



**SDI Review Form 1.6**

Journal Name:	<a href="#">Physical Science International Journal</a>
Manuscript Number:	Ms_PSIJ_33042
Title of the Manuscript:	Structural and Magnetic Properties of Nano Cu-Zn-Zr Ferrite for Magnetic Temperature Transducer (MTT).
Type of the Article	Original Research Article

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<p>The authors should given the transition temperatures <math>T_C</math> for <math>x=0.8</math> and 1 for 10KHz for <math>y=0.05</math> and 1.</p> <p>The authors are given the variation of magnetic permeability why not given the magnetic susceptibility</p> <p>The authors should give some comparison with the other researchers work given in literature</p> <p>The authors should cited some references in this presents works such as:</p> <p>R. Masrou, A. Elgrini, M. Hamedoun, A. Benyoussef, A. Hourmatallah, N. Benzakour, K. Bouslykhane, O. Mounkachi, H. El Moussaoui. J Supercond Nov Magn (2014) 27:2073–2082.</p> <p>R. Masrou, H. El Moussaoui, E. Salmani, O. Mounkachi, H. Ez-Zahraouy, M. Hamedoun, E.K. Hlil, A. Benyoussef. J Supercond Nov Magn (2014) 27:177–181</p> <p>H. Elmoussaoui, M. Hamedoun, O. Mounkachi, A. Benyoussef, R. Masrou, E.K. Hlil. J Supercond Nov Magn (2012) 25:1995–2002</p> <p>H. El Moussaoui , R. Masrou, O. Mounkachi, M. Hamedoun, A. Benyoussef. J Supercond Nov Magn (2012) 25:2473–2480</p> <p>R. Masrou, O. Mounkachi, H. El Moussaoui, M. Hamedoun ,A. Benyoussef, E.K. Hlil, M. Ben Ali, K. El Maalam. J Supercond Nov Magn (2013) 26:3443–3447</p>	<p>The permeability as a function of temperature for the samples <math>x=0.8</math> and 0.1 , <math>y=0.05</math> and 0.1 has different behaviors rather than the other samples. It doesn't show the transformation from ferrimagnetic to paramagnetic especially at 10KHz. They seem to be super paramagnetic materials.</p> <p>The permeability was measured using the available setup in our lab for the samples in the form of toroid where as the measurements of susceptibility is not available in our lab. It is known that, the permeability is a function of susceptibility by the following equation <math>\mu=1+\chi</math> where <math>\chi</math> is the susceptibility.</p> <p>We added the following references to the text:</p> <p>Masrou R, Hamedoun M, Benyoussef A, Hlil E: <b><u>Magnetic properties of mixed Ni–Cu ferrites calculated using mean field approach. Journal of Magnetism and Magnetic Materials 2014, 363:1-5.</u></b></p> <p>El Moussaoui H, Masrou R, Mounkachi O, Hamedoun M, Benyoussef A: <b><u>Cation Distribution and Magnetic Interactions in Zn-Substituted Fe (Cu) Fe<sub>2</sub>O<sub>4</sub> Ferrites. Journal of superconductivity and novel magnetism 2012, 25(7):2473-2480.</u></b></p> <p>El Moussaoui H, Mahfoud T, Ali MB, Mahhouti Z, Masrou R, Hamedoun M, Hlil E, Benyoussef A: <b><u>Experimental studies of neodymium ferrites doped with three different transition metals. Materials Letters 2016, 171:142-145.</u></b></p>
<b>Minor</b> REVISION comments		
<b>Optional/General</b> comments		