

Packaging



The group is open to discuss any kind of collaboration with industry and academia related to these topics.

The group develops and designs improved packaging materials and packages for food products based on food quality and safety, consumers' convenience, and sustainability of materials and technologies. They are experts in the characterisation of the functional properties of materials and packages and the design and development of novel packaging technologies including active and modified atmosphere packaging.

FIELD OF EXPERTISE

The study of packages, packaging materials and structures for food use is vital to improve the quality and safety of foods and to extend their shelf-life.

The packaging group conducts research in the quest for new materials that improve the performance of food packages, that enhance consumers' handiness and suitability, and that reduce environmental impact. The group's research includes metallic materials, novel polymeric materials, blends and composites, materials using nanoparticles and biopolymers and biodegradable plastics. They can characterise functional properties as packaging materials and predict the performance of materials and packages, with especial emphasis in food/packaging/environment interactions.

Furthermore, the group has expertise in the evaluation and development of novel food packaging technologies, such as Active Packaging and Modified Atmosphere Packaging (MAP). They are also experts in the micro and nanoencapsulation of food ingredients.

MAIN APPLICATIONS AND SERVICES

- Development of new materials for food packaging applications.
- Full characterisation of materials and packages used for food applications: additive and residues migration, transport of organic components in polymeric materials, gas and vapor permeability.
- Development of theoretical strategies to predict packaging performance.
- Study of interactions amongst environment-package-food.
- Analysis of transport processes in perforated packages.
- Modified Atmosphere Packaging studies. Development and prediction of applications for minimal processed foods.
- Modified Atmosphere Packaging employing active modifiers.
- Active packages with immobilised components with enzymatic and antimicrobial activities.
- Micro and nanoencapsulation of food ingredients.



FURTHER INFORMATION

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