Electronic supplementary information

Comment on "Energy harvesting from shadow-effect" by Q. Zhang, Q. Liang, D. K. Nandakumar, S. K. Ravi, H. Qu, L. Suresh, X. Zhang, Y. Zhang, L. Yang, A. T. S. Wee and S. C. Tan, *Energy & Environmental Science*, 2020, 13, 2404

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Current-voltage characteristics of ITO/n-Si and Au/n-Si Schottky junctions:

The current-voltage (I-V) characteristics of typical ITO/n-Si and Au/n-Si devices across the junction showing Schottky behaviour in dark are shown in the figure S1. The rectification ratio of the ITO/n-Si junction at 1.0 V bias is found to be ~ 10 and that for Au/n-Si junction is ~ 35.

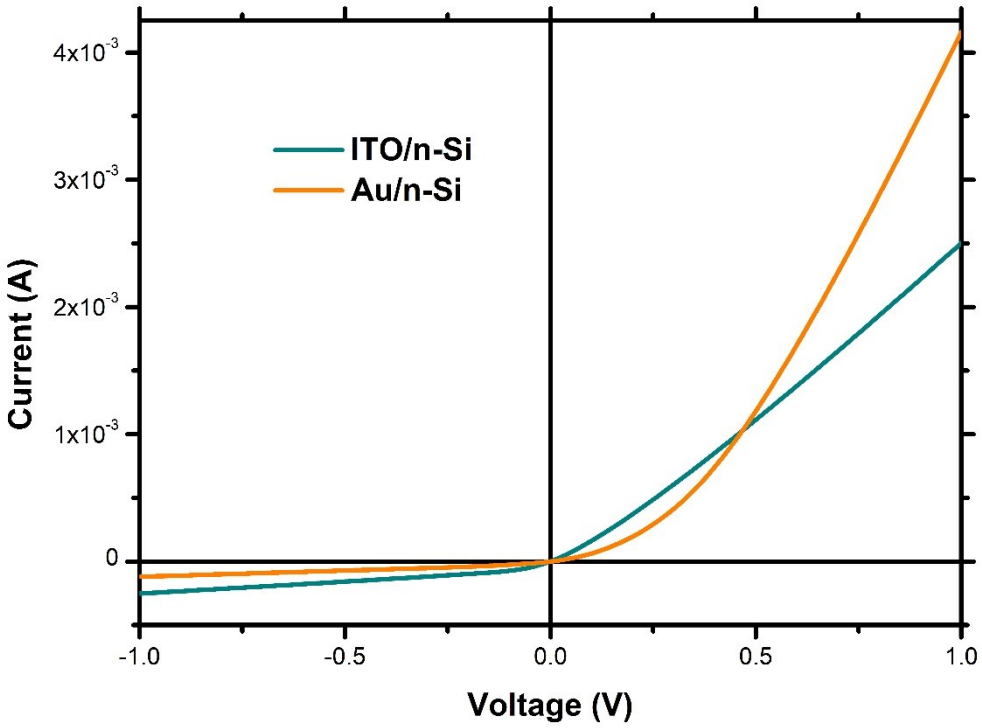

Figure S1: The current-voltage characteristics of ITO/n-Si (dark cyan) and Au/n-Si (orange) Schottky junction showing rectifying behaviour. Ohmic contact to n-Si is made using Mg.

Image of SEGs with one half illuminated and the other shadowed:

One typical ITO/n-Si SEG device in measurement condition wherein shadow has been casted on one half of the device by covering it with multiply folded Al foil is shown in figure S2.

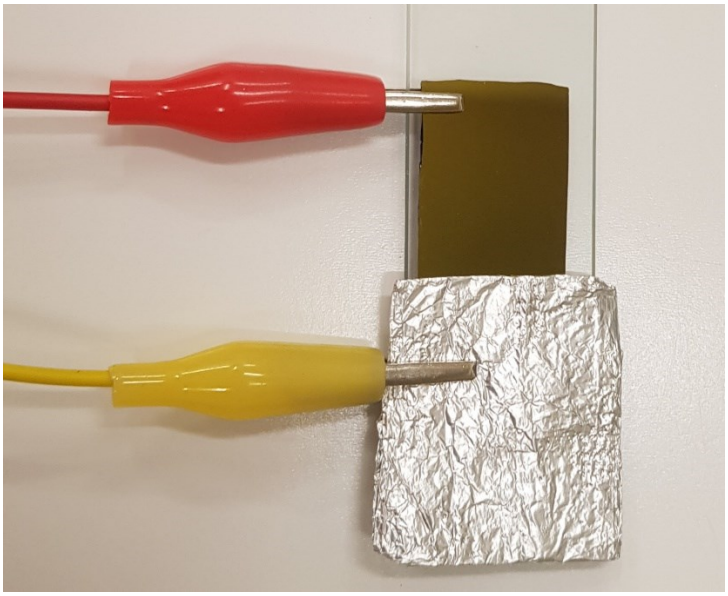

Figure S2: The I-V measurement scheme of the SEGs. Aluminium foil is to cast shadow on one half of the device. The other half is illuminated. Crocodile clips acts as electrical connection.

