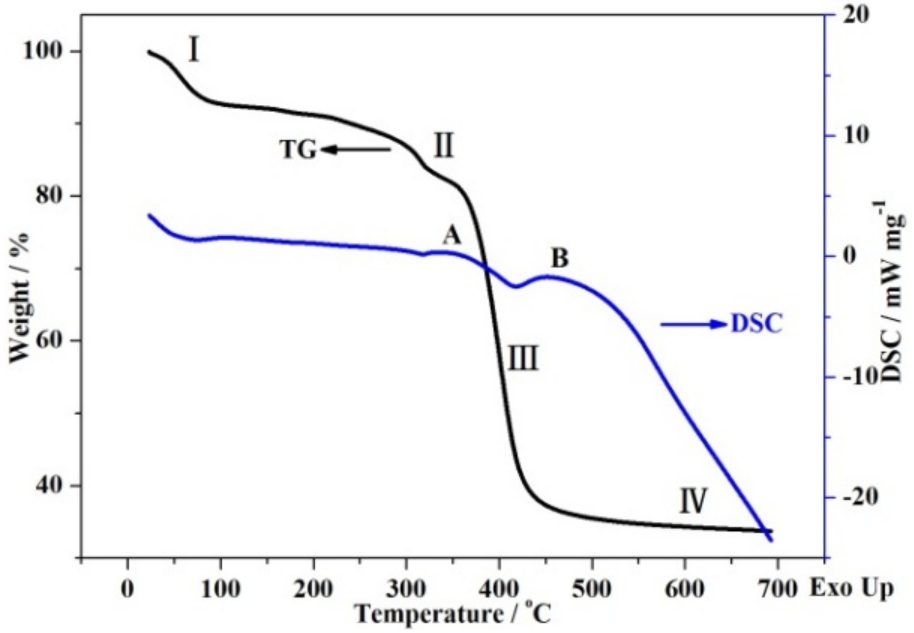

Fig S1 TG-DSC curves of the as-spun Sb-SnO_2 NW precursors

According to the TG-DSC curves, the decomposition was a four main stage process. The first weight loss below 290 °C was assigned to physical dehydration and volatilization of residual solvent in the precursors; whereas the second weight loss in the range 290-360 °C was connected to the decomposition of the PVP side chains. An exothermic peak in the DSC curves was observed in this temperature range, corresponded to the second mass loss step. The third weight loss in the range 360-550 °C was connected to the decomposition of the PVP main chains and the formation of Sb-doped SnO_2 nanowires phase. An exothermic peak at 450 °C in the DSC curves ascribed to the third mass loss step. Above 550 °C, no peaks were appeared in the DSC curves and the weight loss started to level off in the fourth process. It indicated that the moisture and solvent is completely volatilized as well as the complete oxidative decomposition of the organic substances and inorganic salts in IrO_2/Sb-SnO_2 NW precursors.

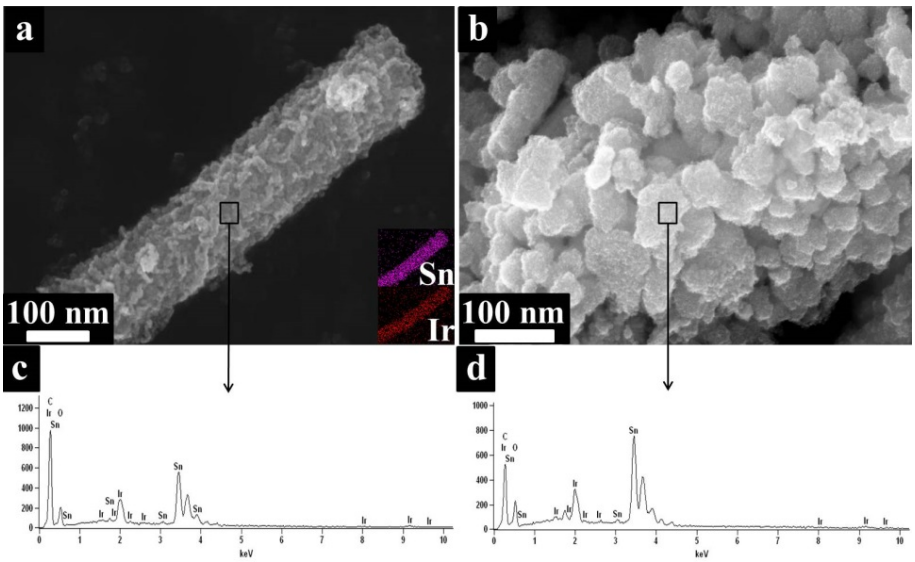

Fig S2 SEM images (a) (inset is SEM and the corresponding elemental mapping from EDX mapping image) and EDX images (c) of IrO_2/Sb-SnO_2 NW, SEM images (b) and EDX images (d) of IrO_2/Sb-SnO_2 NP

