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**Article:**

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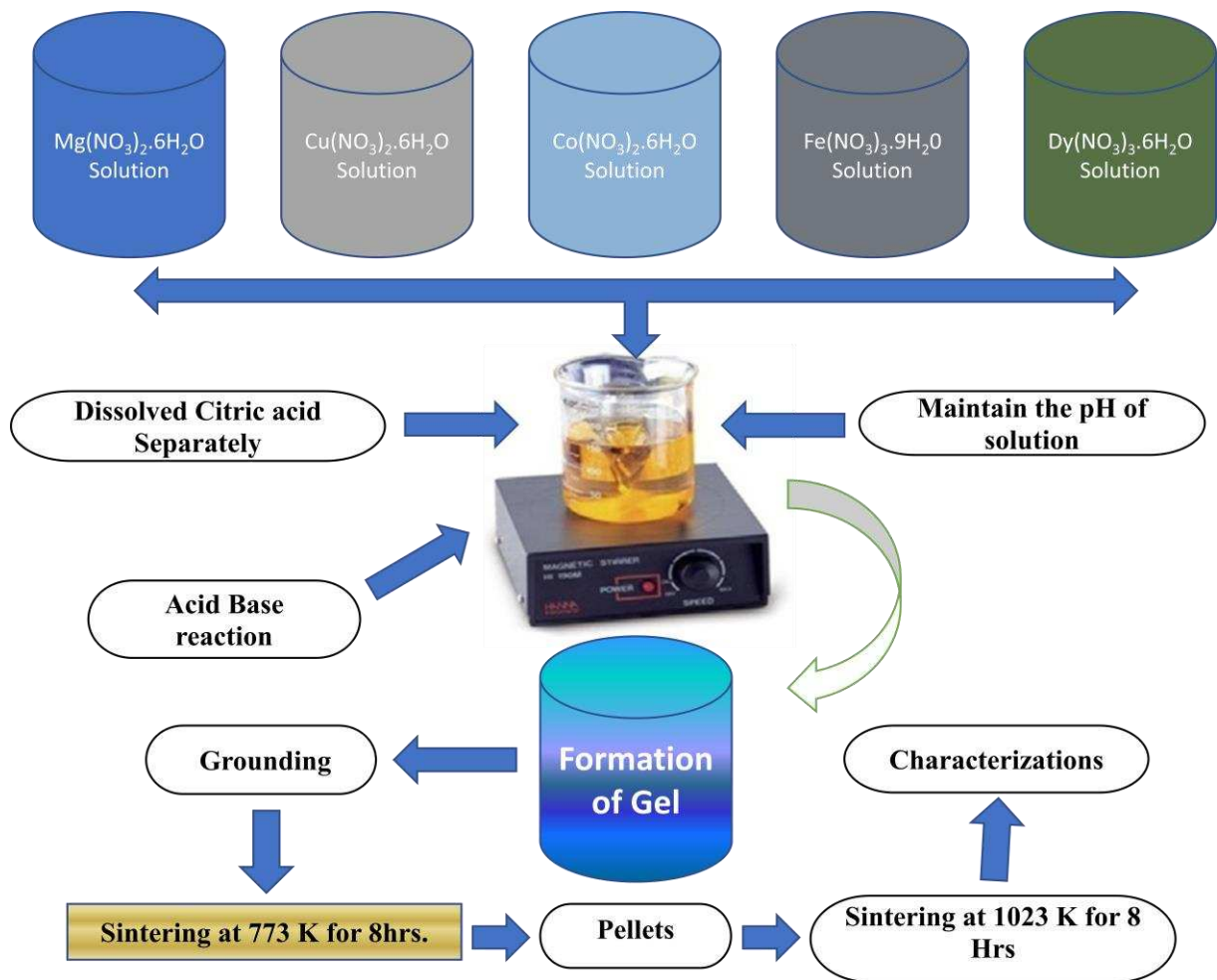


