

The diffuse reflectance spectrum of the  $\text{WO}_3$  nanorods was recorded. The diffuse reflectance measurements were converted into the equivalent absorption coefficient using the Kubelka-Munk method  $F(R) = (1 - R)^2/2R = \alpha$  in which  $R$  is reflectance,  $\alpha$  is absorption coefficient. The  $\text{WO}_3$  nanorod sample displayed a strong absorption edge at around 410 nm in Fig. S1(a). The optical bandgap value of the  $\text{WO}_3$  nanorods was calculated according to the equation:  $(\alpha h\nu) = A(h\nu - E_g)^n$  in which  $h$  is Planck's constant,  $\nu$  is the frequency of light,  $n$  is 1/2, and  $E_g$  is the bandgap value. The estimated  $E_g$  is approximately 3.0 eV for the  $\text{WO}_3$  nanorods (Fig. S1(b)).

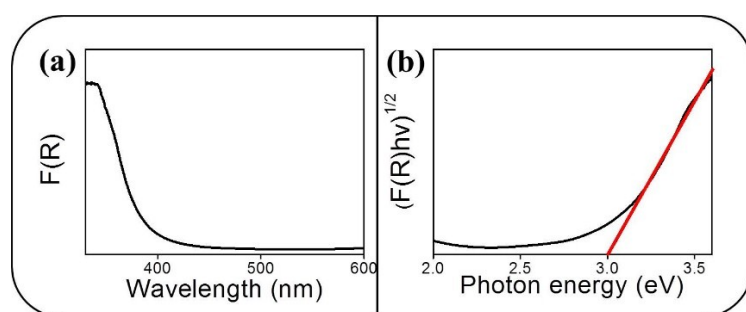


Fig. S1. (a) Optical absorbance spectrum of the  $\text{WO}_3$  nanorods grown on the R6- $\text{WO}_3$  seed layer. (b)  $(F(R)h\nu)^{1/2}$  vs. photon energy plot.