



SDI Review Form 1.6

Journal Name:	Asian Journal of Chemical Sciences
Manuscript Number:	Ms_AJOCS_34313
Title of the Manuscript:	Effect of Thiourea Concentration on Structural, Optical and Electrical Properties of Cu ₂ ZnSnS ₄ Thin Films Prepared by Spray Pyrolysis Setup
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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(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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)
Compulsory REVISION comments	<p>Page 2, Line 57-58 You need to change the name of peak a, b and c? The peaks at $2\theta = 28.5352$, 57, 47.4897 and 56.3556 are labeled as $N^{\circ}4$, $N^{\circ}11$, and $N^{\circ}12$ respectively</p> <p>By what software do you simulate the spectrum DRX? How you got those value 'Observed 'd' value'? How you got those value Observed Relative Intensity?</p> <p>Distance between nozzle and substrate was fixed at 1.5cm. Is this distance sufficient to get thin films homogeneities?</p> <p>which is the filing time of each thin film?</p> <p>How to explain decrease of the preferential orientation with the increase of the concentration of thiourea?</p>	<p>The names of peaks have been changed to their corresponding (hkl) plane.</p> <p>We have used Origin 8 for data analysis. We fitted the Gaussian fit for the observed peaks in the XRD pattern and obtained the FWHM, peak position, and intensity. From the peak position we calculated the 'd' spacing using Bragg's law. The relative intensity was then calculated by assuming the value of maximum peak as 100 and taking the ratio of the other peak intensity with respect to maximum value.</p> <p>Before preparing the final samples, we have optimized all the deposition parameters by constantly checking the absorbance of the film in different part of the substrate. Thus we got homogeneous thin films.</p> <p>It is mentioned in line no. 44.</p>



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	Many important references are missed?	<p>As the thiourea concentration increases, the mobility of the atoms located on the surface increases. So, these atoms can rearrange their positions to occupy more stable sites. This process controls the preferential orientation of the crystal structure. [Nabeel A. Bakr, Ziad T. Khodair, Hussein I. Mahdi. International Journal of Materials Science and Applications. Vol. 5, No. 6, 2016, pp. 261-270].</p> <p>We have added new reference [ref 14, 15, 19, 21, 22, 24] and have changed some old references by new one [ref 3, 9, 10, 16, 17, 20].</p>
<u>Minor</u> REVISION comments	Place the title of figures in down	-Titles of the figures have been placed down of the figures.
<u>Optional/General</u> comments	Can you tell me how you calculate the gap from the absorption spectra?	The direct band gap (E_g) of the samples is determined by fitting the absorption data to the direct transition equation and by extrapolating the linear portion of $(\alpha h\nu)^2$ versus ' $h\nu$ ' curve to $(\alpha h\nu)^2 = 0$ in the high absorption region.