

Fig. 1: Schematic cross-sections of high-mobility InAs-AISb core-shell NW with Si delta-doped InAs QW (a) and InAs-InAlAsSb core-shell NW with delta-doping in the barrier (b); (c) Corresponding CB and VB profile of the modulation-doped InAs-InAlAsSb core-shell NW, exhibiting the formation of a 2DEG in the NW core; (d) SEM image of typical selective area growth on SiO₂-masked Si(111) substrate.

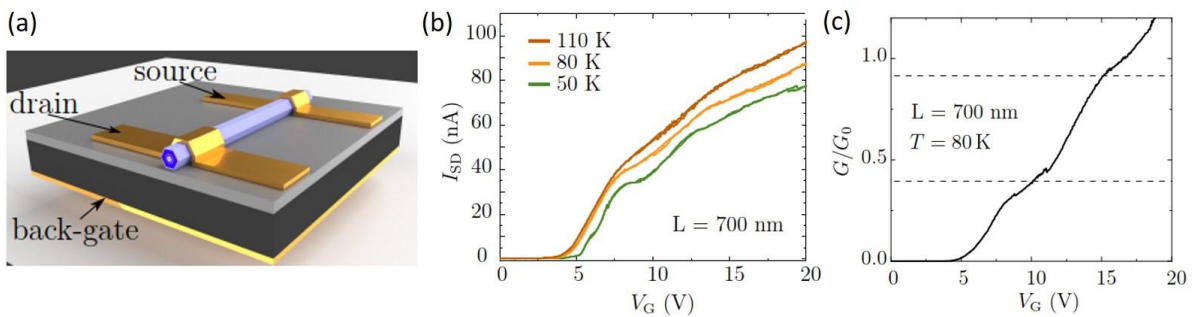


Fig. 2: (a) 2-terminal NW-FET device fabricated from a single InAs-AISb core-shell NW in back-gate configuration; Transfer characteristics at different temperatures reveal 1D-conductance steps shown in the (b) I_{SD} - V_G and (c) G vs. V_G plots.