Electronic Supplementary Material (ESI) for Nanoscale
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Supporting Information

Doping dependent crystal structures and optoelectronic properties of n-type CdSe:Ga nanowries

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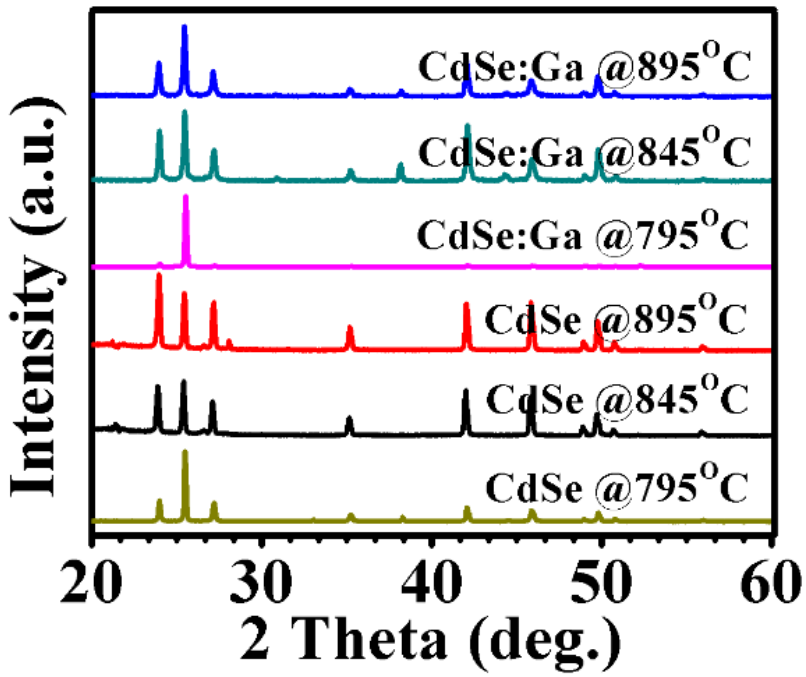

Figure 1S. XRD patterns of both the undoped and Ga-doped NWs synthesized at different source evaporation temperature.

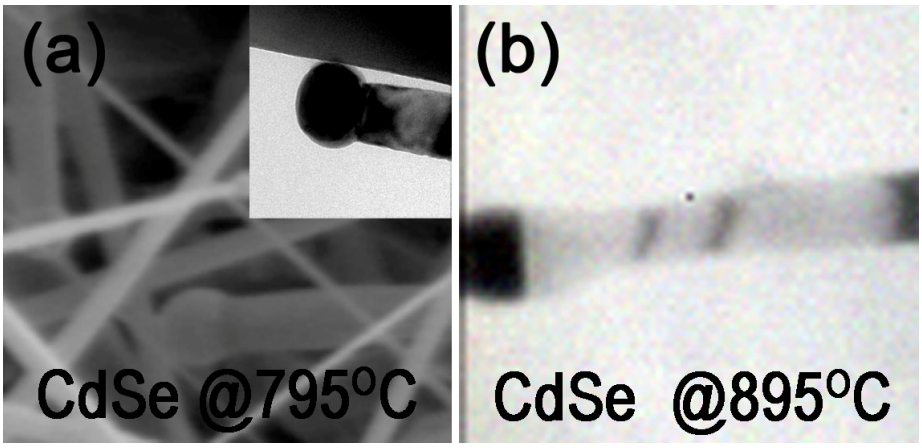

Figure 2S. (a) SEM image of the undoped CdSe NWs synthesized at 795 □ with a ball shape catalyst cap. Inset shows the corresponding low-resolution TEM image. (b) Low-resolution TEM image of the undoped CdSe NW synthesized at 895 □, which has a half-ball shape catalyst cap.

