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生物法合成纳米金的研究进展

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Research Progress in Biosynthesis of Gold Nanoparticles

(Department of Chemistry,Zhengzhou University,Zhengzhou 450001, China)

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摘要 纳米金以它独特的光学、电学和催化性质受到人们越来越多的关注.目前,生物合成的纳米金具有经济、无毒、环境友好等特点而成为研究热点.综述了利用细菌、真菌、放线菌、酵母菌以及各种植物材料合成纳米金的方法,并将各种方法进行了比较,讨论了每种方法的特点、尺寸和形貌的控制以及合成机理.最后,展望了生物合成纳米金的应用以及未来的发展方向.

关键词: 生物合成 纳米金 研究进展

Abstract: Gold nanoparticles are attracting great attention due to their unique optical,electronic and catalytic properties.Recently,biosynthesis of gold nanoparticles has become a research hotspot due to its economic, non-toxic and eco-friendly characteristics.This article provides an overview of current research methods of biosynthesis of gold nanoparticles using bacteria, fungi,actinomycetes, yeast and various plant materials.Different methods are compared,and the characteristics, control of size and shape, and the synthesis mechanisms are discussed.Finally,the application of biosynthesis of gold nanoparticles and the developing trend in the future are also prospected.

Key words: biological synthesis gold nanoparticles research progress

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