Erratum to: Fabrication and electrical characterization of thermally deposited amorphous $\text{Se}_{0.82}\text{In}_{0.18}$ on n-Si (100)

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Due to a processing error, the presentation of Fig. 7 was incorrect. The corrected figure is given below.

Unfortunately, some errors occurred in Sect. 4 “Conclusion”. The corrected Sect. 4 “Conclusion” is given below:

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The effect of introducing 18 at.%In into a-Se, forming a- $\text{Se}_{0.82}\text{In}_{0.18}$ layer-structure composition, on the forward and reverse J – V characteristics of the fabricated Au/a- $\text{Se}_{0.82}\text{In}_{0.18}$ /n-Si/Al heterojunctions leads to various concluding remarks.

The forward current was characterized by two different voltage bias regions. At the low-bias range ($V < 0.2 \text{ V}$), the current flow is dominated by a multi-tunneling capture emission throughout the whole temperature range investigated (198–313 K), in contrast to the recombination conduction mechanism that was established in case of pure a-Se/n-Si. The introduction of such In-content into a-Se forming a-SeIn/n-Si is not enhancing the diode ideality, as it is changed from 1.27 to 4.07 at room temperature. At higher bias voltages ($V > 0.2 \text{ V}$), the conduction was only attributed to ohmic character during the temperature range of 198–273 K. During the remaining (higher) temperature range (283–313 K), the ohmic conduction is limited at a bias voltage range of $0.2 < V < 0.46 \text{ V}$, whereas the current became a space-charge limited for a bias voltage range of $V > 0.46 \text{ V}$. The obtained activation energy (E_t) value for the SCLC region is in agreement with that from the temperature dependence of dc conductivity measurements for the same range of temperature. In the reverse J – V characteristics, the reverse current increases exponentially with the applied voltage with weak temperature dependence, thus being in line with that found for pure a-Se/n-Si.