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# Magnetic microwave and absorbing properties of Fe-Co alloy synthesisedby mechanical alloying process

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**Abstract:** In this paper, the structure and magnetic properties of nanocrystalline Fe(1–x)Coxmixtures are investigated. These structures are prepared using mechanical alloying based onplanetary ball mill under several milling conditions. The structural effects of mechanicalalloying of powders were investigated by scanning electron microscopy, X-ray diffractionanalysis and bench of microwaves. Consequently, alloy powder with an average grain size of10–13 nm was obtained. Maximum saturation magnetisation Ms was obtained at acomposition value of 65%Co. Microwave measurements were performed on the mechanicallymilled Fe(1–x)Cox powder

**Keywords :** powder technology; mechanical alloying; microstructure; microwave.