Fig. 1. Flow chart for preparation of *MCCD-soft* ferrites by sol-gel route

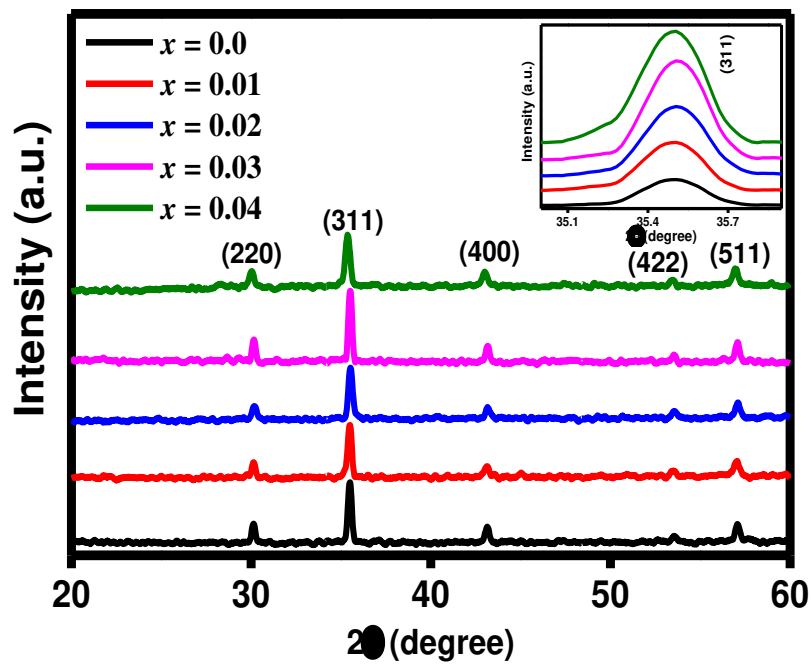
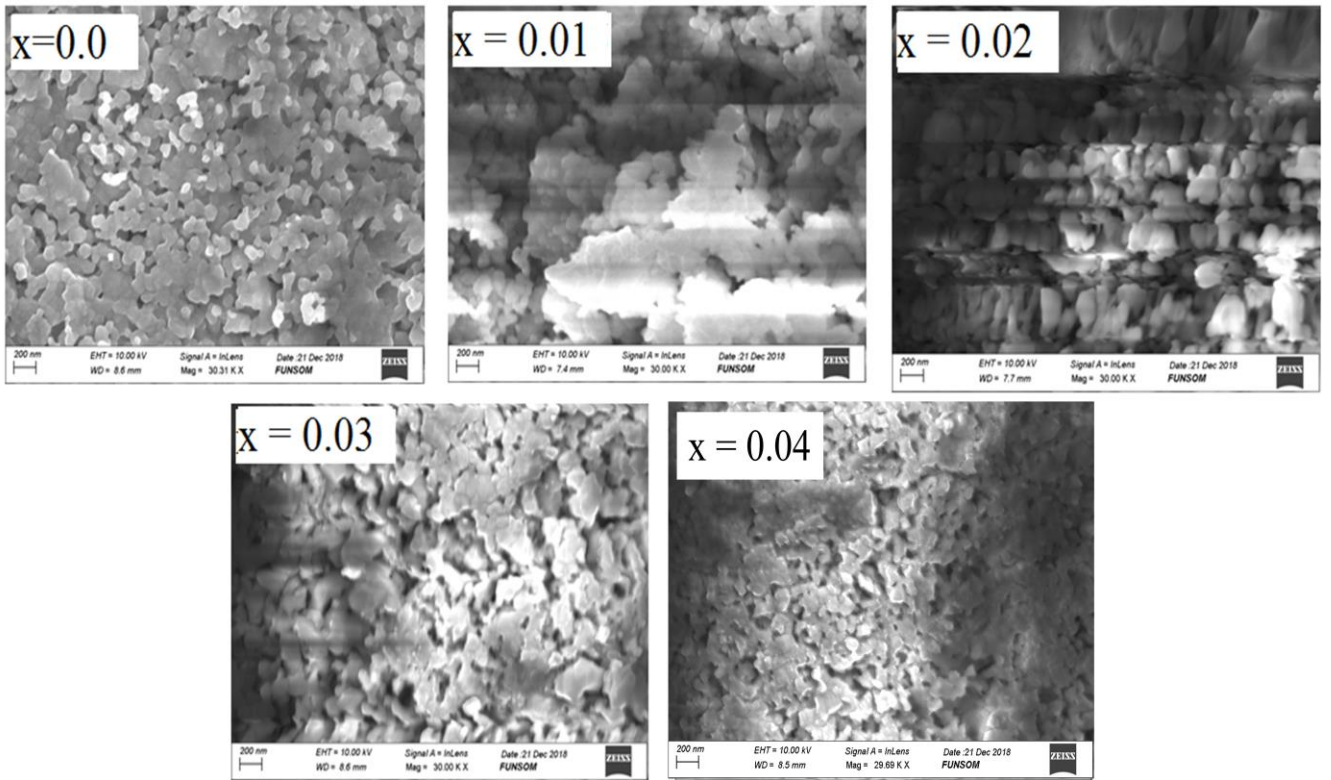


