Mellor  
(KRÜSS GmbH)

The coming “green revolution”, driven both from the consumer side and via legislation, such as the EU Green Deal, presents companies in the packaging sector with a significant push to develop more sustainable solutions. Recently, Integration of recycled materials and switching to mono-material designs have become popular trends in the industry, however, from the perspective of inks, coatings, adhesives etc., such innovations often come with complications in terms of wettability and coating performance, which in turn can lead to increased production issues and product failures. In this talk we outline a process for assessing substrate/coating matching and consider some common issues that often arise as a consequence of poor system compatibility. Finally, we will introduce a new production/QC optimised testing system for assessing coatability and printability of substrates. (Fig. 6)

### The main parameters for Adhesion Analysis of coatings

1. **Work of Adhesion (WoA)**  
How likely are the coating and substrate to **stay together**
2. **Interfacial Energy ( $\sigma_{ic}$ )**  
How **compatible** is the coating/substrate *chemistry*
3. **Spreading Coefficient (S)**  
How will the coating **behave** when it reaches the surface

Fig. 6 The main parameters for Adhesion Analysis of coatings  
(Source: Dr. Andrew Mellor, KRÜSS GmbH)

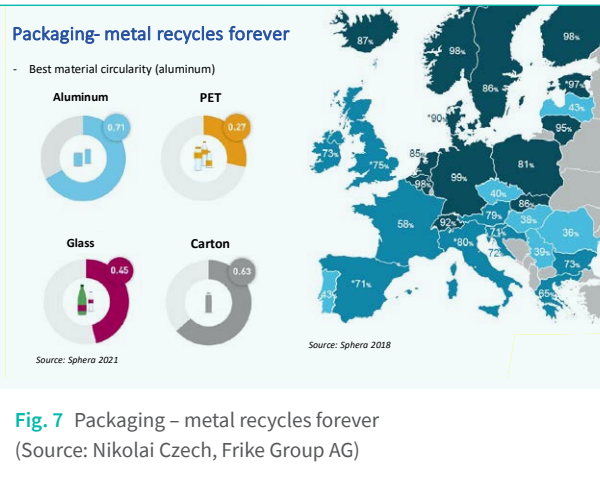


Fig. 7 Packaging – metal recycles forever  
(Source: Nikolai Czech, Frike Group AG)

## Aerosols – the Most Sustainable Packaging? We Think Yes.

Nikolai Czech  
(Frike Group AG)

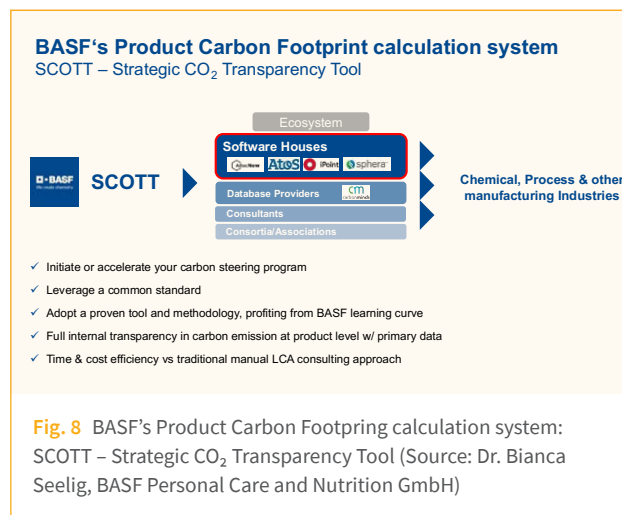
Aerosols have always offered the consumer a convenient product delivery that best fits their needs. A bad aura however continues to sway along with the term “aerosol”. Having long corrected the mistaken choice of chlorofluorocarbon propellants more than a half a century ago, it is about time to review the merits of the packaging in the context of sustainability. Learn about the aerosol basics. Pressurized containers that are airtight, have long shelf-lives, no period after opening and hence create less waste. Pressure in most aerosols is achieved using liquefied gases, which also act as solvents. Quite green solvents when considering modern aspects of green chemistry. For example, if we dissolve a sticky hair fixating polymer paste in a liquefied gas or ethanol and consider its VOC impact, the results may surprise you. The simple answer – density. Liquefied gases can even add to the circular economy by using currently non-recyclable waste. With a CO<sub>2</sub> footprint (cradle-to-gate) of 0.7 – 1.0 kg CO<sub>2</sub>/kg DME the product performs slightly better than bioethanol. If VOCs are out of question, compressed gases with almost zero environmental impact perform well using new packaging developments. Still not convinced? Consider the advantages of metal packaging. A prime example of circular economy; recycles forever, scores the highest in material circularity in Europe. 75% ever produced is still in circulation and energy consumption is lowered in can production with post-consumer recycled (PCR) aluminum. In total, 6.5 tons of CO<sub>2</sub> can be saved per ton aluminum produced. With sustainable formulations and packaging components, any remaining reservations can be eliminated. (Fig. 7)

