

Supporting Information

High performance UV light photodetectors based on Sn-nanodots-embedded SnO₂ nanobelts

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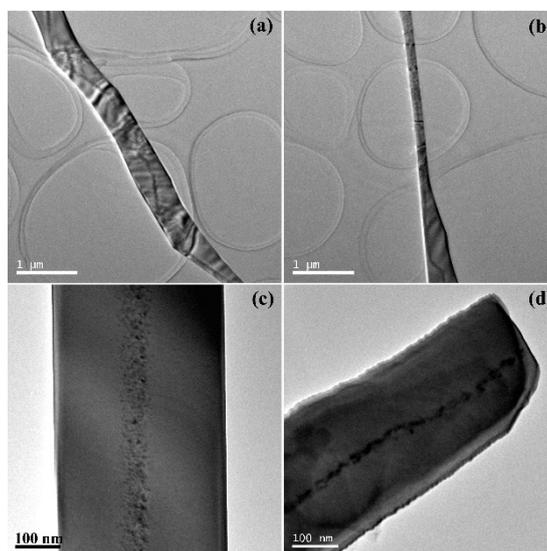


Fig. S1 TEM images of the product. Most of the nanobelts exhibit as pure nanobelts with a chain consisting of nanodots embedded in.

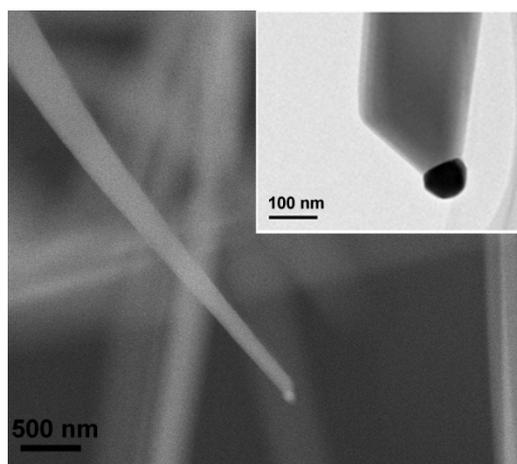


Fig. S2 SEM image and TEM image (inset) of a single Sn-embedded SnO₂ nanobelt, indicating the nanobelt is tipped with a small nanoparticle.

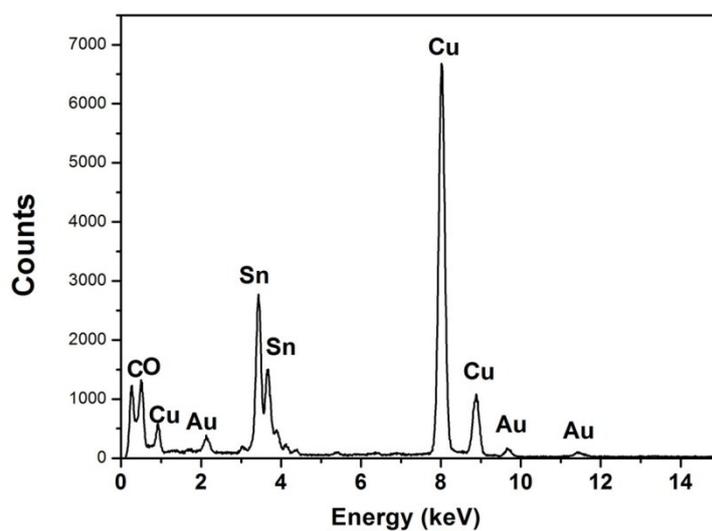


Fig. S3 EDS spectrum collected from the tipped nanoparticle shown in Fig. S1(b), displaying Sn, O and Au exist in the nanoparticle.

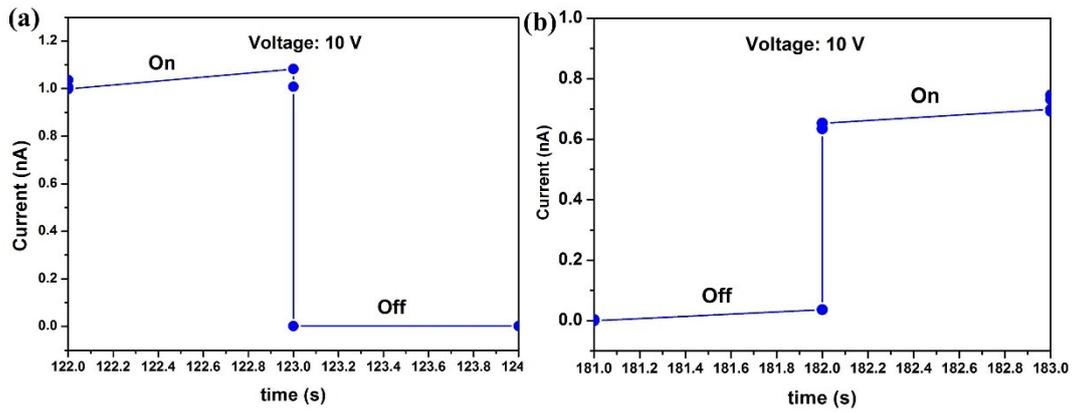


Fig. S4 Enlarged rise and decay edges for the “ON” and “OFF” current, respectively.

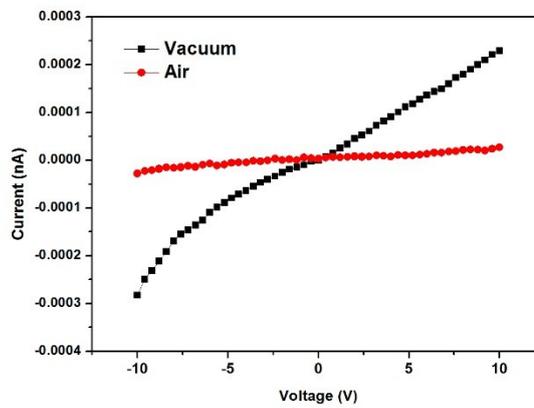


Fig. S5 I - V curves of the device measured under dark conditions in air and 1.0 Pa vacuum condition, respectively. The dark current measured under 1 Pa vacuum condition is ~ 8.4 times higher than that in air at an applied voltage of 10 V.