Fig. 2. XRD patterns of *MCCD-soft* ferrites



**Fig. 3.** SEM micrographs of *MCCD-soft ferrites*

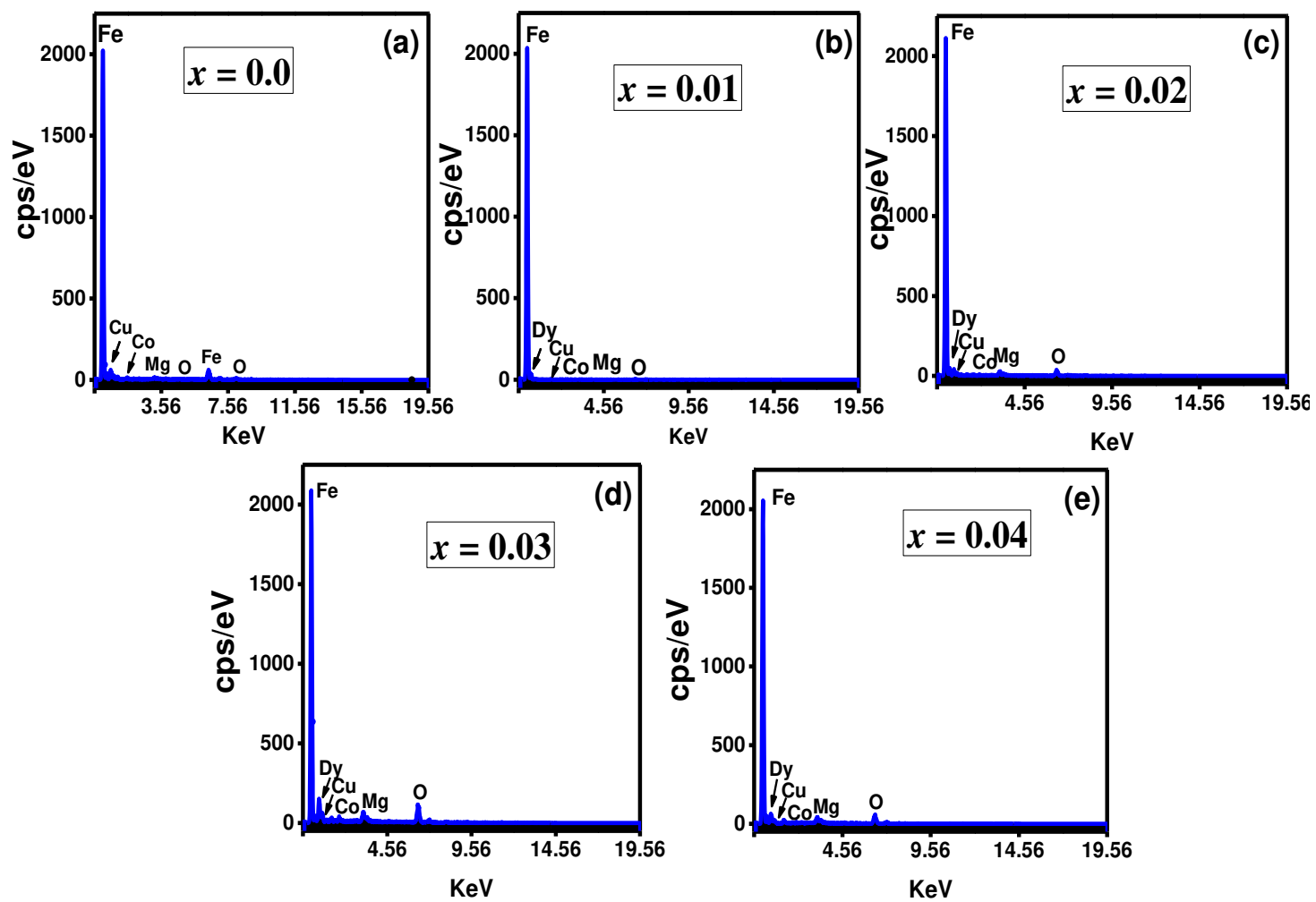