# Scientific Conference SEPAWA® Personal Care CAT

## Product Carbon Footprints for Personal Care Ingredients

Dr. Bianca Seelig  
(BASF Personal Care and Nutrition GmbH)

Mrs. Bianca Seelig explained the key point as follows: “How much greenhouse gas emissions are associated with a product along its life cycle? This question has become progressively more important over the past years while companies are under increasing pressure to reduce carbon emissions in their raw material supply chains and provide trustworthy carbon claims to customers and end consumers. For BASF, climate protection is a key task and an essential part of our strategy. One main pillar to reach our goals is to provide the CO<sub>2</sub> transparency on product level. Therefore, we developed a digital solution to calculate the cradle-to-(BASF)gate product carbon footprints (PCFs) for products in our global portfolio. This presentation will focus on our PCF calculation methodology, ongoing industry standardization efforts, and existing solutions for lowering CO<sub>2</sub> emissions in the Personal Care market.” (Fig. 8)



## Microalgae in Cosmetics – History, Current Status and Outlook

Dipl.-Biol. Jörg Ullmann  
(Roquette Klötze GmbH & Co. KG)

Excerpts from the summary of the presentation of J. Ullmann as follows: The term “microalgae” describes a wide variety of organisms, whose biodiversity reaches out to every habitat on planet earth and bears two kingdoms. A lot of compounds with biological activities are only found in microalgae. These characteristics and adaption abilities enable the huge potential of this sustainable resource. The industrial production of microalgae worldwide is not older than just 70 years and the status of current production sites and usage still do not match the enormous possibilities which lie within this unique raw material. Microalgal extracts include functionalities like anti-ageing, antioxidants, tensor forming and anti-inflammatory characteristics. Molecules like carotenoids, oligosaccharides, peptides and unsaturated fatty acids are directly linked to *in vitro* and *in vivo* results. Hero ingredients like *Coenochloris signiensis* extract, *Dunaliella salina* or *Haemtococcus pluvialis* embody milestones which changed the perspective on former niche products. Next to *Chlorella vulgaris* and *Arthrospira platensis* a huge variety symbolize an enormous interest. The technological drawbacks, biological challenges and juristically regulations limit the feasibility of microalgal production sites. The difference between the novel food list and some of the applied microalgal extracts indicate an easier market access for the cosmetic sector in Europe. The microalgae farm in Klötze is one of the pioneers in the field of advanced microalgae production in Europe and has a proven track record as a raw material supplier. The Center for Natural Product-based Therapeutics at Anhalt university in Köthen, which closely cooperates with Algomed, develops novel natural substances from algae for the cosmetic sector and tests their activity in different cell-free and cell-based assays.

## Studies on the Use of Sophoroliplids in Cosmetic Leave-On Formulations

Dr. Holger Seidel  
(Azelis Deutschland Kosmetik GmbH)

Sophoroliplids are now firmly established as a surfactant alternative. H. Seidel reported to us about, among other things, the formation of liquid-crystalline gel network structure emulsions as follows: Biosurfactants are surfactants produced by bacteria, yeasts and fungi. Current market trends show that the demand for biosurfactants will increase many times over in the coming years due to their environmentally friendly and sustainable character. Among the various biosurfactants, glycolipids – and in particular sophoroliplids (SLP) – are the most promising biosurfactants. In the context of these investigations, sophoroliplids are used that were produced fermentatively (yeast strain *Candida Bombicola*) from wheat and maize (sugar source) and rapeseed oil. While the conductivity of SLPs in the detergent and skin cleansing sectors has been the subject of much research in recent years, little is known about the use of sophoroliplids in cosmetic leave-on formulations and is essentially limited here to their use as active ingredients to balance the skin microbiome. Due to the amphiphilic and structural properties of SLP, mixtures of SLP with suitable co-emulsifiers such as fatty alcohols, glyceryl stearates and the like are potentially suitable for building liquid-crystalline gel network structures in cosmetic leave-on formulations of the o/w-emulsion type. The mixing ratios of these complex emulsifiers for the formation of stable, stretched lamellar gel network structures are optimised by means of microscopic and rheological investigations (gel network studies). Differences in the use of the two SLP modifications (lactone-rich versus acidic form) are discussed. The resilience of SLP-based cosmetic leave-on products is demonstrated on the basis of various example formulations. Another formulation approach describes the use and performance of SLP in two-phase leave-on emulsion gels.

