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# Synthesis and characterization of $\text{Cu}_x\text{Si}_x\text{Fe}_{2-2x}\text{O}$ spinelferrites produced by the ceramic technique

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**Abstract :** Spinel copper ferrites  $\text{Cu}_{1+x}\text{M}_x\text{Fe}_{2-2x}\text{O}$  ( $\text{M}=\text{Si}$ ) with (0.2 x 0.5) were synthesized by the double sintering ceramic technique and characterized using X-ray diffraction VSM and SEM, diffraction patterns show that all samples have a single phase. The magnetic properties of the nanocomposites were investigated, the scanning electron microscope (SEM) with EDS analyser were performed to show micrographs aggregates and confirm the stoichiometry of the compound.

**Keywords :** Cu-Ti Ferrites, Spinel, XRD, VSM, SEM, EDS