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A review on highly versatile electromagnetic material: Mg spinel ferrites

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Spinel ferrites have been the subject of several studies in their natural state and after being doped with various elements. By exchanging numerous divalent and trivalent ions, this article provides a summary of the study of magnesium spinel ferrites. Different techniques were used to create magnesium spinel ferrites with the space group Fd3m. For crystallographic information, XRD was used, as well as SEM and TEM for surface morphology, VSM for magnetic behaviour, and FTIR for structural information. Changes in a material's chemical composition can have an impact on a variety of characteristics, including coercivity, saturation magnetization, Curie temperature, and many other characteristics. These compounds are utilized in the sectors of water treatment, magnetic devices, rechargeable batteries, and medicine to influence and exploit these properties.

Topics

Magnetic devices, **Magnetic materials**, **Phase transitions**, **Water treatment**, **Rechargeable batteries**, **Chemical compounds**, **Review**

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