

4. Conclusions

Polycrystalline perovskite ceramic sample of NdFeO_3 were prepared by sol-gel auto combustion method. The phase formation of the NdFeO_3 sample is confirmed by XRD. The presence of phase charge polarization at higher temperature arises only due to the mobility of ions and imperfections in the material. The DC conductivity (σ_{DC}) and relaxation time (τ) follows the Arrhenius behavior. The real and imaginary parts of impedance properties investigated. The impedance analysis supports the typical behavior of negative temperature coefficient of resistance (NTCR) of materials. They also confirm the presence of non-Debye type relaxation phenomenon in the material.

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