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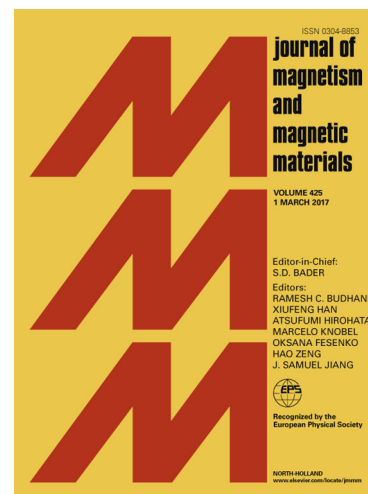
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Evidence of particle-particle interaction quenching in nanocomposite based on oleic acid-coated Fe₃O₄ nanoparticles after over-coating with essential oil extracted from *Croton cajucara Benth*

J. J. A. Medrano^{1*}, F. F. H. Aragón^{2**}, L. Leon-Felix², J. A. H. Coaquira^{2***}, A. F. R. Rodríguez³, F. S. E. D. V. Faria³, M. H. Sousa⁴, J. C. Mantilla Ochoa⁵ and P. C. Morais^{2,6}

¹Instituto de Ciências Biológicas, Pós-graduação em Nanociência e Nanobiotecnologia, Universidade de Brasília, Brasília DF 70919-970, Brazil

²Núcleo de Física Aplicada, Instituto de Física, Universidade de Brasília, Brasília DF 70910900, Brazil.

³Biodiversity and Biotechnology Network of Legal Amazon, Federal University of Acre, Rio Branco AC 69915-900, Brazil

⁴ Faculdade de Ceilândia, Universidade de Brasília, Ceilândia DF 72220-900, Brazil

⁵ Dfte UFRN, departamento de Física teórica e experimental da Universidade Federal de Rio grande do Norte, RN 59078-970, Brazil

⁶ Anhui University, School of Chemistry and Chemical Engineering, Hefei 230601, China

Abstract

This study reports on the synthesis and characterization of oleic acid (OA)-coated Fe₃O₄ nanoparticles (Fe₃O₄@OA) and AO plus essential oil(EO)-coated Fe₃O₄ nanoparticles (Fe₃O₄@OA/EO). The EO was extracted from *Croton cajucara Benth* (CCB) leaves; a plant from the Brazilian Amazon region. Structural and morphological characterizations were carried out using X-ray diffraction (XRD) and transmission electron microscopy (TEM) images, respectively. Additionally, thermogravimetric analysis and magnetization measurements (hysteresis cycle, zero field-cooled-ZFC, field-cooled-FC, and AC

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