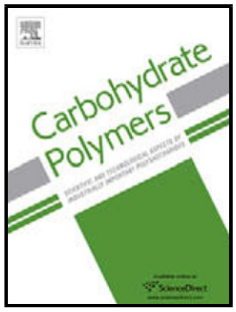

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Insight into the interaction between chitosan and bovine serum albumin

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Highlights

pH and BSA/WCS ratio significantly affect the interaction between BSA and chitosan.

BSA and chitosan could form complex coacervate by the electrostatic interactions.

Addition of chitosan changed the microenvironment and the secondary structure of BSA.

Viscosity of mixtures increased with the increasing of the chitosan concentration.

Abstract: Exploiting the uses of proteins and polysaccharides is of increasing interest because the combination of the attributes of these two types of biopolymers can produce small emulsion droplets with good physical stability. The objective of this study was to evaluate the effect of adding chitosan to a bovine serum albumin (BSA) solution at different pH values, and the consequent conformational changes were monitored using ultraviolet–visible adsorption spectroscopy and fluorescence spectroscopy. Spectroscopic observations were further combined with rheological analysis results to illustrate the interaction mechanism. The results showed that the pH and BSA/chitosan ratio

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