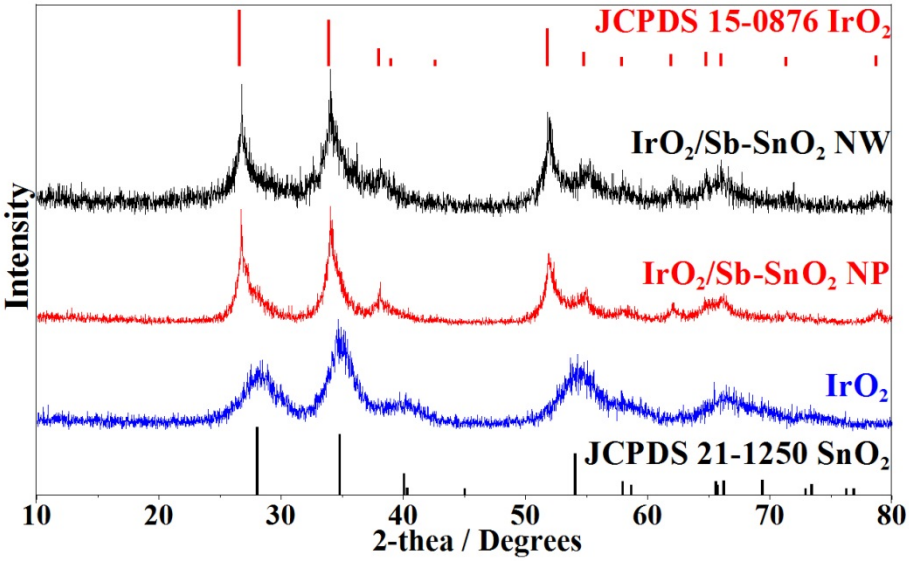

Fig S3 XRD patterns of IrO_2/Sb-SnO_2 NW, IrO_2/Sb-SnO_2 NP and IrO_2

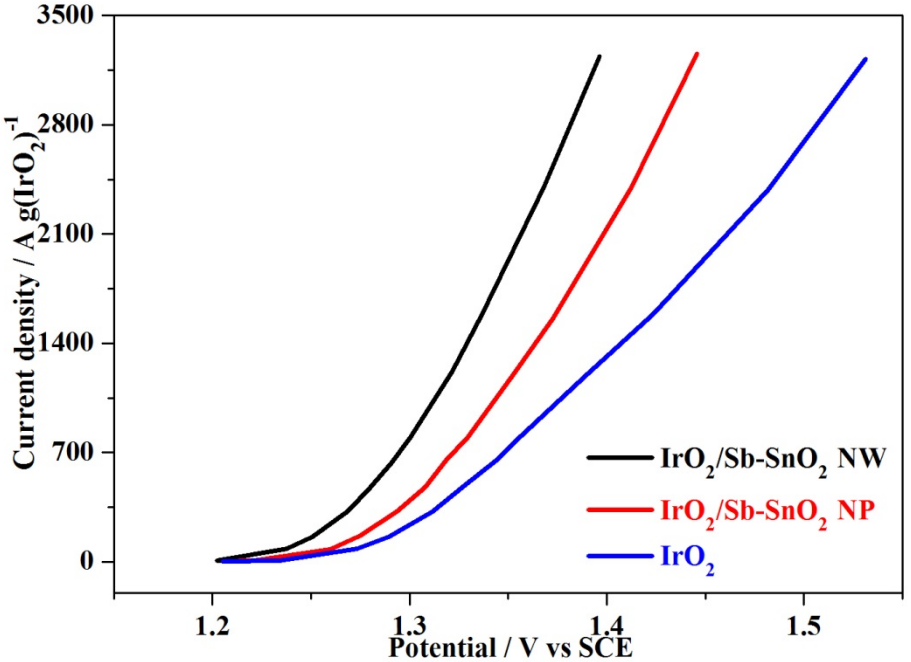

Fig S4 Mass normalized steady-state polarization curves of IrO_2/Sb-SnO_2 NW, IrO_2/Sb-SnO_2 NP and IrO_2

