

# NDT Characterization of FeCu Nanostructured

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**Abstract :** The mechanical alloying process has been used to synthesis Fe-Cu nanostructured powder in a high energy planetary ball-mill PM400. Structural and magnetic, properties of the powders milled were investigated by scanning X-ray diffraction and vibrating sample magnetometer, respectively, the elemental micrometer-sized Cu and Fe powders were first mixed in Fe<sub>70</sub>Cu<sub>30</sub> compositions, the added of Cu in Fe formed the solid solutions of Cu in Fe and Fe in Cu, a solid solution face-centred cubic and solid solution body-centred cubic nanograined composite has been formed

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