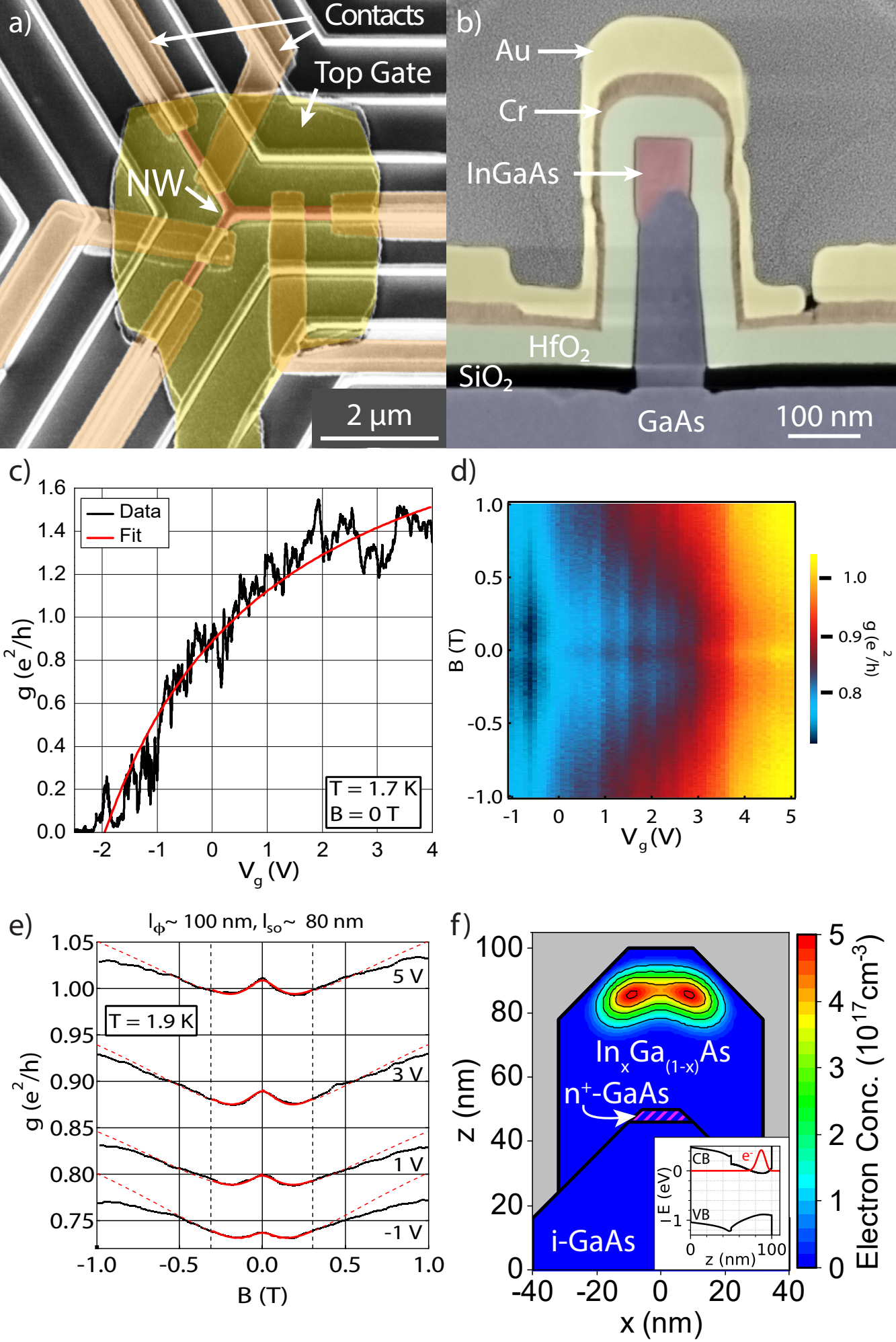
a)
Contacts
Top Gate
NW
2 µm
b)
Au
Cr
InGaAs
HfO2
SiO2
GaAs
100 nm
c)
Data
Fit
T = 1.7 K
B = 0 T
g (e2/h)
Vg (V)
d)
B (T)
Vg (V)
g (e2/h)
e)
lφ~ 100 nm, lso~ 80 nm
T = 1.9 K
5 V
3 V
1 V
-1 V
g (e2/h)
B (T)
f)
InxGa(1-x)As
n+-GaAs
i-GaAs
CB
VB
e-
E (eV)
z (nm)
z (nm)
x (nm)
Electron Conc. (10^17 cm^-3)