Fig. 4. EDS spectra of *MCCD-soft ferrites*

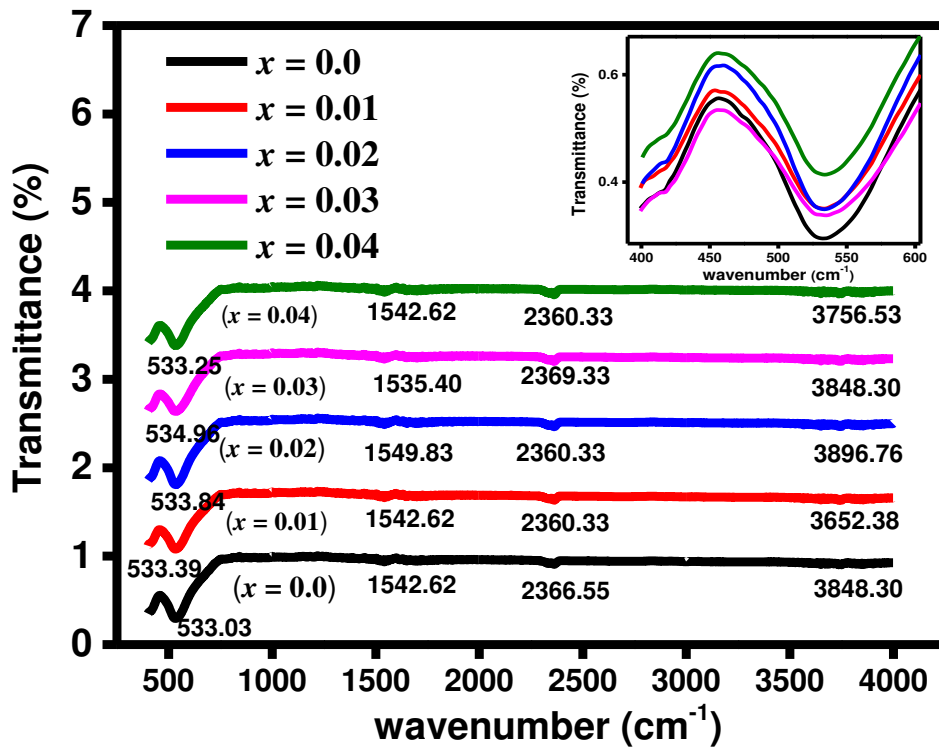


Fig. 5. FTIR spectra for MCCD-soft ferrites

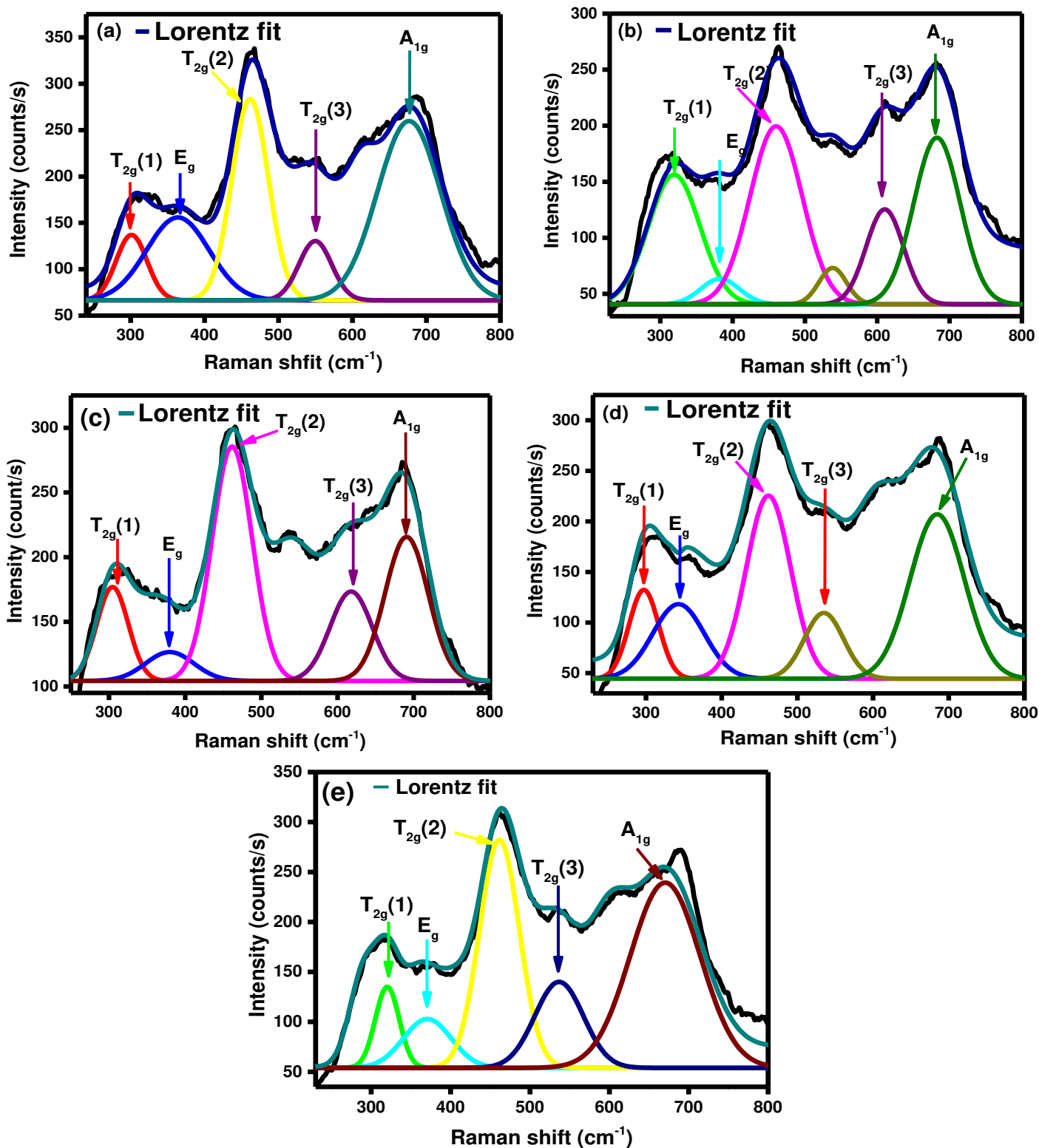


