Dear Reviewer,

Below are listed all the modification that were made in the text according to the requests.

1. Q: You improved Introduction part by listing all the methods for obtaining Zn4Sb3 but my

intent was to give us a short review about what was done so far according to Zn4Sb3

doping.

A: A short review about the doping of Zn4Sb3 with different species of ions were done,

underlining the most valuable results (lowering electrical resistivity and thermal

conductivity): ‘’Other ways to improve the thermoelectric properties of Zn4Sb3 is doping

(addition, substitution)26-27 with different species of ions as: Ag26-29 , Al29, Bi30, Cd31-33,

Co34, Cu26, Fe35, Gd36, Hg37, I38, In27, 39-40, Nb41, Pb27, Se42, Si43, Sn19, 44, Te20, 45, etc. In the

case of doping Zn4Sb3 with Ag, a significant lowering of the electrical resistivity28 was

obtained. The thermal conductivity values were remarkably reduced by doping the Zn4Sb3

material with Cu26, Hg37, Nb41 or Te20.’’

New references were introduced according with the text.

2. Q: Sentence ‘Zn4Sb3 structure belongs to the rhombohedral space group R-3c, space group

nb. 167’. Instead of nb. should be No.

A: nb was replaced with No.

3. Q: Change the table caption for Table I: Undoped and Ag and/or Sn doped samples according

to formula (Zn1-xMx)4Sb3

A: The table caption was changed.

4. Q: ‘…an excess of 2 % of Zn’… You should specify what percentages - An excess of 2 wt%

Zn.

A: ‘…an excess of 2 % of Zn’… was modified into ‘an excess of 2 wt % Zn’

5. Q: Explanation about XRD, presence of secondary phase and moving of the peaks should be

included in the text.

A: It was included in the text an explanation about XRD, about the presence of secondary phase

and moving of the peaks. The first paragraph was completed with: “, whereas there are

additional peaks appearing in the XRD patterns which could be ascribed to formation of

impurity phase ZnSb (JCPDS No. 00-018-0140) which was detected in samples S1 and S2 at

2*θ* = 23.77 ̊ and 2*θ* = 27.89 ̊ and for all samples at 2*θ* = 40.05 ̊ as indicted in the figure. A peak

corresponding to Zn3Sb2 (JCPDS 00-023-1016) was detected at 2*θ* = 35.27 ̊ for S3.

Also, in the XRD patterns of the doped samples, a shift of the peaks was observed, the

shift was to the left for the Ag doped sample and to the right for the doped Zn4Sb3 with Sn or

Ag and Sn. The shifting of the XRD peaks is due to the exchange in cell parameter because of

the atomic radii of Ag (1.60 Å) and Sn (1.45 Å) which are larger than that of Zn (1.35 Å). In

the case of the sample doped with Ag, the peaks are shifted to lower values of the diffraction

angle, which means that the lattice parameters are increasing, behavior which is totally

opposite to that of the samples S3 and S4.’’

6. Q: It is necessary to present linear fit in Fig 5. (or in the inset of the fig. 5.) just for the

temperature interval that you are interested in.

A: Inset of the figure 5 was presented the linear fit into temperature range 385 to 415 K.

Best regards,

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