



Surfactants from regional vegetable oils in sustainable household & personal care products

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Meyer-Galow Prize for Business Chemistry 2020 goes to Edgar Endlein

Dr. Edgar Endlein, Head of Research & Development at Werner & Mertz GmbH of Mainz, will receive the Meyer-Galow Prize for Business Chemistry on 7 July 2021. The prize, endowed with 10,000 EUR, is sponsored by the eponymous foundation which is part of the GDCh (association of German Chemists). It is awarded for the market launch of an innovation in chemistry with emphasis on sustainability, a special concern of the association. For several years Dr. Endlein has worked on the conversion of sustainable household and personal care products to surfactants made from native European vegetable oils and has been involved in the products' successful market launches. The award ceremony will take place virtually and will be hosted by Prof. Dr. Peter R. Schreiner, President of the GDCh.



Dr. Edgar Endlein was awarded the Meyer-Galow Prize for Business Chemistry 2020. Copyright: Werner & Mertz

The sustainable handling of limited resources demands the use of renewable materials and regenerative energy. Biodiversity too must be respected and safeguarded for the benefit of



future generations. Wash-active substances known as "surfactants" in laundry detergents, cleaning and personal care products should be biologically degradable and plant-based with the best possible ecotoxicological profile. Their cultivation and logistics should have a low impact on the environment. Vegetable oils are increasingly being put to use in the production of surfactants to serve those goals. In addition to oils that come from biologically diverse sources, palm kernel oil and coconut oil are used.

The use of regional European vegetable oils would lead to a larger variety of surfactants. Native oil-producing plants, however, have compositions that differ from tropical species. The carbon chain of triglycerides in European oilseeds is generally longer and, irrespective of the plant species, their fatty acids are more or less unsaturated. Both affect chemical reactivity and application properties. Consequently, more extensive research and development efforts are required on the use of surfactants based on oil-bearing plants from temperate zones in the formulas for household cleaners and personal care products.

Dr. Endlein took up the challenge. The sugar surfactants used, which are based on sunflower oil, are made almost entirely from renewable carbon. Like others based on rapeseed oil, the surfactants are extremely mild and skin-friendly with strong emulsifying properties. They also produce a stable lather. Thanks to his innovative, forward-thinking approach, the award winner was able to put surfactants based on regional European oil-producing plants to use in Frosch brand laundry detergents and cleaning products. The GDCh association appreciates especially the sustainability aspect of his developments and the products' introduction to the market.

About the event:

An online award ceremony will be held on 7 July 2021 at 11 a.m. GDCh President Prof. Dr. Peter R. Schreiner will present the prize to Dr. Edgar Endlein, who will provide a brief explanation of the award-winning project. In the past the Meyer-Galow Prize was presented at the end of the year. Because that was not possible in 2020, the award presentation is taking place now.

Media representatives are invited to the online ceremony. Arrangements can be made for interviews. Please register at <https://www.gdch.de/gdch/stiftungen/meyer-galow-stiftung/preisverleihung-meyer-galow-preis.html>.

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