**Abstract**

Copper substituted cobalt–nickel mixed ferrite nanoparticles are synthesized by co-precipitation method and the samples are sintered at 130 °C, 600 °C and 900 °C. The effects of sintering on structural and magnetic properties are studied using XRD analysis and VSM studies. The particle sizes are found to be 12 nm and 32 nm for the samples sintered at 600° and 900 °C respectively and the degree of crystallinity of the sample increases with increasing sintering temperature. The absorption bands shift to lower values on sintering the samples. The saturation magnetization (*Ms*), remanent magnetization (*Mr*) and coercivity (*Hc*) increase on sintering the samples at 600 °C and 900 °C. EDX results confirm the presence of Co, Ni, Cu, Fe and O without any impurities.