

Supporting information for

Surface Plasmon Resonance-induced Color-selective Au-peapodded Silica Nanowire Photodetectors with High Photoconductive Gain

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The current-voltage (I-V) of these three type individual devices reveals Ohmic contact behavior as shown in Fig (S1) at the room temperature in vacuum. We also determinate the conductivity for silica nanowire, Au NPs@silica nanowire and Au-filled@silica nanowire (Fig (S1) inset) are 230, 7.01, 0.55 Ω -cm. It was found that the conductivity of Au-filled@silica nanowire is higher than the other two type nanowire due to the electron hopping from silica shell to gold core then directly conduction in gold nanowire. For Au-NPs@silica nanowire the conduction attributable to the gold nanoparticles embedded the nanowires will increase the defects state in the nanowire, which may play the role as hopping sites leading to enhanced conductivity [23]. The low conductivity of the silica nanowire can ascribed to a lesser hopping sites for electron conduction.

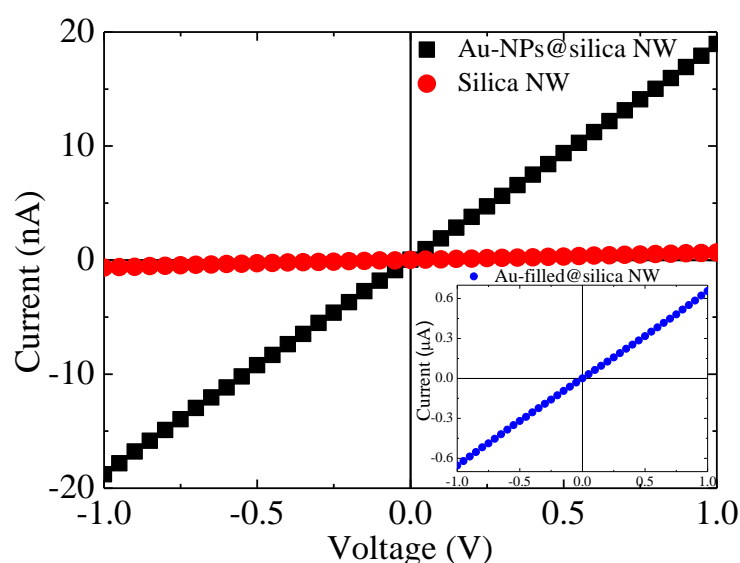


Fig. (S1). The current-voltage (I-V) of these three type individual devices.