Fig. 6(a-e). Raman spectra for MCCD-soft ferrites

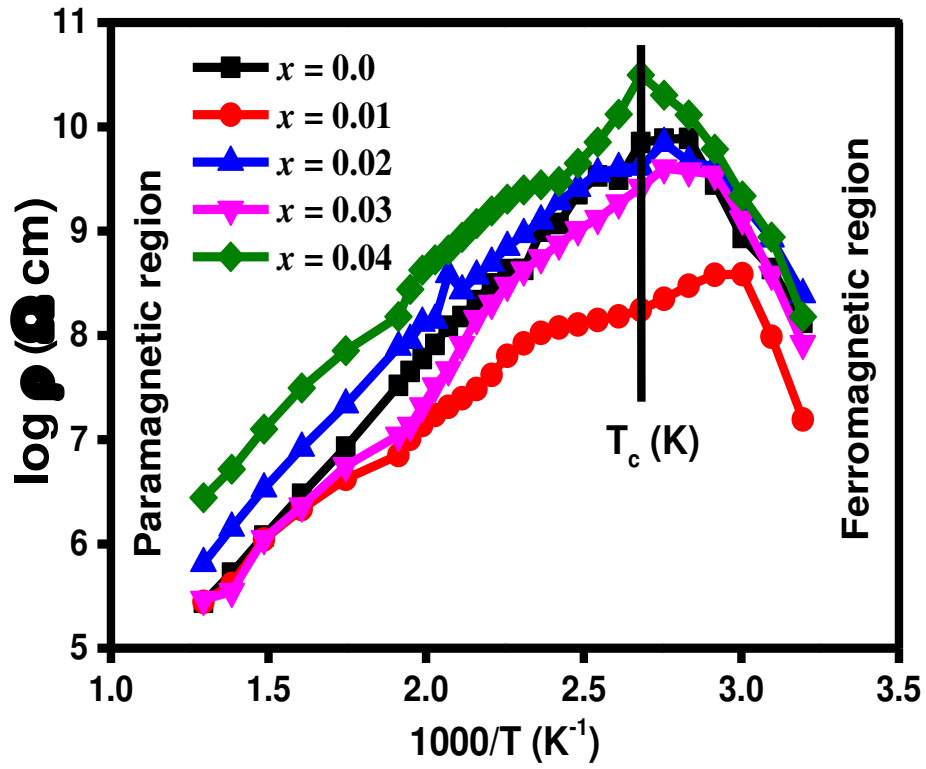
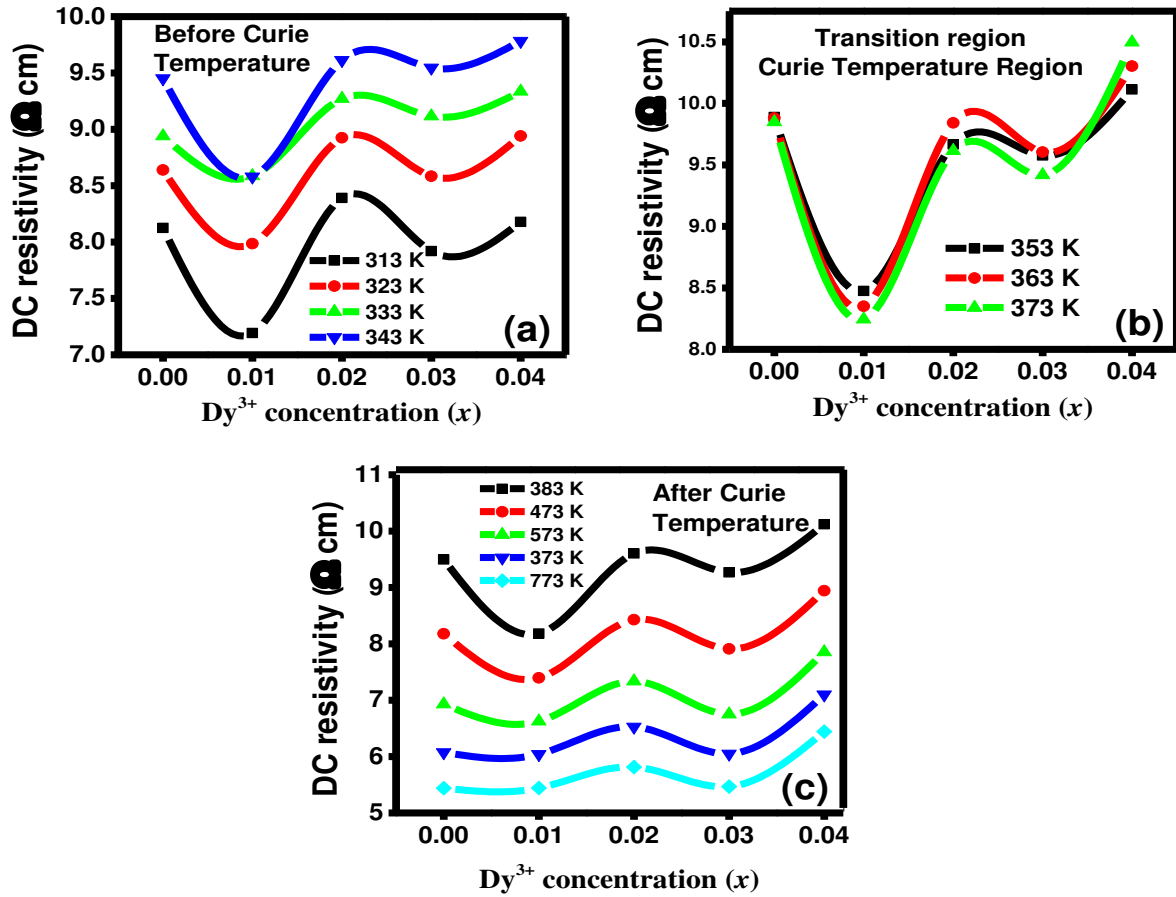


