

Title (en)

METHOD FOR PRODUCING NANOPARTICLES FROM A NOBLE METAL AND USE OF THE NANOPARTICLES THUS PRODUCED

Title (de)

VERFAHREN ZUR HERSTELLUNG VON NANOPARTIKELN AUS EINEM EDELMETALL UND DIE VERWENDUNG DER SO HERGESTELLTEN NANOPARTIKEL

Title (fr)

PROCÉDÉ DE PRÉPARATION DE NANOPARTICULES D'UN MÉTAL PRÉCIEUX ET UTILISATION DES NANOPARTICULES AINSI PRODUITES

Publication

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Application

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Abstract (en)

[origin: WO2012016565A2] The invention relates to a method for producing nanoparticles from a noble metal and the use of the nanoparticles produced by means of the method. The aim of the invention is to specify possibilities for easily and cheaply producing nanoparticles from a noble metal, wherein the particle size of the nanoparticles thus produced can be influenced in a specific manner. By means of the method according to the invention, nanoparticles made of silver, gold, and platinum and having an adjustable particle size can be produced. A chemical compound of the particular noble metal is dissolved in an aqueous solution or the noble metal is dissolved in an acid mixture. An aqueous solution containing at least one surfactant is added to the particular solution, and a reductant is additionally added to the particular solution in the case of silver and platinum. The following parameters are influenced in order to influence the particle size: concentration of the chemical compound or of the noble metal, temperature, pH, and fraction of surfactant. The noble-metal particles precipitating out of the particular solution can be removed by centrifuging.

IPC 8 full level

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