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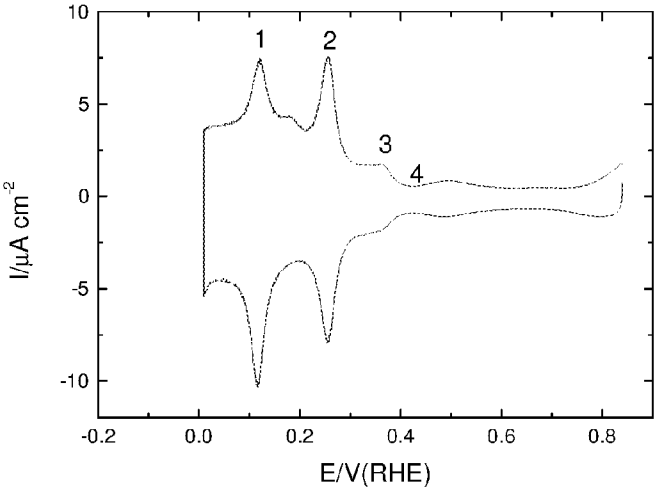
(54) Title: A METHOD OF PREPARING PURE PRECIOUS METAL NANOPARTICLES WITH LARGE FRACTION OF (100) FACETS, NANOPARTICLES OBTAINED BY THIS METHOD AND THEIR USE

Fig. 1



(57) Abstract: The invention provides a method of preparing pure precious metal nanoparticles of controlled sizes and having (100) facets, wherein a precursor substance contained in a reagent solution is subjected to a reduction reaction using a reducing agent contained in the reagent solution to provide nanoparticles, and the reduction reaction is stopped by rapid lowering of the reaction solution temperature. In the process of the invention, the need to use surfactants or other organic particles to stabilize the (100) facets is eliminated.

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