Fig. 7. Graph between DC resistivity and inverse of temperature for *MCCD-soft ferrites*



**Fig. 8.**  $\text{Dy}^{3+}$  concentration versus DC resistivity (a) before Curie temperature (b) at Curie or transition temperature region (c) after the Curie temperature for MCCD-soft ferrites



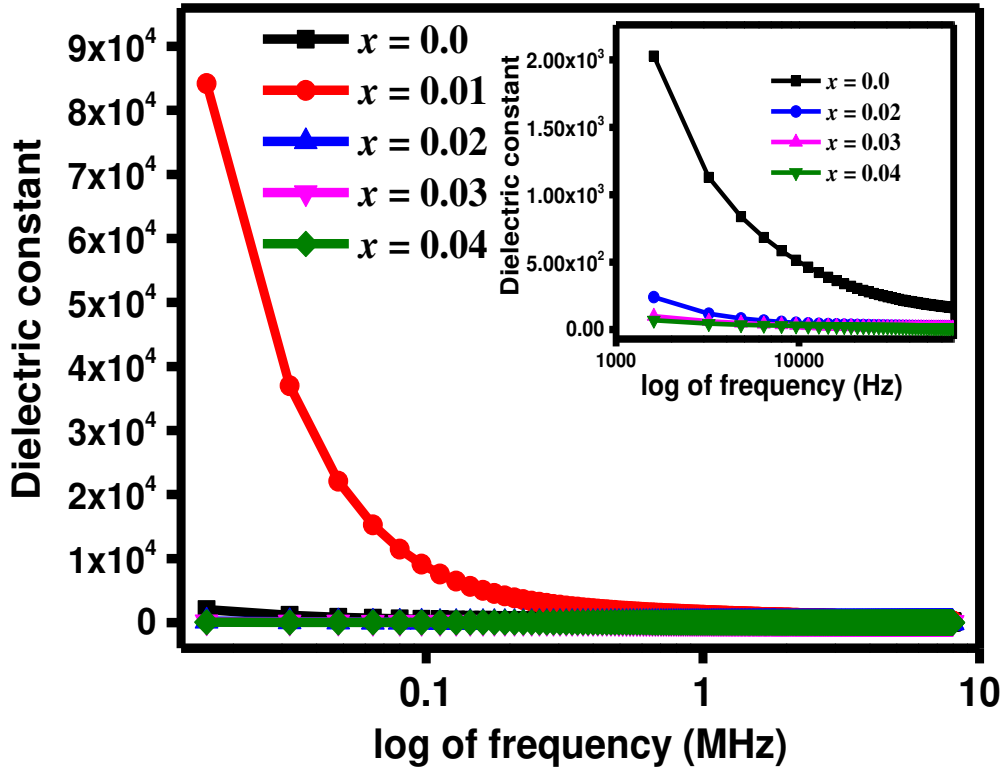


Fig. 9. Plot between log of frequency and dielectric constant for *MCCD-soft ferrites*