## Scientific Conference SEPAWA® Home Care

### Plastic – Paper – Propaganda – From Doubtful Solutions to Sustainable Product Design

Prof. Dr. Thomas Müller-Kirschbaum  
(Circular Valley)

T. Müller-Kirschbaum explained in his speech as follows: “More and more packaging for fast-moving consumer goods is made from paper or cardboard. Plastic is obviously seen as a material of concern, in particular for single-use packaging. This development is supported by the trend to solid product applications replacing liquid product forms. Solid shampoos and soap bars in carton packaging substituting liquid shampoos and liquid soap. Quite often with negative impact for the convenient product application, too. Strong consumer interests for water free products on the one hand together with a preference for packaging without plastic seems to be the drivers of this trend. And manufacturers promote these properties as single features or in combination. And partially also as progress in sustainability. And for products which could not be offered as solids, so called “paper bottles” are regularly announced as sustainable solutions.” Key questions had been answered. Which materials are really the best ones for which application? How can the efforts for a holistic sustainable design for content and packaging be guided in the right direction? Which general and which new principles need to be considered? Which existing and upcoming regulatory has to be taken into account? The presentation shows an innovative pathway for successful sustainable

product design – for content and packaging as a holistic system. All facts will be included, from recyclability via environmental footprints for packaging and content, the toxicological risks till degradability. A set of indicators as guidelines already for the product development phase can be derived, which can be afterwards transferred into a parameterization which is easily to understand for consumers and which can be used for product claims for that reason. (Fig. 9)

#### Key takeaways and way forward

- Consumers show high concern for sustainable solutions
- Industrial leaders accelerate the transformation
- Some solutions are only short-term fashionable than sustainable
- EU Green Claim Directive support true leaders
- Closed material loops are economically feasible
- It needs standardized sustainable circularity metrics as guidance

Fig. 9 Key takeaways and way forward  
(Source: Prof. Dr. Thomas Müller-Kirschbaum, Circular Valley)

# Coupling SMLS Analysis and HLD Approach to Assess the Amphiphilicity of Surfactants for Detergency Applications

Dr. Guillaume Lemahieu  
(Formulation)

The summary of the contribution of G. Lemahieu as follows: “The selection of the most effective surfactants for a target application requires an accurate knowledge of their behavior in complex environments. This is especially true for detergents formulations that must remain effective in a wide range of salinity and temperature conditions. In such applications, surfactants are used to decrease the interfacial tension between fats trapped between tissue fibers and tap water down to low values for ensuring an efficient cleaning. However, salinity and temperature variations can really inhibit the surfactant affinity for interface and induce a loss of efficiency. It is particularly the case for ionic surfactants which tend to precipitate with the increase of salinity by charge screening, or for nonionic ones which become insoluble with the increase of temperature by dehydration. To prevent such problematics, the salinity resistance and the temperature sensibility of surfactant need to be known. In this work, we use Static Multiple Light Scattering (SMLS) analysis in conjunction with the HLD concept to unambiguously evaluate the salinity resistance, the temperature sensitivity and the oil compatibility of surfactants. To characterize surfactants, the SMLS analysis has been adapted to identify efficiently the WIII microemulsion through the phase inversion detection at different temperatures during a continuous aqueous salinity variation in model emulsions under stirring. Using a well-described surfactant as reference, this experimental method allows the estimation of three parameters derived from the HLD equation ( $\delta_S$ ,  $\delta_T$  and PACN) representative of the salinity

resistance, the temperature sensitivity and the oil compatibility of unknown surfactants under study. Using a such characterization allows to choose the best surfactants to use in detergents in function of salinity and temperature working conditions. Accordingly, this characterization technique appears to be a major step toward the rapid screening of surfactants for adaptability in detergents formulations, with numerous applications in re-formulation.” (Fig. 10)

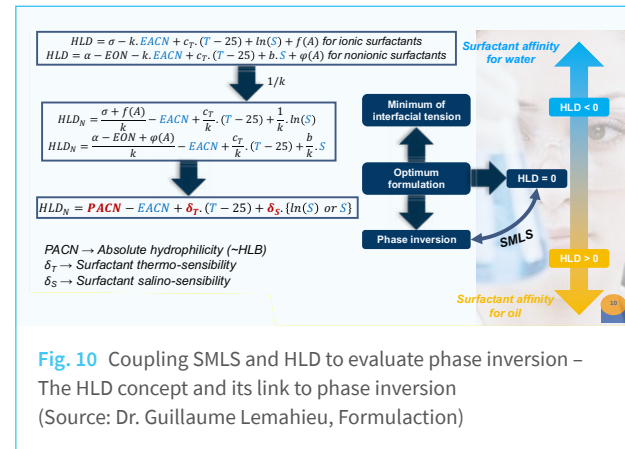


Fig. 10 Coupling SMLS and HLD to evaluate phase inversion – The HLD concept and its link to phase inversion (Source: Dr. Guillaume Lemahieu, Formulation)



## Sustainable Feedstocks Made from Organic Waste Digested by Insects for Cleaning Products

Dr. Renke Rommerskirchen  
(Sasol Chemicals)

