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Compétences

- Microencapsulation,
- Emulsions alimentaires,
- Interactions protéines / polysaccharides,
- Emballages antimicrobiens,
- Biopolymères,
- Rhéologie interfaciale.

/ Skills

- Microencapsulation,
- Emulsions,
- Proteins / polysaccharides interactions,
- Antimicrobial packaging,
- Biopolymers,
- Interfacial rheology.

Cursus:

- Thèse de doctorat en Sciences des aliments "Microencapsulation par séchage par atomisation de systèmes lipidiques dans des matrices végétales (protéines de pois / pectine) : effet des interactions aux l'interfaces huile/eau".
- Master en Biotechnologie (2006),
- Master en Industries alimentaires (2005),
- Ingénieur en Bioindustries (2003).

/ Education:

- Ph D in Food Science "Microencapsulation by spray-drying of lipid systems in a plant matrix (pea protein and pectin) : effect of oil/water interfacial interactions". (2009),
- Master Diploma (Biotechnology, 2006),
- Master Diploma (Food industry, 2005),
- Engineer Diploma (Bioindustry, 2003).

Postes occupés:

Maître de Conférences en physico-chimie des aliments, Université Lyon 1 depuis 2010.

Positions:

Associate Professor in food physicochemistry, Lyon 1 University (2010-present).

Activités d'enseignement :

Enseignements en DUT, Licence professionnelle, Master 1 et Master 2 :

- Technologie alimentaires et procédés (Cours et TP),
- Rhéologie des produits alimentaires (Cours et TP),
- Physique industrielle (TP),
- Biochimie métabolique (Cours),
- Chimie et biochimie analytique (TP),
- Formulation des produits alimentaires (Cours et TP).

/ Teaching activities :

Courses taught (undergraduate and postgraduate levels) :

- Food technology and processing (lectures and lab),
- Food rheology (lectures et lab),
- Industrial physics (lab),
- Metabolic biochemistry (lectures),
- Analytical chemistry and biochemistry (lab),
- Formulation of food products (lectures and lab),

Thèmes de recherche:

- Interactions protéines / polysaccharides,
- Effet de la composition des matériaux d'emballage sur le contrôle de la libération des molécules antimicrobiennes,
- Microencapsulation et contrôle de la libération des molécules alimentaires actives.

/ Research topics :

- Proteins / polysaccharides interactions,
- Effect of packaging material composition on its ability to release antimicrobial molecules,
- Microencapsulation and controlled release of food active molecules.

Production scientifique/ Scientific production:

