

Method for obtaining colloidal solution of spherical nanoscale silver, in which the following are used as final product components of the synthesis process: water as a solvent, silver nitrate as a source of silver ions, sodium borohydride as a reducing agent for silver ions, and an organic compound containing carboxyl groups and capable of forming coordination bonds with silver ions. Reduced silver ions are used as a ligand and a stabilizing agent, along with sodium hydroxide as a pH regulator for the reaction medium, the sequential mixing of the process component solutions is carried out while maintaining fixed molar ratios between them, achieving fixed values for the pH and temperature of the reaction medium, and adhering to the time parameters of the process the conditions are provided for the final product formation of the synthesis process. In this process, glycine is used as both a ligand and a stabilizing agent by mixing solutions of silver nitrate and glycine in a molar ratio of silver nitrate:glycine = 1:20, thermostating the resulting mixture of solutions at a temperature of 25 ± 1 °C, and stirring it until a homogeneous solution of silver nitrate and glycine is formed.. Then, while stirring and maintaining the solution at the specified temperature, a sodium hydroxide solution is added until the solution reaches a pH of 10, thereby initially providing conditions for the formation of primarily the AgGly_2^- complex as the target product of the chemical reaction between silver nitrate and glycine. Then, while stirring and maintaining the solution at the specified temperature, to the solution of this complex a sodium borohydride solution cooled to 4 ± 1 °C is added in a molar ratio of silver nitrate:sodium borohydride = 1:6.9, and by stirring and maintaining the mixture of solutions at the specified temperature until its optical density reaches a constant value, conditions are provided for the \ final product formation of the synthesis process.