R. Rommerskirchen pointed out the following in his presentation: Derivatives of C12-14 mid-cut alcohols (MCA) are the main ingredients of most cleaning products. Therefore, MCA is a key component for the industry. Today MCA is derived either from fossil sources through petrochemical processes (e.g. Ziegler alcohols) or from natural sources like Palm Kernel Oil (PKO) or Coconut Oil (CNO). As there is a growing demand for MCA derivatives, the industry strives for additional sources to make sustainable products. Conventional natural sources are considered environmentally friendly, their product carbon footprint (PCF) can however be above petrochemically produced alcohols. Especially newly created plantations come with a high PCF. The novel, innovative approach presented in this study is to use organic waste streams which are converted by certain insect species into triglycerides of desired composition. Using such insect oils as alternative source for MCA delivers products which come with improved sustainability benefits – not only because of organic waste as the feed stream, but also because of their very high yield per acre. Additionally, as the technology to convert triglycerides into fatty alcohols is already established, existing facilities can be utilized. Further, this approach addresses the waste management of e.g. the agricultural industry or other low-value organic waste streams which would usually be composted. In addition, there is no competition with crops for food, as organic waste streams are utilized and the land use for insect farming is minimal compared to the huge plantations required for plant-based sources. This paper discussed the use of insect oils to produce MCA and derivatives as ingredients for sustainable cleaning products and shows first results of insect-derived MCA and its derivatives compared with conventionally sourced natural products made from PKO or CNO. It could be shown that these materials are drop-in solutions for current products and massive reformulation is not required. (Fig. 11)

### Summary

- Insect-based derivatives are drop-in solutions for PKO and CNO based materials
- Insect farming is commercialised and rapidly growing
- Chemical industry has established technologies and mature processes
  - Existing facilities and infrastructure
- Organic waste streams are converted into high value feedstock
  - No competition with growing crops for food
- High yields can be achieved due to multiple harvests
- Estimates indicate a strongly negative carbon footprint
- CO<sub>2</sub> emissions are reduced significantly compared to conventional composting of the organic waste material
- Co-location with other industries allows significant synergies and therefore further improve the environmental impact

Fig. 11 Summary

(Source: Dr. Renke Rommerskirchen, Sasol Chemicals)

### Dispersin – harnessing the power of nature for laundry applications

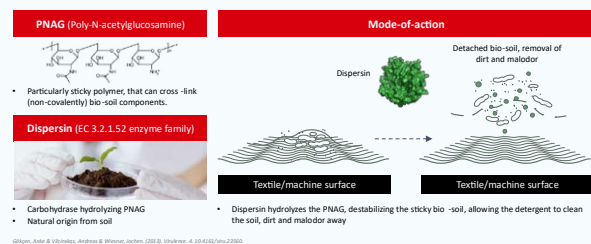


Fig. 12 Dispersin – harnessing the power of nature for laundry applications (Source: Dr. Mirko Weide, Henkel AG & Co. KGaA; Dr. Rebecca Vejborg, Novozymes A/S)

## Sustainable Laundry with Dispersin for Revolutionary Deep-Cleaning and Freshness

Dr. Mirko Weide (Henkel AG & Co. KGaA);  
Dr. Rebecca Vejborg (Novozymes A/S)

The sustainability-driven shift in laundering behavior, while positively impacting the environmental footprint of domestic households, is affecting laundry freshness and hygiene. While visible staining and overall greying are common pain point for consumers, a prominent complaint arising when switching to low temperature washing conditions, is the generation and persistence of malodor, both in the laundry items and in the washing machine. While malodor can be masked by advanced perfume systems, giving the consumer the perception of cleanliness, masking does not solve the root cause of the issue. Tackling the recalcitrant laundry soil that is insufficiently removed at low washing temperature is therefore imperative to solve the malodor issues. This warrants new innovation that will allow the consumers to wash their clothes sustainably without compromising washing performance. Here we show that a nature-based dispersin enzyme technology provides deep-cleaning on textile and hard surfaces, promoting freshness and cleanliness in both clothes and in the washing machine, even at sustainable low temperatures. (Fig. 12)

## Biopolymers from Norwegian Spruce: Biorefining and Performance in Cleaning Formulations

Dr. Ross Ellis  
(Borregaard)

Biorefining is a process that extracts natural substances from biomass with minimal synthetic alteration. At the Borregaard biorefinery, locally sourced Norwegian Spruce wood is digested and separated into multiple bioproduct streams. More than 94% of the total biomass is converted into products using water-based processes powered by renewable energy. We present the biorefinery model as a basis for delivering benign biobased ingredients for cleaning products, with short local supply chains and low carbon footprint. Specialized lignin biopolymers and cellulose fibrils are showcased, including life cycle analysis (LCA) and performance data in dishwasher, fabric care, and hard surface cleaning formulations. This includes dishwasher anti-filming, soil dispersion, rheology modification and formulation stabilization. (Fig. 13)

**Summary**

**The Borregaardbiorefinery**

- Non-agricultural wild sustainable Norway Spruce
- Water-based, energy-efficient processes, 94% biomass utilization

**Lignin biopolymer the plant-based dispersant**

- Natural lignin modified with anionic charge
- Improve cleaning performance
- Uses:
  - Dishwasher: anti-filming
  - Laundry: anti-greying