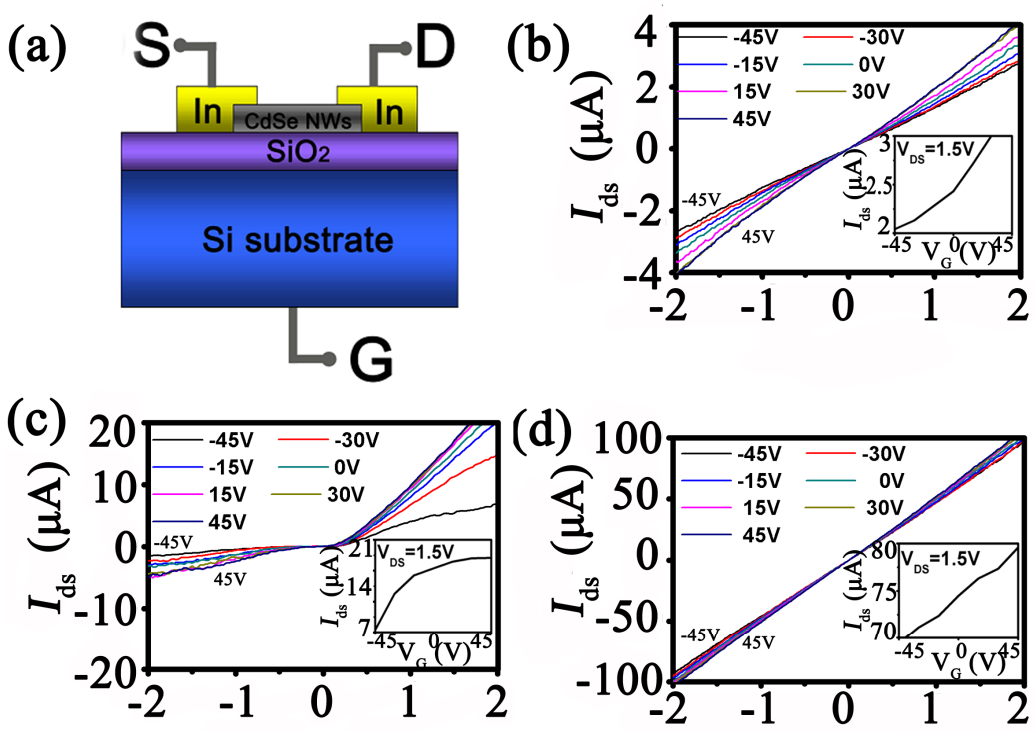

Figure 3S. (a) Schematic illustration of the back-gate nanoFET based on individual CdSe NWs. (b), (c), and (d) show the device characteristics of the back-gate NW FETs fabricated from N1, N2, and N3, respectively.

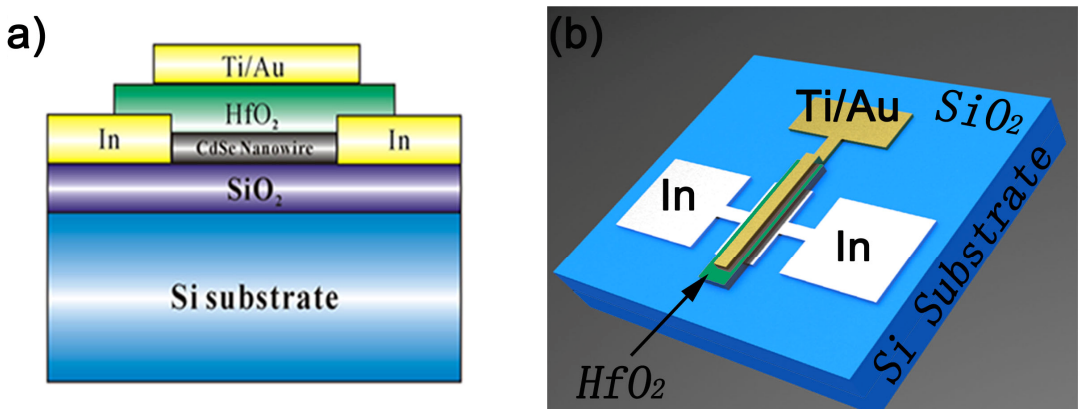

Figure 4S. Schematic illustration of the top-gate nanoFETs based on the individual CdSe:Ga NWs with high-κ HfO_2 dielectric. (a) cross-sectional view. (b) tilted view.