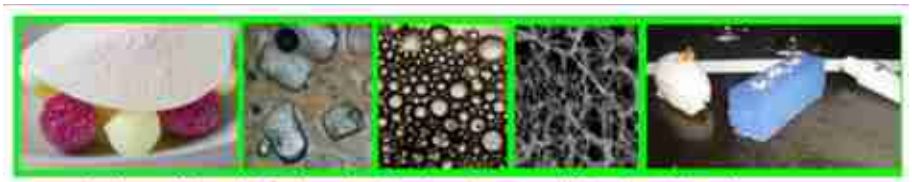


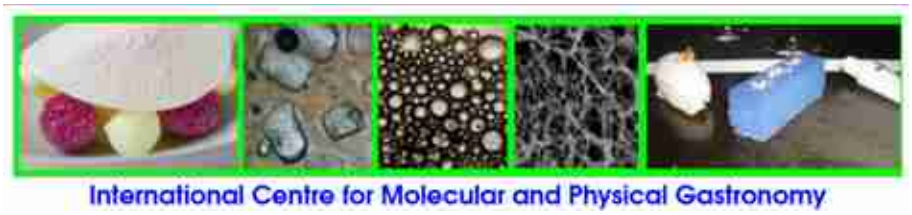
Save the date :
4 December 2025, 11 h Paris Time

A scientific video seminar by César Antonio Ortiz-Sánchez

Link :
Join Zoom Meeting
https://agroparistech-fr.zoom.us/j/99062200343?pwd=PwTMICwbfJ9LSXFwQ8tBRcnoKb4hke.1
Meeting ID: 990 6220 0343
Passcode: 921032

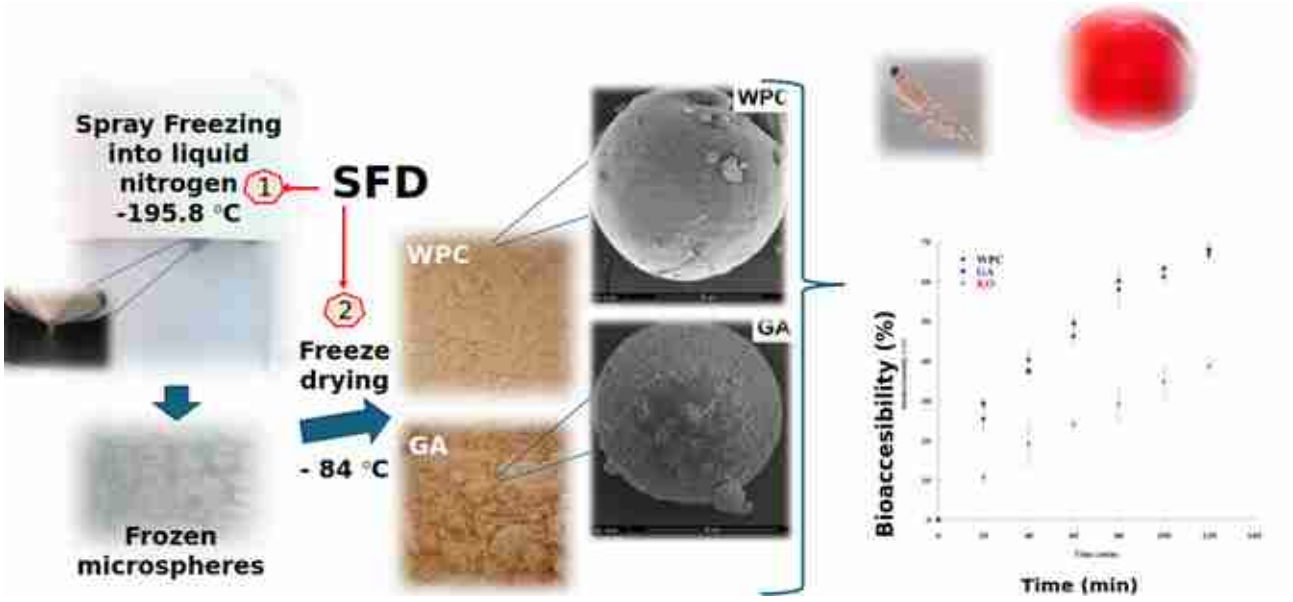
Title :
Innovations Across the Food Chain: Wastewater Management and Food Development Solutions