**Cellulose fibrils the natural network**

- Natural cellulose split into thin strands
- Thicken and stabilize formulations
- Uses:
  - Fabric softeners: stability
  - Spray cleaners: anti-drip, sprayability

**Fig. 13** Summary (Dr. Ross Ellis, (Borregaard))

## Cosmetic Science Conference by DGK



## Shower Foam Characterization – A Comparison of Human Evaluation and Instrumental Analysis

Dr. Sven Munke  
(DGK FG Hautreinigung)

In his presentation, S. Munke gives an insight into the work of the DGK e.V. skin cleansing specialist group. “Shower foam volume is a key attribute of skin cleansing products and associated with positive product performance. Thus, evaluation of the amount or volume of foam is crucial for product development and benchmarking. For this evaluation reliable methods are required. Aim of the present study was to investigate the correlation between sensory panel results (expert and lay) and instrumental analysis. Therefore, five commercially available shower products with different textures and surfactant composition leading to differences in foam characteristics were tested. Subjective results of a lay and various expert sensory panels in a multi-center approach were compared to standardized instrumental measurements and analyzed statistically. Concerning weaker foaming products, the ranking was characterized by a reduced correlation or was less clearly identifiable. But the

strong foaming formulations were similar identified between the different test approaches and test centers showing a clear correlation for those products.” (Fig. 14)

### Conclusion

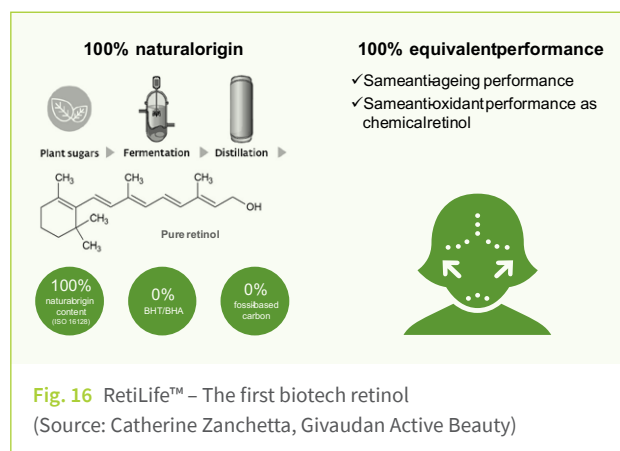
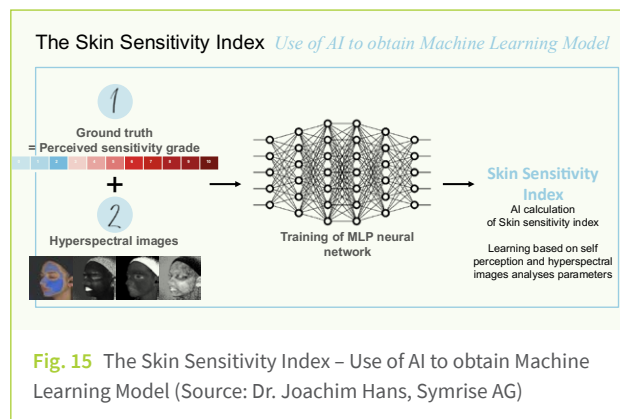
- Strong foaming formulations (JK26, DS45) are similar identified between different test approaches and test centers
- Weaker Foaming formulations (HA63, GS34, UK52) are less clearly identifiable.
- The stronger the foam performance, the stronger the correlation between the different test approaches.
- For these products standardised instrumental measurements are a valuable tool for product development and benchmarking in an early phase.

**Fig. 14** Conclusion  
(Source: Dr. Sven Munke, DGK FG Hautreinigung)

## Objective Evaluation and Grading of Skin Sensitivity: The Skin Sensitivity Index

Dr. Joachim Hans  
(Symrise AG)

J. Hans introduced the topic of “Skin Sensitivity Index”, describes suitable measurement methods, presents results and draws conclusions as follows: Sensitive skin is one of the most common skin issues. 56% of consumers claim to have sensitive skin [1] often perceived as xerosis, pruritus or erythema. Sensitive skin is still based solely on self-perception, objective tools are missing. We present a technology to analyze skin in a multi-parametric way, allowing the calculation of a linear ‘Skin Sensitivity Index’. An in-vivo study was performed with 90 subjects self-declaring their sensitivity status. Data was obtained by a self-assessment, expert assessment and analysis of hyperspectral images (melanin, hemoglobin and oxygen saturation, obtained with SpectraFace) in different facial areas. Additionally, a lactic acid test was performed. To better understand skin sensitivity, we computed correlations between all multi-spectrum parameters and expert evaluation. We computed a linear regression of the responses to the self-assessment. To validate the obtained index, we compared it with sensitivity evaluation given by experts. From hyperspectral data, both color and chromophore concentrations were computed and evaluated on the cheeks, cheekbones and nasolabial folds. A neural network was trained on these parameters to model the clinical sensitivity index. This clinical sensitivity index achieved 96,8% precision with the respective expert sensitivity status. The instrumental sensitivity index achieved 90% correlation with the clinical sensitivity index and 82% precision with expert sensitivity status. Both indices allowed having a continuous and fine sensitivity scale, either based on subjects’ perceptions or instrumental acquisitions. Skin sensitivity is a complex, multi-parametric condition. Here we prove that “classical” sensitivity evaluations, like lactic acid test, are not appropriate tools. We propose an innovative tool to grade skin sensitivity automatically. This innovative tool suggests novel support and assessment of skin sensitivity evolution under environmental changes or after using a soothing treatment. (Fig. 15)