- Gharsallaoui, A., Roudaut, G., Chambin, O., Voilley, A., & Saurel, R. (2007). Applications of spray-drying in microencapsulation of food ingredients: An overview. *Food Research International*, 40(9), 1107-1121. (IF : 3.050)
- Gharsallaoui, A., Rogé, B., Génotelle, J., & Mathlouthi, M. (2008). Relationships between hydration number, water activity and density of aqueous sugar solutions. *Food Chemistry*, 106(4), 1443-1453. (IF : 3.259)
- Gharsallaoui, A., Rogé, B., & Mathlouthi, M. (2008). Solid-Liquid equilibrium of maltitol aqueous solutions—implications on the crystallization behavior and process. *Food Biophysics*, 3(1), 16-24. (IF : 1.551)
- Gharsallaoui, A., Rogé, B., & Mathlouthi, M. (2008). Water-disaccharides interactions in saturated solution and the crystallisation conditions. *Food Chemistry*, 106(4), 1329-1339. (IF : 3.259)
- Gharsallaoui, A., Cases, E., Chambin, O., & Saurel, R. (2009). Interfacial and emulsifying characteristics of acid-treated pea protein. *Food Biophysics*, 4(4), 273-280. (IF : 1.551)
- Gharsallaoui, A., Rogé, B., & Mathlouthi, M. (2010). Study of batch maltitol (4-O- α -D-glucopyranosyl-D-glucitol) crystallization by cooling and water evaporation. *Journal of Crystal Growth*, 312(21), 3183-3190. (IF : 1.693)
- Gharsallaoui, A., Saurel, R., Chambin, O., Cases, E., Voilley, A., & Cayot, P. (2010). Utilisation of pectin coating to enhance spray-dry stability of pea protein-stabilised oil-in-water emulsions. *Food Chemistry*, 122(2), 447-454. (IF : 3.259)
- Gharsallaoui, A., Yamauchi, K., Chambin, O., Cases, E., & Saurel, R. (2010). Effect of high methoxyl pectin on pea protein in aqueous solution and at oil/water interface. *Carbohydrate Polymers*, 80(3), 817-827. (IF : 3.916)
- Gharsallaoui, A., Roudaut, G., Beney, L., Chambin, O., Voilley, A., & Saurel, R. (2012). Properties of spray-dried food flavours microencapsulated with two-layered membranes: Roles of interfacial interactions and water. *Food Chemistry*, 132(4), 1713-1720. (IF : 3.259)
- Gharsallaoui, A., Saurel, R., Chambin, O., & Voilley, A. (2012). Pea (*Pisum sativum*, L.) protein isolate stabilized emulsions: A novel system for microencapsulation of lipophilic ingredients by spray drying. *Food and Bioprocess Technology*, 5(6), 2211-2221. (IF : 4.120)
- Léonard, L., Gharsallaoui, A., Oualli, F., Degraeve, P., Waché, Y., Saurel, R., & Oulahal, N. (2013). Preferential localization of *Lactococcus lactis* cells entrapped in a caseinate/alginate phase separated system. *Colloids and Surfaces B: Biointerfaces*, 109(0), 266-272. (IF : 3.554)
- Bayarri, M., Oulahal, N., Degraeve, P., & Gharsallaoui, A. (2014). Properties of lysozyme/low methoxyl (LM) pectin complexes for antimicrobial edible food packaging. *Journal of Food Engineering*, 131(0), 18-25. (IF : 2.276)
- Léonard, L., Degraeve, P., Gharsallaoui, A., Saurel, R., & Oulahal, N. (2014). Design of biopolymeric matrices entrapping bioprotective lactic acid bacteria to control *Listeria monocytogenes* growth: Comparison of alginate and alginate-caseinate matrices entrapping *Lactococcus lactis* subsp. *lactis* cells. *Food Control*, 37(0), 200-209. (IF : 2.738)
- Jiménez-Martín, E., Gharsallaoui, A., Pérez-Palacios, T., Carrascal, J., & Rojas, T. (2014). Suitability of using monolayered and multilayered emulsions for microencapsulation of ω -3 fatty acids by spray drying: Effect of storage at different temperatures. *Food and Bioprocess Technology*, 1-12 (In Press). (IF : 4.120)
- Léonard, L., Beji, O., Arnould, C., Noirot, E., Bonnotte, A., Gharsallaoui, A., et al. (2015). Preservation of viability and anti-*Listeria* activity of lactic acid bacteria, *Lactococcus lactis* and *Lactobacillus paracasei*, entrapped in gelling matrices of alginate or alginate/caseinate. *Food Control*, 47(0), 7-19. (IF : 2.738)
- Ormus, S., Oulahal, N., Noël, C., Degraeve, P., & Gharsallaoui, A. (2015). Effect of low methoxyl (LM) pectin complexation on the thermal and proteolytic inactivation of lysozyme: A kinetic study. *Food Hydrocolloids*, 43(0), 812-818. (IF : 4.280)
- Gharsallaoui, A., Oulahal, N., Joly, C., Degraeve, P. (2014) Nisin as a food preservative: Part 1: Physicochemical properties, antimicrobial activity, and main uses. *Critical Reviews in Food Science and Nutrition* (In press), (IF : 4.820)
- Gharsallaoui, A., Joly, C., Oulahal, N., Degraeve, P. (2014) Nisin as a food preservative: Part 2: Antimicrobial polymer materials containing nisin. *Critical Reviews in Food Science and Nutrition* (In press), (IF : 4.820)