

COMPLEMENTARY MICROSCOPY TECHNIQUES APPLIED TO THE CHARACTERIZATION OF SYNTHESIZED NANOCOMPOSITES

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Abstract

Nowadays, it has been clear an increasing interest in designing materials that can fulfill the needs for high performance in specific applications. Therefore, many researches have been attracted to study the synthesis of composite materials due to their unique properties and potential uses. In that field it is well known the particular interest in the nano-composites, specially because they may possess a stable microstructure with good resistance to recrystallization and grain growth. In contrast to hardening by precipitation mechanism, some physical and mechanical properties can be kept, even at high temperature, due to the stability and high melting point of particles such as those of Al₂O₃, which do not react with the metallic matrix constituted by, for example, copper and/or nickel.

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