

عنوان مقاله:

Synthesis and size control of copper nanoparticles

محل انتشار:

اولین کنگره سراسری فناوریهای نوین ایران با هدف دستیابی به توسعه پایدار (سال: 1393)

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خلاصه مقاله:

In this paper, a method for synthesis of copper nanoparticles stabilized with polyvinylpyrrolidone in aqueous solution under nitrogen gas environment is described. Reaction parameters were controlled to attain the sharp particle size distribution with the smallest average particle size in this method. Optimum conditions for production of smallest nano particles by this method are reducing agent to precursor concentrations ratio of 4 and temperature of 60 oC. Also oxidation resistance of copper nano particles was investigated. Results showed that after 10 minutes, dispersed nanoparticles in the solution were oxidized and redissolved in water after contact with air.

کلمات کلیدی:

Synthesis, size control, copper, nanoparticles

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