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(54) Title of the invention : A CHITOSAN FUNCTIONALIZED GOLD NANOPARTICLE AND METHOD OF PREPARATION THEREOF

(51) International classification	:B82Y5/00, B82Y30/00, B82Y40/00, A61K31/722, A61K33/242, A61K36/58, A61K47/50, A61K47/56	(71) <b>Name of Applicant :</b> <b>1)NOIDA INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b> Address of Applicant :19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Uttar Pradesh India
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(57) Abstract :

Disclosed herein is a formulation (100) for synthesis of functionalized gold nanoparticle. The formulation (100) comprises a gold precursor (102) to serve as a source of gold ions for a gold nanoparticle formation. The formulation (100) also comprises a biocompatible reducing agent (104) to facilitate the conversion of gold ions into the gold nanoparticle. The formulation (100) comprises chitosan (106) adapted for providing stabilization and surface functionality to the gold nanoparticle. The formulation (100) comprises also sodium tripolyphosphate (108) adapted to serve as crosslinking agent enabling crosslinking of the chitosan (104) to form a structurally stable coating around the gold nanoparticle.

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