

Benefits

As an active partner in the Surface4Food network of excellence you will profit from a variety of offers and benefits:



Fig.: Network meeting in the INP Greifswald

- R&D cooperation with renowned research institutes and industrial partners
- Joint project development for the implementation of product and process innovations
- Participation in funding programmes
- Generation of new market access points and business potential
- Knowledge transfer
- Support in clarification of legal framework conditions
- Organisation and performance of workshops and technical/scientific events
- Joint PR and marketing activities

Network Management

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For further information please see:

www.surface4food.de

Network for Surface Refinement in the Food Industry

Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages



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The Network

Surface4Food is a multidisciplinary network that pursues the common goal of refining surfaces in the food manufacturing and processing industry to provide efficient and effective cleanability and preventive properties against recurring germ growth. One possible solution is the use of photocatalytic, self-cleaning, anti-adhesive or antimicrobial coatings. Objects that can be treated with these coatings include production plants, conveyor belts, storage and cooling facilities, work surfaces or cutting equipment.



Fig.: Innovative barrier coatings for PET bottles

The network brings together companies and research institutions from the overall food industry supply chain. Apart from scientific knowhow, the network partners contribute their entrepreneurial skills in areas such as plant construction, cleaning technologies, food processing, packaging and food hygiene.



Fig.: Mouldy food due to contaminated surfaces

Hygiene in Food Production

The production and processing of food requires special and comprehensive hygiene technology to prevent the proliferation of germs and pathogens.

Additional to the daily cleaning and disinfection of the whole production plant and facilities, typical preventive actions include several pre-processing washing steps and special preservation techniques. These techniques require an extensive input of time and resources, and are thus very cost-intensive.



Fig.: The current cleaning methods are very extensive and complex

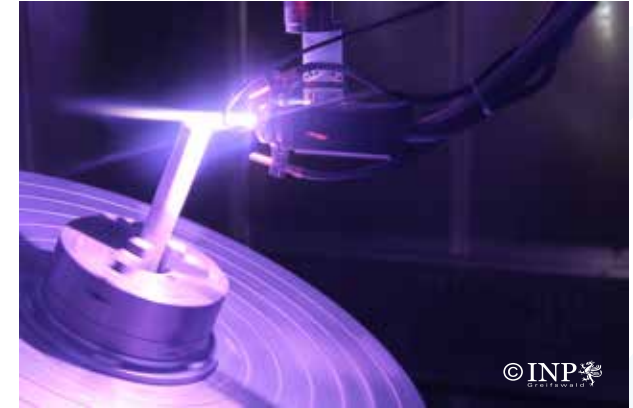


Fig.: Development of new refinement methods for surfaces, e.g. with plasma technology

Joint Technology Development for Practical Applications

The network's joint development focus is on the use of plasma technology. Plasmas are ionised gases that have a deactivating effect on a multitude of microorganisms as proven in many independent studies. In addition, plasmas can be used to generate special surface properties. The network also focuses on other technologies such as fluorination processes, sol-gel processes or flame treatment.

Vision

- Improvement of hygienic conditions in food production
- More time-efficient cleaning, resulting in increased productivity
- Conservation of resources due to the reduction of wet chemical processes
- Extension of the service life of the refined tools
- Extension of the shelf life