

SUCCESS STORIES

EXAMPLES OF TECHNOLOGICAL APPLICATIONS

Design and improvement of detergent formulations

Design of new cosmetic formulations based on nano-emulsions prepared using low-energy methods

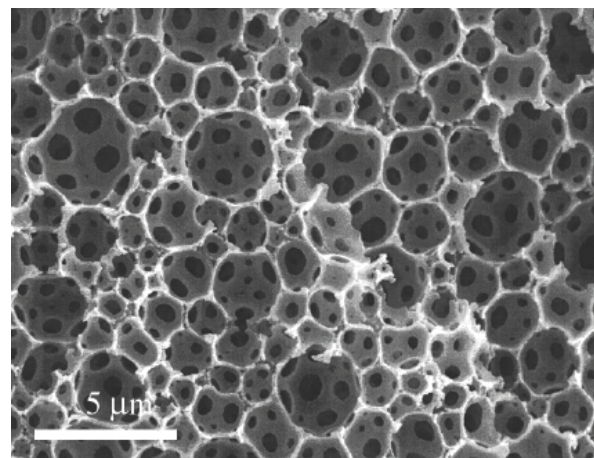
Preparation of latexes with high solid content and stable against electrolytes

Preparation of porous gelatin foams for applications in surgery

Preparation of nanoparticles for encapsulation and delivery of active substances

PATENTS

- Procedure for the preparation of nanoparticles by reaction in oil-in-water (O/W) microemulsions
- Meso/macroporous polymers obtained from concentrated emulsions
- Textiles from chitosan hydrogels



CONTACT WITH US

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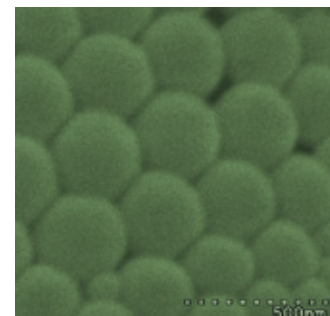
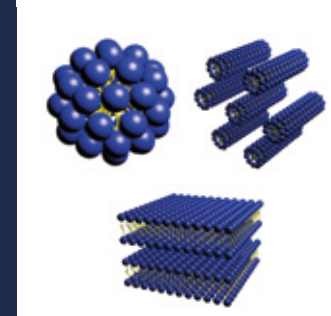
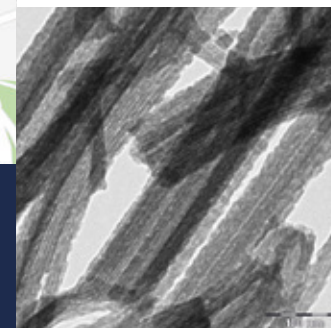
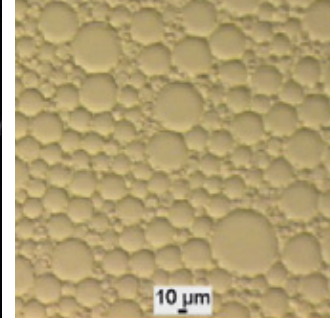
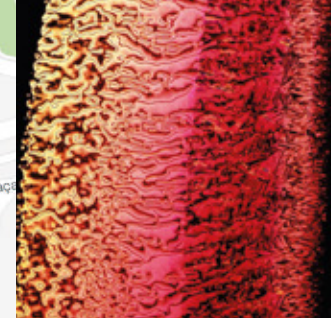
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CENTRE
QCI

COLLOID AND INTERFACE CHEMISTRY



CENTRE QCI

Our mission is the development of new technological applications from surfactant colloids.

TEAM

Highly qualified personnel for R&D and service support.

EXPERIENCE

More than 100 research projects and services for leading companies.

ACTIVITIES

We develop R&D projects and provide services to companies, improving competitiveness and added value.



The Centre QCI integrates three groups, two of them from the Institute for Advanced Chemistry of Catalonia (IQAC), belonging to the Spanish National Research Council (CSIC), and the other one from the Faculty of Pharmacy and Food Science of the University of Barcelona (UB). The QCI Centre focus on the development of R&D projects and services in the field of colloid chemistry and advanced materials.