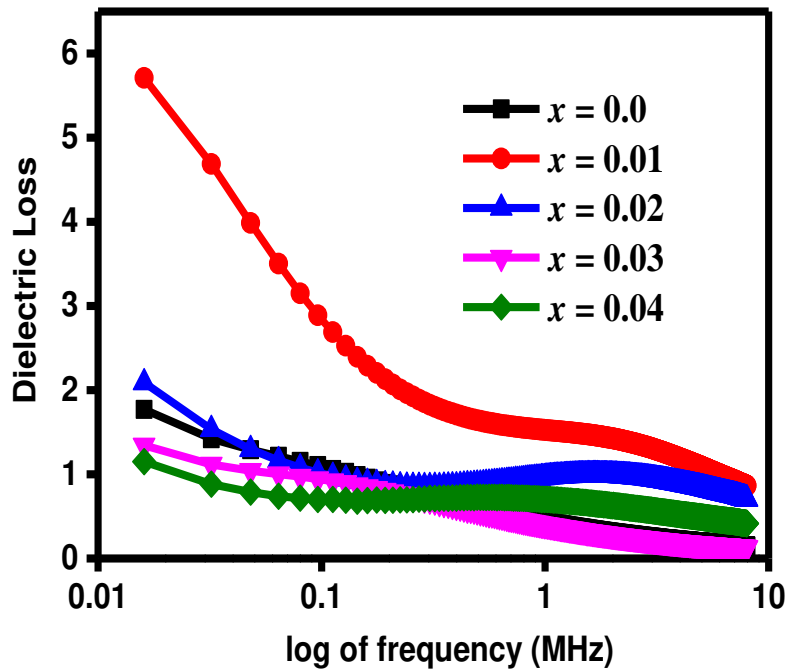


Fig. 10. Plot between log of frequency and dielectric loss for *MCCD-soft ferrites*

