

Dear Editor,

Please find enclosed the resubmission of our manuscript entitled “Experimental characterisation of a metamaterial optical partial polariser in the quantum regime”. The paper has been revised following closely the comments and suggestions made by the Referees.

In their reports, both Referees are positive about our work and mention that it is appropriate for publication in the 2016 SAIP Proceedings. We are delighted by this and thank the Referees for carefully reading our manuscript. We agree with all their recommendations for modifications and clarifications. We have addressed these in our revision.

We feel that the improved presentation of our study and the further details added in our revised manuscript put it in full agreement with the Referees’ recommendations. We hope that our work can now be accepted for publication in the 2016 SAIP Proceedings.

Sincerely,

Solomon Uriri

(on behalf of the authors)

Response to the Referee comments

Referee 1

We thank the Referee for carefully reading our manuscript and for the constructive comments in their Report. Below we reply to the Referee’s comments.

1. The Referee writes, *‘The position of the figure should move from the introduction to the experimental section. Also in the caption of Figure 1, FM should not appear as part of the caption for (a) since it does not appear there but in (b). The captions can be changed to incorporate this correctly.’*

We thank the Referee for their comments. Figure 1 has been moved from the introduction to the experimental section and FM now appears as part of the caption for panel (b) of that Figure.

Referee 2

We thank the Referee for carefully reading our manuscript and for the constructive comments in their Report. Below we reply to the Referee’s individual comments.

1. The Referee writes, *‘I would suggest to give a fair comparison with other related work on the previous published results, giving for example the transmission of the polarisations in each different work earlier published.’*

We thank the Referee for their suggestion. We have added information about the range of transmission of the polarisations from other works. In particular, our results agree well with the general trend of transmissions obtained by M. Asano et al. in Ref. [15] by classical FTIR for metamaterials with similar nanorod structures but different dimensions, where TV of 11% to 41% was obtained.

2. The Referee writes, *'I do not think that a killing ratio of 75% for the undesired polarisation, is high enough to claim having a polariser. For that reason I would suggest to clarify that from the beginning. Stating that is a partial polariser in the tittle and give the transmission rates in the abstract.'*

We thank the Referee for their comment. We have changed the title of the work to 'Experimental characterisation of a metamaterial optical partial polariser in the quantum regime' and included the transmission rates in the abstract.

3. The Referee writes, *'I would also suggest to move the first part of the abstract to the introduction, there is no need of such introduction in abstract, just the main results accomplished.'*

We have removed the first two sentences in the abstract. We did not feel it necessary to include them in the introduction as the main points are already covered there.

4. The Referee writes, *'Lastly, just to improve the appearance of the manuscript, the font size of all the figures images must be equivalent to the font size of the figure caption.'*

The font size of all figures is now equal to the font size of the figure caption.

We hope that the improved presentation of our results and the further details we have provided make our study much clearer, and that we have satisfied all the Referees' comments. We hope that our manuscript can be accepted for publication.