The Centre QCI has a TECNIO certification, an ACCIÓ (Generalitat de Catalunya) label to recognize experts in applied research and technology transfer with the aim of giving companies access to R&D facilities and in this way favor competitiveness and internationalization.

TECHNOLOGICAL FIELDS

COLLOID AND INTERFACIAL CHEMISTRY

CHEMICAL TECHNOLOGY

MATERIALS TECHNOLOGY

NANO AND MICROSTRUCTURED LIQUIDS

PRODUCT FORMULATION

Design, preparation and characterization of new formulations from surfactants, colloids and nanostructured liquids:



- Emulsions
- Nano-emulsions
- Microemulsions
- Vesicles and liposomes
- Nanoparticle suspensions
- Gels and microgels



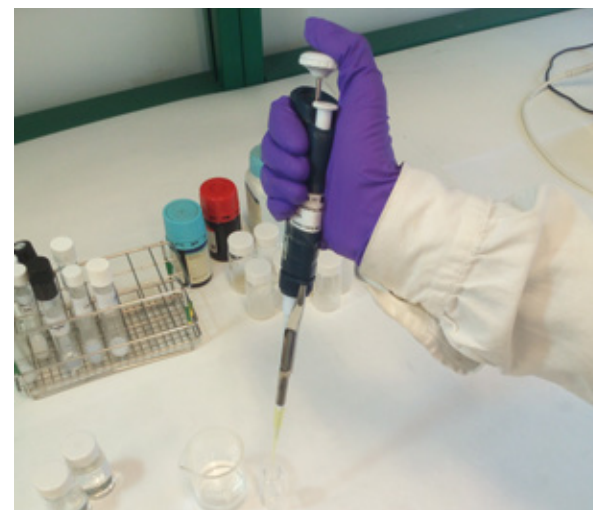
Preparation and characterization of nanoparticles and multifunctional porous materials from colloids.



Surface modification of materials using chemical methods.

TARGETED INDUSTRIES

- Chemical
- Pharmaceutical
- Cosmetic
- Detergency
- Textile and polymers
- Biotechnology and nanomedicine
- Agro-food
- Energy and environment



TECHNOLOGIES WE OFFER

RESEARCH LINES

Formation and characterization of colloids and nanostructured liquids.

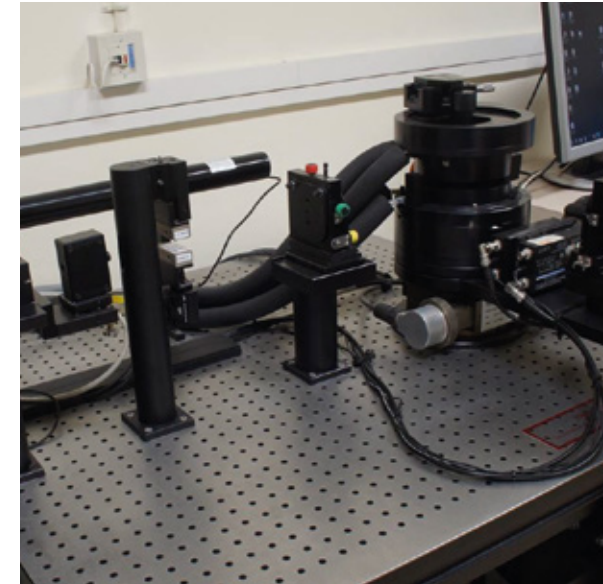
Tailor-made formulations (controlled delivery systems, detergents, etc).

Fabrication of advanced materials from surfactant and colloids: nanoparticles, meso- and macroporous materials, hydrogels, etc.

Surface modification (textiles, polymers, etc.) using chemical treatments and nanostructured materials.

SERVICES

- Characterization of nanostructured liquids and colloids (micelles, nano-emulsions, emulsions, gels, liquid crystals, nanoparticles, etc.)
- Characterization of surfaces and interfaces.



EQUIPMENT AND FACILITIES

Dynamic Light Scattering, Laser light diffraction, Small and Wide Angle X-ray Scattering (SAXS/WAXS), rheometer, viscometer, force tensiometers, high resolution optical microscope, scanning electron microscope, electrophoretic light scattering (for zeta potential measurements), densimeter, porosimeter, etc.