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Abstract ABSTRACT
The study of amorphous alloys have wide supercooled liquid region prepared by mechanical alloying. Compared the divergence and relationship between different compositions, and measured it which is the composites materials compose with the sample and polymer in high frequency.
According the rate of study to make the alloys (Fe1-xNix) 62 Nb8B30(X=0、0.2、0.4、0.5、0.6、0.7、0.8、0.9)、(Fe1-xCox) 62Nb8B30(X=0、0.1、0.16、0.2、0.3、0.4、0.5、0.6、0.64、1.0). We choose the pure element Fe、Co、Nb、B for main ingredients, and respectively to analyze the samples which are the relationships between crystalline of variation and amorphous processed in ball milling processes.
In ball milling processes, sampling analyzed by XRD, to comply with the milling time increase, the particle size will decrease and sample can became amorphous. Using SEM to observe the particle varied that to prove the particle size will decrease as the milling time increases. After milling for 18 hours, the particle has decreased indefinite; the samples became amorphous alloys after milling for 36 hours. In magnet property, using VSM to measure the magnetization and coercivity between each samples and compare them.
In conclusion, take the samples mixed with epoxy resin adequately. The complex permeability were measured by LCR meter.
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