METALLIC NANOCRYSTALLINE MATERIALS: PREPARATION AND PROPERTIES

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Abstract

Research on metallic nanoparticles launched the explosive era of the interest on the nanomaterials almost 30 years ago [1]. However, the long period of intensive studies on nanostructured metallic materials they are still full of contrasts - simple but present in highly sophisticated systems [2]. From their beginning with Faraday to current days, metallic nanoparticles are present and important in our life, thanks to their optical and magnetic properties, use in chemistry, biology and medicine. Many procedures were already developed for preparation of metallic nanoparticles but questions about tailoring their properties for a specific application remain. Controls of phase, size, and shape, physical and chemical properties are prerequisites for various applications. In this contribution selected technologies of nanocrystalline metals and their properties will be discussed.

Keywords: nanocrystalline materials, metals, preparation, properties

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