## Biotechnologies: the Switch from Chemical to Natural for Hero-Molecules

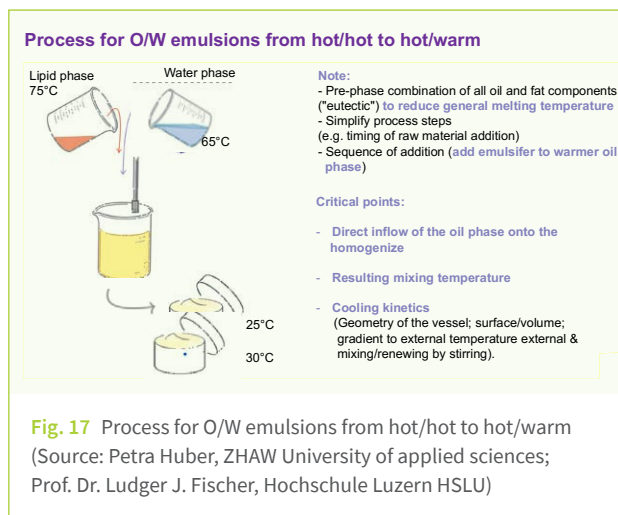
Catherine Zanchetta  
(Givaudan Active Beauty)

In her presentation, Catherine Zanchetta gave an insight into current developments towards biotechnological technologies as follows: “Innovation in the cosmetics industry is now driven by natural, and sustainable compounds, offering the same efficacy as their chemical competitors. According to these principles, white biotechnology capabilities – based on the use of microorganisms – can deliver high-performance ingredients. Focusing on the cosmetic industry’s hero-molecules, in 2017, Givaudan Active Beauty was the first company to offer a natural alternative to chemically-synthesised bisabolol. BisaboLife™ was the first fully bio-sourced, plant-derived active isomer of (-)- $\alpha$ -bisabolol. In addition to its novel production method, BisaboLife™ offers better purity than the chemically-produced bisabolol. Environmental impact assessments have demonstrated the BisaboLife™ production process to be sustainable, and biological assessments have confirmed the molecule’s powerful soothing effect. Pursuing the switch from chemical to natural, in 2023, Givaudan Active Beauty will launch the first biotech-crafted natural-origin retinol. RetiLife™ is the first 100% naturally sourced retinol, and as such represents a sustainable alternative to chemically-synthesised retinol. Produced from plant sugars by fermentation, and combined with natural antioxidants to ensure its longevity, RetiLife™ provides the same well-known anti-aging and anti-wrinkle properties as classical retinol. RetiLife™ and BisaboLife™ are the perfect examples of two high-performance ingredients produced through innovative biotechnological processes. This strong desire to switch from chemical to natural production of for skin care hero-molecules is crucial to respond to the urgent call to action for more sustainable cosmetics.” (Fig. 16)

## “Reduce to the Max” – Making Emulsions with Reduced Energy, Process Time and Costs

Petra Huber (ZHAW University of applied sciences);  
Prof. Dr. Ludger J. Fischer (Hochschule Luzern HSLU)

The speakers begin their presentation with a question: “Which possibilities do we have to design at a later stage energy-optimised commercial products established in the market (here on the example of emulsions) and so to reduce CO<sub>2</sub>?” and then continue: The guideline for energy-efficient cosmetics production published in Switzerland aims to initiate a positive change in the cosmetics industry. In this presentation, the above-mentioned authors address energy optimisation and its consequences for product quality with a complementary focus. The guide summarises the findings to date with three industry partners and is based on six efficiency concepts. In the first part of the presentation, the question is answered as to which are the most important process parameters and other setting factors. On the one hand, these lead to energy-optimised product samples, but at the same time they also have a considerable influence on their final quality. Through modern and skillful process control (temperature, shear rate resp. time) during production the following concrete savings could be achieved: • Increase in productivity by 20–30% • Energy savings of 20–30% • Increased flexibility in production due to shorter production times • Savings in material costs through optimisation of the cleaning process. How can the textures produced by newly adjusted process parameters be promptly analysed for quality differences? The second part of the paper deals with analytical “proof”. Which measurement methods are suitable and sensitive enough to detect possible differences. These methods can also provide information on how effectively the setting factors can be optimised to achieve an energy-efficient result. In this case, this means that the newly produced batch must be similar to the standard batch. In order to base the efficiency concepts on an even broader data basis, the authors are looking for additional project partners from industry. They are keen to support companies in implementing positive changes. (Fig. 17)



