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Neutron scattering to investigate complex systems formed by bio-macromolecules



Wednesday, 24th January
12.00 p.m.

CIC biomaGUNE - Seminar Room

Neutron scattering techniques are widely being used to study the structure and dynamics of materials, mainly due to their very high innovative potential and the multiple applications they offer in areas such as life sciences, medicine, energy, the environment, and telecommunications, among others. In particular, neutron scattering methods outstand in probing the detailed structure of biological systems, which is intimately linked to the interplay of multiple molecules, including proteins and lipids. In this talk, a few examples of different neutron scattering experiments being developed at BCMaterials will be briefly introduced. In particular, results of neutron reflectometry (NR) and small-angle neutron scattering (SANS) for nanoscale characterization of the particles in bulk and at interfaces will be shown. The structural analysis of complex systems of nanoparticles with bio-macromolecules (magnetoferritin, amyloids, magnetosomes among others) will be described in detail during the presentation. Finally, the interaction characteristics between surfactant/polymer molecules in solutions will be presented.

