

Forum Current Topics of the Food Industry

Surface4Food - Innovative surface technologies for a safer food production

Surface4Food – Innovative Oberflächentechnologien für eine sicherere Produktion

Thursday, 22.03.2018, 10.00 am – 12.00 noon

Abstract:

Contamination by microorganisms is a critical problem in many sectors of the food industry. Surface4Food is a German network that develops innovative surface solutions to improve the food safety. In several R & D projects the network partners focus on anti-adhesive, self-cleaning, or antimicrobial coatings which can be used i. e. for conveyor belts, cutting and processing tools, work tops, or packaging. The aim is to provide finishing processes who achieve more efficient and more effective cleaning possibilities, and who protect the surface against contamination by microorganisms. Possible technologies are plasma, sol-gel, fluorination, or flame.

The network brings together companies and research institutions in the field of surface and plasma technology, cleaning technology, hygienic design, packaging industry, machine and plant construction, food processing, food hygiene, and microbiology. In this session network partners present innovative technologies which will economize on resources like energy, water, detergents, time, manpower, as well as enhance hygienic conditions of food products and extend their shelf life.

Venue:

Organiser: Surface4Food, neoplas GmbH

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Program: Thursday, 22.03.2018

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|-------------|---|
| 10:00-10:10 | Opening and Chair
Dr. Christian Theel, neoplas GmbH |
| 10:10-10:30 | Kill or clean? How to deal with biofilms
Constanze Messal (MICOR – Laboratory for Microbial Processes and Material Science) / Cornelia Koch (Vink Chemicals GmbH & Co. KG) <ul style="list-style-type: none">- Communication and competition in biofilms- From biofilm to biocorrosion- Biofilm detection and avoidance |
| 10:30-10:50 | Example 1:
SAFEFRESH - Research and evaluation of innovative decontamination technologies for use on ready-to-eat-plants (i.e. salad)
Peter Muranyi (Fraunhofer Institute for Process Engineering and Packaging) / Michael Zdoniak (Jürgen Löhcke GmbH) |

- Research and evaluation of decontamination systems, based on the following technologies: Atmospheric pressure plasma, Plasma-processed water, Pulsed light, Electrically stimulated water, Chlorine dioxide
- Monitoring system for the rapid identification of pathogenic microorganisms and possible sources of infection along the process chain

10:50-11:10

Example 2:

CleanBand – disinfection and coating of conveyor belts in food processing

Kerstin Horn (Innovent e.V.) / Berrin Küzün (Tigres GmbH)

- Drying, cleaning and disinfection with atmospheric pressure plasma
- Coating and sealing of the conveyor belt surface with an antimicrobial effect by using innovative surface technologies

11:10-11:30

Functional surface coatings in the food industry

Florian Horn (ADELHELM Group)

- Innovative solutions along the entire process technology
- Anti-adhesive-, corrosion- and chemical protection: resource efficiency from food processing to the counter

11:30-11:50

Plasma polishing – The newest innovation in surface finishing

Maik Fröhlich (Leibniz Institute for Plasma Science and Technology)

- Plasma polishing as an eco-friendly and efficient alternative to electropolishing
- Application examples

11:50-12:00

Summary and closing

Dr. Christian Theel, neoplas GmbH