**Fig. 17** Process for O/W emulsions from hot/hot to hot/warm (Source: Petra Huber, ZHAW University of applied sciences; Prof. Dr. Ludger J. Fischer, Hochschule Luzern HSLU)

### Benefits and Challenges of Cold Emulsification

Benefits	Challenges
Saving costs	All ingredients have to be liquid, soluble or dispersible -> raw material selection!
Saving energy Up to 90 % of the energy	The interface is liquid and difficult to stabilize -> careful emulsifier selection!
Saving time Up to 40 % of the time are normally needed for heating/cooling	Longer homogenization = can be stressful for the formulation
Lower Carbon Footprint	-
Different Textures	High viscosity is difficult, watch skin feel! -> rheology modifier selection!
No heating and cooling good for sensitive ingredients	Microbial safety of ingredients and water!

**Fig. 18** Benefits and Challenges of Cold Emulsification (Source: Prof. Dr. Andrea Wanninger, Hochschule Niederrhein)

## Evaluation of Raw Materials and Formulation Concepts for Cold Process Emulsification

Prof. Dr. Andrea Wanninger  
(Hochschule Niederrhein)

Quoted from the summary: Cold process emulsification has become popular as a way of reducing energy, production time and costs. It is seen as a greener production method, increasing the sustainability of a cosmetic emulsion and significantly reducing the carbon footprint. Compared to the conventional emulsification process up to 90% of the energy and the time for heating and cooling can be saved. On the one hand the cold process has clear benefits, on the other hand the selection of suitable cosmetic ingredients is limited and has some preconditions, especially when natural cosmetics are the aim. Regarding the development of formulations for cold process O/W and W/O emulsions, the most ingredients have to be liquid, and solids have to be soluble in the oil phase or the aqueous phase. Some ingredients such as metal soaps or solid particles which form Pickering emulsions are dispersed in order to stabilize emulsions. Waxes and polymers which have to be processed hot, or solid emulsifiers which have to be molten, are excluded from those formulations. The variety of suitable basic ingredients, which is nevertheless still huge, will be presented and compared as an orientation for product development, focusing on emulsifiers and rheological additives or thickeners. In emulsions that are produced in a hot or hot/cold process, solid, wax-like ingredients are parts of stabilizing lamellar gel structures or oleogels. Therefore, in the cold process a different formulation world is present. The performance of emulsifiers, stabilizing and rheological additives has been investigated. Formulation concepts for cold processed O/W emulsions, W/O emulsions, and Pickering emulsions had been presented, which had compared with each other and with hot processed emulsions. (Fig. 18)



# Scientific Conference SEPAWA® Sustainability LUV

## Critical Degradation Products of Aminopolyphosphonates

Prof. Dr. Carolin Huhn  
(Eberhard Karls Universität Tübingen)

Excerpts from the summary of Carolin Huhn's lecture as follows: Aminopolyphosphonates are widely applied in laundry products but also as antiscalants in reverse osmosis and as flame retardants in textile industry. The most important aminopolyphosphonate is diethylenetriamine penta(methylene phosphonic acid) (DTPMP). It was detected in aquatic sediments and in wastewater treatment plants at elevated concentrations in sludge, as well as dissolved and sorbed to particles in influent and effluent waters. Despite its intense use, little is known about the degradation products formed during application, in wastewater treatment and in the environment. aminomethylphosphonic acid (AMPA) was reported as a major degradation product of aminopolyphosphonates in several studies, but may also be derived from the herbicide glyphosate. Currently, its (eco)toxicological relevance in the environment is discussed. In this study, a meta-analysis of surface water data revealed that in Europe, AMPA predominantly enters surface waters via wastewater, whereas in US, glyphosate applied in agriculture and cities seems to be the major source. In order to better understand the impact of aminopolyphosphonates in the environment, we developed and optimized new analytical methods to analyze transformation products. We studied various deg-

radation processes including reactions with bleach simulating laundry processes, metal-catalyzed oxidation, biodegradation and photodegradation. A vast number of different degradation products evolved, some of them can be expected to be environmentally relevant. In addition, wastewater and sediment samples were analyzed for transformation products for the first time. (Fig. 19)

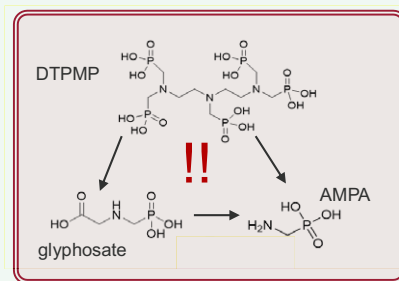


Fig. 19 Conclusions (Source: Prof. Dr. Carolin Huhn, Eberhard-Karls-Universität Tübingen)

## EU Intention to Regulate 1,4-Dioxane – Challenges for the Surfactant Manufacturers and their Downstream Users

Dr. Alex Föllner  
(Verband TEGEWA e.V.)

