Supplementary Information for

Single reactor deposition of silicon/tungsten oxide core-shell heterostructure nanowires with controllable structure and optical properties

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Figure S1 typical XPS spectrum of the Si/WO₃ core-shell NWs.
Figure S2 Tauc’s plots of the WO$_3$ thin films prepared at different $T_f$. 
Figure S3 Tauc’s plots of Si NWs, and Si/WO$_3$ core-shell NWs prepared at different $T_f$. The Tauc’s plots of the Si/WO$_3$ core-shell NWs revealed the indirect optical band gap of both Si (lower energy) core and WO$_3$ (higher energy) shell.
Figure S4 Typical current density versus potential plots of the WO$_3$ films under dark and illumination.
Figure S5 Photocurrent density versus time plot of the Si/crystalline WO$_3$ core-shell NWs.