



**SDI Review Form 1.6**

Journal Name:	<a href="#">Physical Science International Journal</a>
Manuscript Number:	2014_PSIJ_12908
Title of the Manuscript:	THERMAL AND FREQUENCY STABILITY OF DIELECTRIC CERAMIC $\text{Ba}_{6-3x}\text{Nd}_{8+2x}\text{Ti}_{18}\text{O}_{54}$ ( $x=0.15, 0.25$ )
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.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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>Materials and methods:</p> <p>1] The mixing of raw materials must be calcined before sintering to remove CO<sub>2</sub> gas by a certain heat treatment. The author must be mention in the main text the condition of the calcination process.</p> <p>Results and discussion:</p> <p>1] The author made the XRD-analysis and he/she mentioned that the structure was orthorhombic phase, it is necessary to calculate the lattice constants in order to emphasize the orthorhombic structure.</p> <p>2] The author mentioned to the shifting of the XRD-peaks, but also it is necessary to mention the variation of the peaks intensities and their effect on the position of Nd-ions in the structure.</p> <p>3] The data in table (1), was not clear how it was obtained.</p>	<p>1] Before sintered at 1300°C, both pellets were undergone pre-sinter at 600°C.</p> <p>1] BNT ceramic with Ba<sub>6-3x</sub>Nd<sub>8+2x</sub>Ti<sub>18</sub>O<sub>54</sub> obtained orthorhombic structure has been also reported by Ohsato [19] in the reference.</p> <p>2] From the results, BNT 0.15 has higher peak intensities than BNT 0.25. However, higher content of Nd shows more Nd ions fully incorporated into A1 site.</p> <p>3] The density was obtained using Electronic Densimeter MD300S which adopts Archimedes principle. Shrinkage is taken by calculating the percentage of dimension changed before and after the sintering process. Method for calculating the average grain size was mentioned in the main text.</p>
<b>Minor</b> REVISION comments	<p>Materials and methods:</p> <p>1] Archimedes experiment is not accurate in comparable with densometer apparatus if it was used.</p> <p>2] Some times the author used the word (doping), but the process to composite the mixture is (substitution) not doping.</p>	<p>1] Electronic Densimeter MD300S which adopts Archimedes principle when measuring density.</p> <p>2] Substitution is the better word in the text.</p>
<b>Optional/General</b> comments	<p>Results and discussion:</p> <p>He/she did not try to discuss the effect of frequency if it is used greater than 1 MHz.</p>	<p>The dielectric measurement was performed at low frequency region only.</p>