A number of regulations will come into force in the next few years. These will impact chemical manufacturers and their industrial and commercial customers. The European Commission and also national German legislators (BAuA) are planning to limit 1,4-dioxane to 1ppm (active content). This is an extremely low limit which, from today's perspective, does not appear to be feasible for some well-known, large-volume surfactants. Activities of the affected industries, represented by the CESIO, among others, also aim to provide an objective assessment and have begun socio-economic analyzes and risk assessment studies to improve the data situation. Legislators in the USA and Asia are currently assessing 1,4-dioxane just as intensively, but are defining higher limit values. Competitive disadvantages for European manufacturers would therefore be inevitable. (Fig. 20)

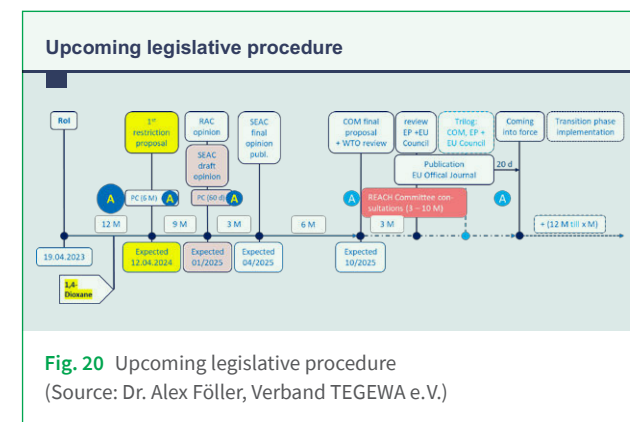


Fig. 20 Upcoming legislative procedure (Source: Dr. Alex Föllner, Verband TEGEWA e.V.)

## The Revision of the Detergents Regulation

Ioanna Vasilaki  
(European Commission)

Ioanna Vasilaki explained the key points of her presentation as follows: The Commission proposed a revised Regulation on detergents that simplifies and future-proofs the current rules to better protect health and the environment, as well as ensure the better functioning of the Single Market for detergents. The revised rules cover new innovative products like detergents containing micro-organisms and sustainable new practices like the refill sale of detergents. The new rules also introduce a digital labelling and a product passport for detergents and surfac-

tants. This proposal updates the existing rules in line with the objectives of the European Green Deal, the Chemicals Strategy for Sustainability and the recently adopted Commission Communication on the long-term competitiveness of the EU. In particular, the proposal will: simplify market rules by abolishing several unnecessary or redundant requirements; introduce voluntary digital labelling; facilitate the sales of innovative safe products; increase sustainability and safety of refilled detergents; and strengthen market surveillance. (Fig. 21)

### Next steps

- Negotiations with the European Parliament and the Council are ongoing
- Council negotiations ongoing – 1<sup>st</sup> Council Working Party, 16 May 2023
- Vote of EP amendments in plenary: March/April 2024
- Earliest application of the new rules: 2026

**Fig. 21** Next steps  
(Source: Ioanna Vasilaki, European Commission)

## After Event

**Almost 950 guests** enjoyed the wide selection of culinary delights and did not mind lining up at the buffet tables of the celebrity chefs. The ECC excelled with its gastronomic abilities, and the Estrel Live Band invited everyone to dance. One of the highlights of the after party were a special guest appearance by The Blues Brothers who got everyone on their feet to dance along! As usual, the party went on until well after midnight.



# Conclusion, Thanks, and Outlook

The SEPAWA® CONGRESS hasn't lost any of its attractiveness. On the contrary, the 70<sup>th</sup> SEPAWA® CONGRESS, actually a mini-jubilee in sequence, counted over 3500 attendees. A proud record.

Familiar procedures, as well as innovations, have contributed to this success. Registration runs smoothly, and bidding farewell to the traditional coupon system for food and beverages is certainly a gain. It's not only the ECC location that effortlessly accommodates congresses of this scale. It's the participants who create a lively atmosphere and a great networking opportunity overall. Specifically, it's the speakers with their presentations on various topics and the exhibiting companies that showcase the continuity, creativity, and innovation of our industry.

The board of SEPAWA® e.V. thanks everyone who contributed to the success of the congress, especially the team of SEPAWA® eVent GmbH, led by Robert and Siegfried Fischer, which prepared and conducted the congress with professionalism and enthusiasm.

Conclusion: "Value for money is right." This makes the annual SEPAWA® CONGRESS the most significant meeting point for the detergent/cleansing, cosmetic, and perfume industries in Europe.

It's never too early to mark your calendar! The SEPAWA® CONGRESS 2024 will take place from October 16<sup>th</sup> to 18<sup>th</sup> at the ECC in Berlin.



**16–18 OCTOBER 2024**

# **SEPAWA<sup>®</sup> CONGRESS**

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Author Congress Report: Dr. H. Lothar Möhle, Oberhausenstr. 23, 8907 Wettswil a.A., Switzerland

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