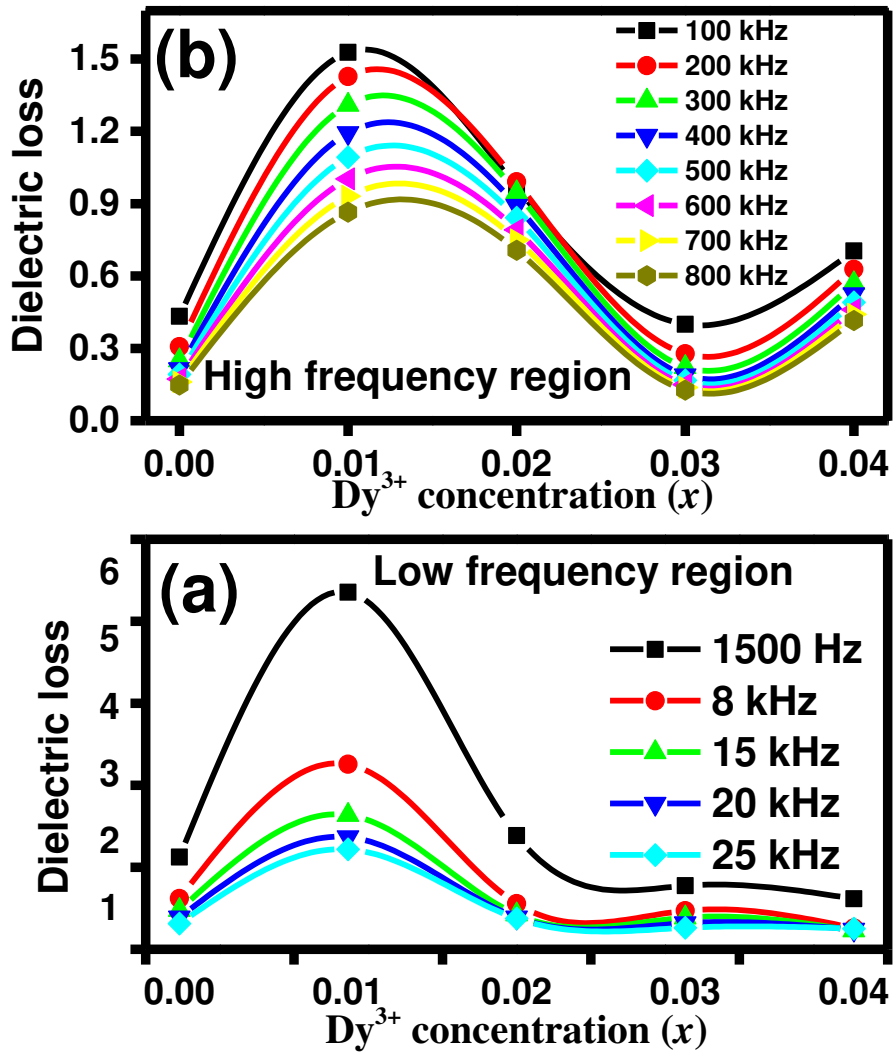


Fig. 11(a).  $Dy^{3+}$  concentration versus dielectric loss at low frequency region (b)  $Dy^{3+}$  concentration versus dielectric loss at high frequency region for MCCD-soft ferrites

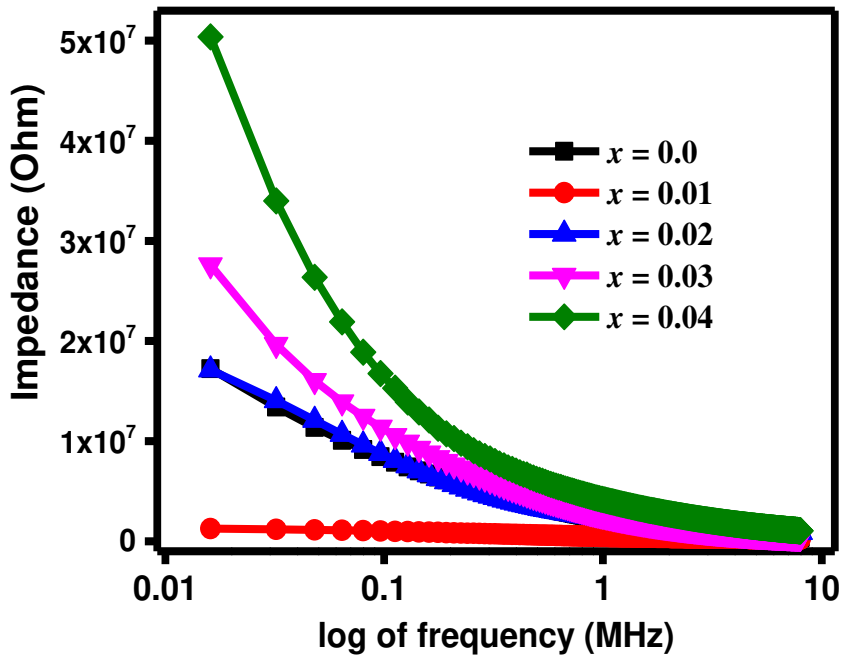


Fig. 12. Plot between log of frequency and dielectric impedance for MCCD-soft ferrites

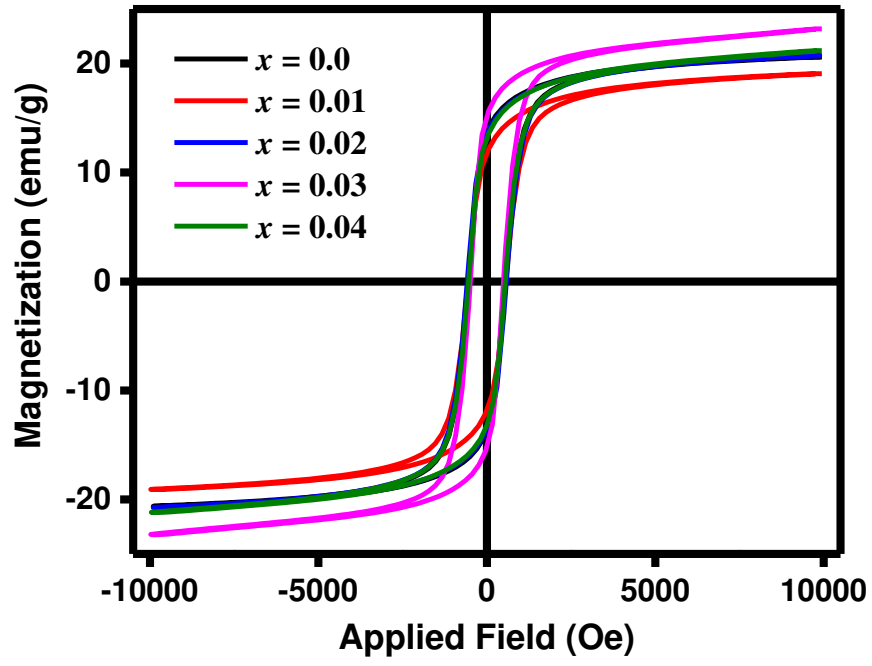


Fig. 13. Hysteresis loops for *MCCD-soft ferrites*