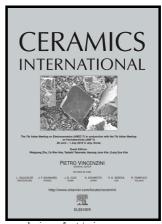
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Controllable properties synthesis magnetic of

hydrothermally synthesised NiCo₂O₄ nano-spheres

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Abstract

In the work, we explored an efficient synthetic platform to purposefully fabricate different

morphologies of NiCo₂O₄ by controlling the hydrothermal temperature. All the obtained samples were

characterized by means of X-ray diffraction, scanning electron microscopy, high resolution

transmission electron microscopy. With the increase of hydrothermal temperature, the morphology of

obtained samples transformed from spongy nanosphere to ellipse-like, then to peanut-like structure and

an effective blue shifting of Raman spectroscopy occurred. The magnetic measurements indicated that

the materials transform from paramagnetic to weak ferromagnetic with the increase of hydrothermal

temperature.

Keyword: A. Powders: chemical preparation; NiCo₂O₄; Nanostructure; C. Magnetic

properties

1. Introductions

In the past decades, nanopowders and nanostructured materials have aroused

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