Cross-Sectional SEM image of ITO/n-Si SEG:

The cross-sectional SEM image of the ITO/n-Si SEG is shown in figure S3 that confirms the thickness of the ITO electrode to be ~ 160 nm.

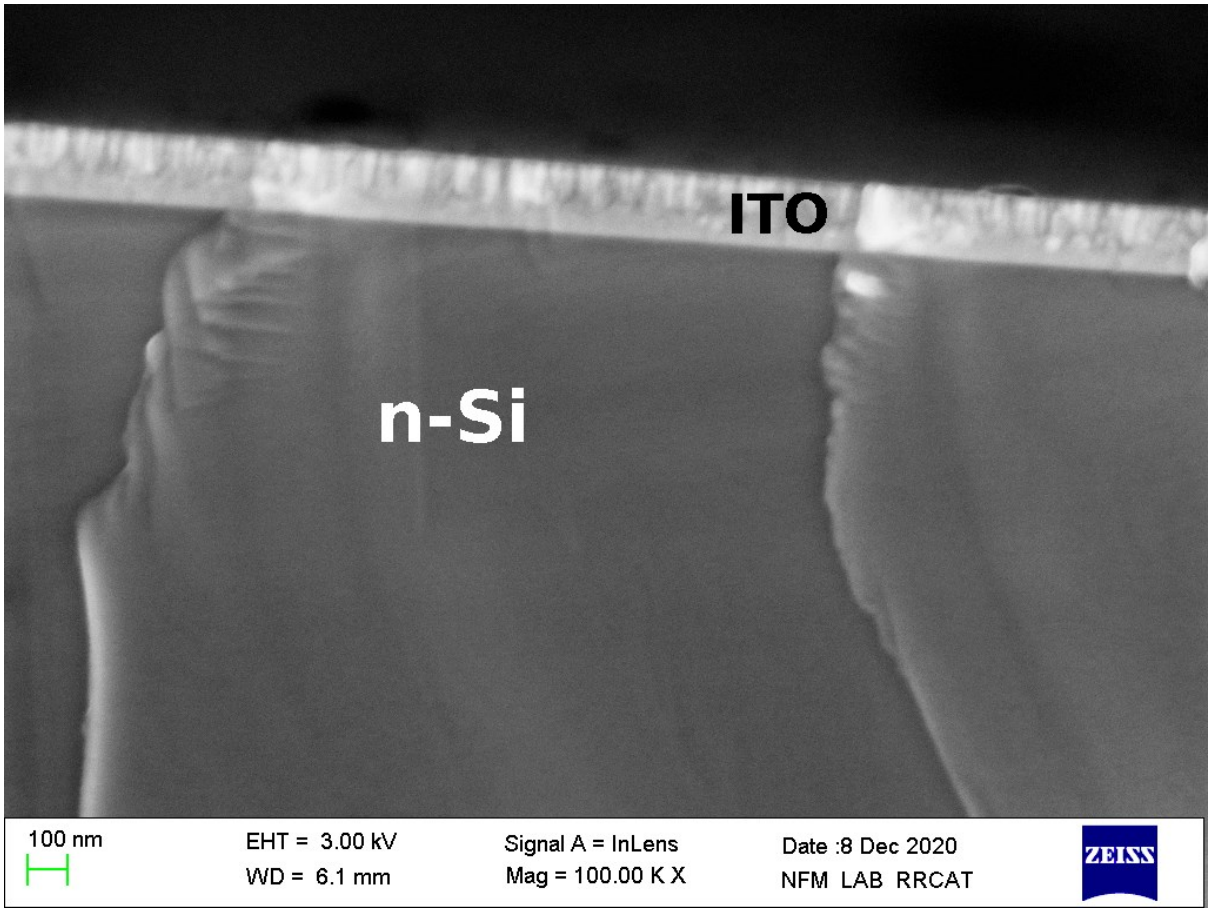

Figure S3: Cross-section SEM image of ITO/n-Si SEG.