Thematic area of my work; Nanochemistry and biotechnology

Synthesis of the Derivatives Having Different Functional Groups of *p-tert-butyl*-Calix [4] arene, Their Nanofibers Production and Using for HAS Protein immobilization

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CALIXAREN was synthesized different functional groups as *p-tert*-butyl-Calix[4]arene ester and amides. Calixaren nanofibers was sysnthesized by electrospin coating. Protein immolizitaion on the calixaren nanofibers was analysied via binding of human serum albumin (HSA). The maximum binding of albumin on three calixaren nanofibers was compared by using fluorescence analysis.The protein binding was characterized by using SEM, TEM,AFM and FT-IR. From obtained results, calixaren-albumin nanofiber was also synthesized by spin coating by using calixaren which has ability max binding of protein. Nanotechnology is a growing science that has applications in synthesis of inorganic and organic materials, have unique physical, chemical and biological functions, and have been extensively studied [1,2]. The materials produced at the nanoscale level have attracted increasing attention in the fields such as drug delivery, protein affinity, diagnostic, biomedical imaging and engineering by development of nanotechnology [3,4]. Calixarenes can be used in many areas because of the easy-functionalized and having large surface area. In recent years, usage of the nanofibers obtained by electrospine method is getting increased[5]. In this paper, calixaren nanofibers has been prepared for protein adsorption. The new nanofiber system was developed by spin coating with three different calixaren. Human serum albumin (HSA) was used as a model protein to examine the binding characteristics of calixaren nanofibers.

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