INSTITUT DE MINERALOGIE, DE PHYSIQUE DES MATERIAUX ET DE COSMOCHIMIE

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SÉMINAIRE
Mardi 8 Juillet, 11 h

Salle de Conférence, 4e étage, Tour 22-23, Salle 1
IMPMC, Université P. et M. Curie, 4, Place Jussieu, 75005 Paris

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ELECTRON MICROSCOPY STUDY OF THE ULTRASTRUCTURE OF OIL/WATER EMULSIONS

Addition of fish oil to industrial food products brings health benefits and commercial value. However, it is highly susceptible to oxidation which limits the shelf-life of fish-oil enriched products. Emulsification of the fish oil changes the oxidative stability of the product but this seems to depend on the matrix to which the emulsion is added.

Here we characterized fish oil/water emulsions by electron microscopy using different preparation protocols: cryo-TEM, chemical fixation combined with room temperature embedding in resin, high pressure freezing combined with freeze substitution, and high pressure freezing combined with freeze-fracture cryo-SEM. With this work, we wish to demonstrate the need of combining different microscopic approaches to access the ultrastructure of the oil/water emulsions due to their complexity and instability.

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