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The investigation of the electrical transport properties of Gd doped YCrO₃ nanoparticles

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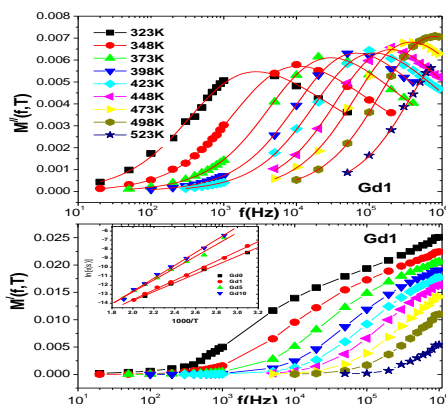
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Graphical abstract

The variation of imaginary part of complex electric modulus with frequency at different temperatures shows well defined peaks and considering generalized susceptibility function its asymmetric nature and non – Debye type behavior have been analyzed.



Highlights

- The Gd doped YCrO₃ nanoparticles synthesized by sol-gel method.
- Optical band gap increases with the increase of the Gd doping concentration.
- The dc conductivity follows the adiabatic small polaron conduction model.
- Dielectric permittivity obeys the modified Cole-Cole model.
- The imaginary part of complex electric modulus shows well defined peaks.

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