FOOD HYDROCOLLOIDS

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DESCRIPTION

Food Hydrocolloids publishes original and innovative research concerned with the characterisation, properties, functionality and application of hydrocolloids in food products. Hydrocolloids are defined as polysaccharides and proteins of commercial importance. The key focus of the research should be on the hydrocolloid material itself and the manuscript should include a fundamental discussion of the research findings and their significance. Manuscripts that simply report data without providing a detailed interpretation of the results are unlikely to be accepted for publication in the journal.

The main areas of interest are:

- Chemical and physicochemical characterisation
- Thermal properties including glass transitions and conformational changes
- Rheological properties including viscosity, viscoelastic properties and gelation behaviour
- The influence on organoleptic properties
- Interfacial properties including stabilisation of dispersions, emulsions and foams
- Film forming properties with application to edible films and active packaging
- Encapsulation and controlled release of active compounds
- The influence on health including their role as dietary fibre
- Manipulation of hydrocolloid structure and functionality through chemical, biochemical and physical processes
- New hydrocolloids and hydrocolloid sources of commercial potential

The Journal also publishes Review articles that provide an overview of the latest developments in topics of specific interest to researchers in this field of activity.

AUDIENCE

Food scientists and technologists, R&D managers, concerned with the application of science in the use, development and manufacture of food hydrocolloids.

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emulsions, milk proteins, interactions, digestive behaviours, functional properties

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Rheology, Hydrocolloids, Thickeners, Emulsifiers, Proteins

Hongbin Zhang, Shanghai Jiao Tong University Department of Computer Science and Engineering, Shanghai, China
Polysaccharide; rheology; hydrogel; solution; emulsification
INTRODUCTION

Food Hydrocolloids only publishes original and novel research that is of high scientific quality. Research areas include basic and applied aspects of the characteristics, properties, functionality and use of macromolecules in food systems. Hydrocolloids in this context include polysaccharides, modified polysaccharides and proteins acting alone, or in mixture with other food components, as thickening agents, gelling agents, film formers or surface-active agents. Included within the scope of the journal are studies of real and model food colloids - dispersions, emulsions and foams - and the associated physicochemical stability phenomena - creaming, sedimentation, flocculation and coalescence.

In particular, Food Hydrocolloids covers: the full scope of hydrocolloid behaviour, including isolation procedures, chemical and physicochemical characterization, through to end use and analysis in finished food products; structural characterization of established food hydrocolloids and new ones ultimately seeking food approval; gelling mechanisms, syneresis and polymer synergism in the gelation process; rheological investigations where these can be correlated with hydrocolloids functionality, colloid stability or organoleptic properties; theoretical, computational or simulation approaches to the study of colloidal stability, provided that they have a clear relationship to food systems; surface properties of absorbed films, and their relationship to foaming and emulsifying behaviour; phase behaviour of low-molecular-weight surfactants or soluble polymers, and their relationship to food colloid stability; droplet and bubble growth, bubble nucleation, thin-film drainage and rupture processes; fat and water crystallization and the influence of hydrocolloids on these phenomena, with respect to stability and texture; direct applications of hydrocolloids in finished food products in all branches of the food industry, including their interactions with other food components; and toxicological, physiological and metabolic studies of hydrocolloids.

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