

Chemical methods for producing copper nanoparticles

© Elena M. Soldatenko,⁺ Sergey Yu. Doronin,^{*} and Rimma K. Chernova

Department of Analytical Chemistry and Chemical Ecology. Institute of Chemistry SSU.

Astrakhanskaya St., 18/3. Saratov, 410012. Russia. Phone: +7 (8452) 26-45-53. E-mail: Doroninsu@mail.ru

^{*}Supervising author; ⁺Corresponding author

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Abstract

Chemical methods for producing copper nanoparticles are summarized and analyzed. The main types of processes leading to the production of copper nanoparticles were studied: thermal decomposition of copper compounds; directed selection of ligands to reduce the redox potentials of copper complexes; use of different spatially restricted systems as nanoreactors. The major factors have been shown (redox-potential of complex copper compounds, reducing agent, stabilizers, pH etc.), affecting the morphology and stability of the resulting copper nanoparticles.