

## Exploring nano-sized colloids: A gateway to modern science

Nano-sized colloids are minute particles dispersed in liquid solutions. These diminutive entities frequently manifest in our daily lives, such as in the form of paints. In this scenario, tiny polymeric spherical particles are dissolved in eco-friendly water and congeal into uniform films as they dry. Even the fundamental components of life, proteins, can be regarded as colloids, as they commonly populate our cells, sparking profound interest in understanding their interactions and movements. Additionally, polymeric micelles and polymer solutions have the capability to serve as carriers for controlled drug release within the human body. Consequently, comprehending the nuances of colloids, including their size, interactions, and responses to external stimuli at the nano-scale, is imperative. Small-angle neutron scattering stands as an excellent tool for embarking on a journey into the realm of colloids.

