

LECTURE

POTENTIAL OF PLASMA TECHNOLOGIES FOR FUTURE APPLICATION IN PLANT-BASED FOOD PRODUCTION

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Plasma is referred to as the fourth state of matter next to fluid, solid and gaseous. While fusion plasmas are extremely hot, cold plasma can have moderate and even physiological temperatures and is applied in hygiene, cosmetics and medicine. The talk introduces to cold plasma research in agriculture and its potential for future application in plant-based feed and food production. Different plasma treatment modes are presented aiming to disinfect plant surfaces, to stimulate plant growth and development and to affect plant stress responses. Finally, the potential application is discussed as a future treatment technology in agriculture.



ABOUT THE SPEAKER:

Dr. Henrike Brust studied biology at the University of Greifswald and received her PhD in plant molecular biology. At the University of Potsdam, she was involved in interdisciplinary joint-projects to study the primary metabolism in model plants thale cress, potato, barley, maize and the algae *Chlamydomonas reinhardtii*. In 2017, she joined the Leibniz Institute for Plasma Science and Technology (INP) where she is leading the interdisciplinary research group Plasma-Agriculture. Her research interests are focused on pre-harvest processes such as testing and developing plasma-based treatment systems for disinfection of plant seeds prior to seeding and analyzing the effects of plasma on plant growth and developments during different stages within the plant life cycle.