

Neutron imaging: from meat cooking to protein hydration

The food scientist is commonly confronted with the challenge of modifying the formulation of a food product. The objective may be to enhance the taste, texture or appearance of the food, to produce a product with a longer shelf-life or a healthier image, or to improve manufacturing efficiency by incorporating a cheaper ingredient or adopting a new processing technology. The speed with which these objectives can be accomplished depends on the level of fundamental understanding that exists on the key physico-chemical factors affecting products properties. In the case of foods proteins, it is especially important to understand how the interfacial and aggregation behaviour of the proteins are affected by processing conditions (heat, drying, freezing, shear forces), or by molecular interactions with other constituents (fat, hydrocolloids, aroma, water...). One of our goals is to improve insights into such factors by taking advantage of polymer science concepts and neutron scattering technique applications to such systems, to the systematic study of model food proteins or food ingredients.

Primary author: LOUPIAC, Camille (Université de Bourgogne- AgroSup Dijon)

Presenter: LOUPIAC, Camille (Université de Bourgogne- AgroSup Dijon)