Abstract :
Innovation in the agri-food sector requires integrated approaches that address both product quality and environmental sustainability. The work that will be shown during the seminar, developed at the Faculty of Chemical Sciences of Universidad Veracruzana, presents a multidisciplinary proposal aimed at improving food product design while simultaneously developing sustainable strategies for wastewater management generated by the food industry. The project is conducted within the academic body UV-CA-226 "Comprehensive Study of Applied Engineering" and is structured around two complementary research lines.
The first line focuses on food product design and physicochemical characterization, evaluating key parameters such as stability, moisture content, and bioaccessibility (in vitro). Thermodynamic behavior is assessed through minimum and intermediate entropy changes as a function of water activity. Different processing and dehydration techniques, including conventional spray-drying, freeze-drying and alternative drying methods, are comparatively analyzed to determine their impact on quality attributes, structural integrity, and functional properties of the developed food products. Also, solar drying of new food sources is explored.
These studies are directly related to **molecular gastronomy and molecular cooking**, where the understanding and control of physicochemical and thermodynamic transformations are essential for designing innovative textures, structures, flavors, and sensory experiences at the culinary level.



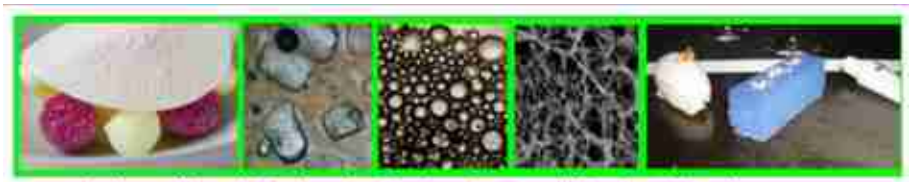
The second research line addresses the management of wastewater from food processing activities. It evaluates the environmental implications of industrial effluents and explores potential treatment and mitigation strategies aimed at reducing pollutant loads and promoting sustainable water reuse within the agri-food sector.
Overall, this seminar proposes an integrated model that combines principles of food engineering, and environmental management, contributing to the development of more sustainable, efficient, and innovative practices across the food production chain.

Overall, this seminar proposes an integrated model that combines principles of food engineering, molecular gastronomy, and environmental management. **Future perspectives** of this work include its application in the development of functional foods, sustainable culinary practices, circular economy models, and the incorporation of scientific cooking techniques into both industrial and gastronomic innovation.



A short bio :

César Antonio Ortiz-Sánchez is a researcher in Chemical Engineering and Food technology from Mexico. He is attached to the Facultad de Ciencias Químicas of the Universidad Veracruzana (UV), campus Orizaba, where he participates in teaching activities in food-related areas. At UV he has also taken on academic responsibilities such as coordination and tutoring within the educational program.



Teaching activity

At the Universidad Veracruzana he teaches Food Technology and related subjects, including unit operations and food science/technology courses within the Chemical Sciences faculty. His teaching integrates concepts drying and preservation technologies, and the development of new food products.

Research areas

His main lines of research focus on drying processes, microencapsulation, new food sources such as edible insects, and storage stability of foods and food ingredients. He has co-authored works on spray drying, microencapsulation of bioactives from agro-industrial residues, and the technological use of alternative food matrices.

Scientific output

His publications and conference contributions include studies on convective drying of plant materials, optimization of emerging technologies for obtaining bioactive compounds, and the application of engineering tools to improve food quality and stability.

References :
https://orcid.org/0000-0001-8545-0702