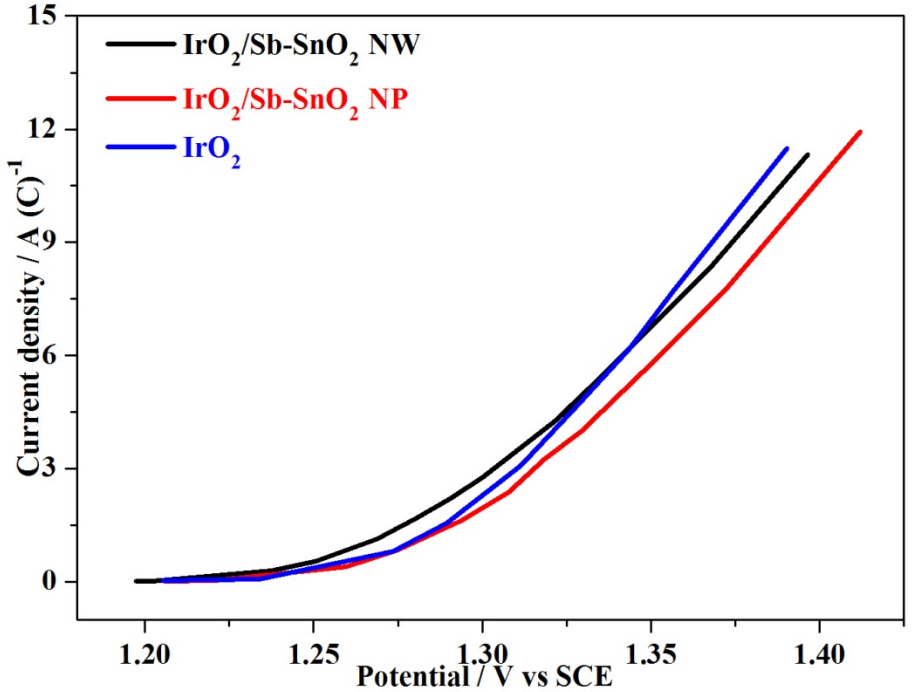

Fig S5 The total charge normalized steady-state polarization curves of IrO_2/Sb-SnO_2 NW, IrO_2/Sb-SnO_2 NP and IrO_2

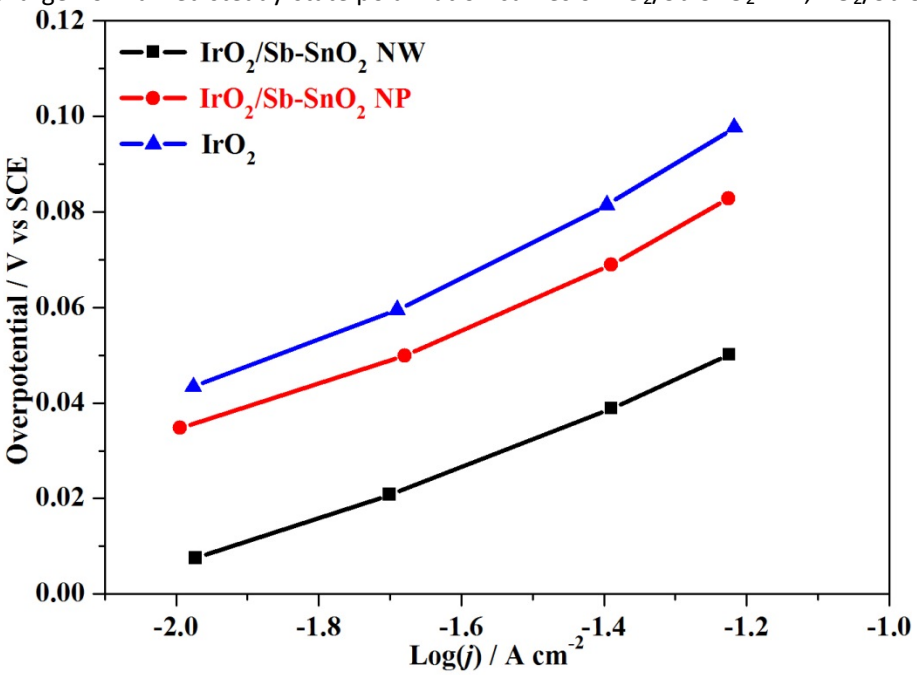

Fig S6 Tafel curves of IrO_2/Sb-SnO_2 NW, IrO_2/Sb-SnO_2 NP and IrO_2