

20th January 2014

Dear Sir/Madam,

Thank you for the swift review of our paper. Below is a list of responses to the reviewer's comments. A marked copy of the new manuscript, which includes line numbers, has also been submitted as "Supplementary Material".

REQUIREMENT NOT SATISFIED:

1. Do not use computerese in the figures. Do not use "E" or "e" for powers of 10 - i.e., 1×10^3 - NOT 1E3.

1. All "computerese" has been removed from offending figures (3 and 5) and replaced with scientific notation.

1) REVIEWER COMMENT (RC): The study of SZO is not motivated in the introduction. The authors should mention why this system is being explored and previous works should be mentioned. How does the properties of SZO compare to popular TCOs such as ITO and AZO?

1) AUTHOR RESPONSE (AR): A new paragraph has been added to the manuscript at line 44. The paragraph discusses the motivation to determine an accurate relationship between dopant composition and opto-electronic performance of SZO – a relatively under-studied metal-oxide system. Further recent references to work SZO are also included.

On line 192 a discussion is included regarding the relative electrical performance of SZO deposited in this work and in the literature. A discussion point comparing the minimum achievable resistivities of SZO and AZO is also included.

2) RC: The authors used a deposition temperature of 350 °C. Why was this temperature chosen? Growth temperature affects the crystal growth of the thin films, their morphology and thus their

optical and electrical properties. Was an optimization in temperatures carried out?

2) AR: The additional sentence is included within the “Experimental” section at line 64

“Note that the chosen substrate temperature was determined, through preliminary investigations, to be optimum for minimising resistivity in SZO films.”

3) RC: Page 5, line 11, the word "is" should be removed

3) AR: Amendment made as requested

4) RC: Page 9, line 7. A space is missing among et and al.

4) AR: Amendment made as requested

The authors would like to thank all reviewers and JAP editors for their time in considering the work for publication. Should any further amendmends be required please do not hesitate to contact the corresponding author.

Yours sincerely

Dr. Robert Treharne