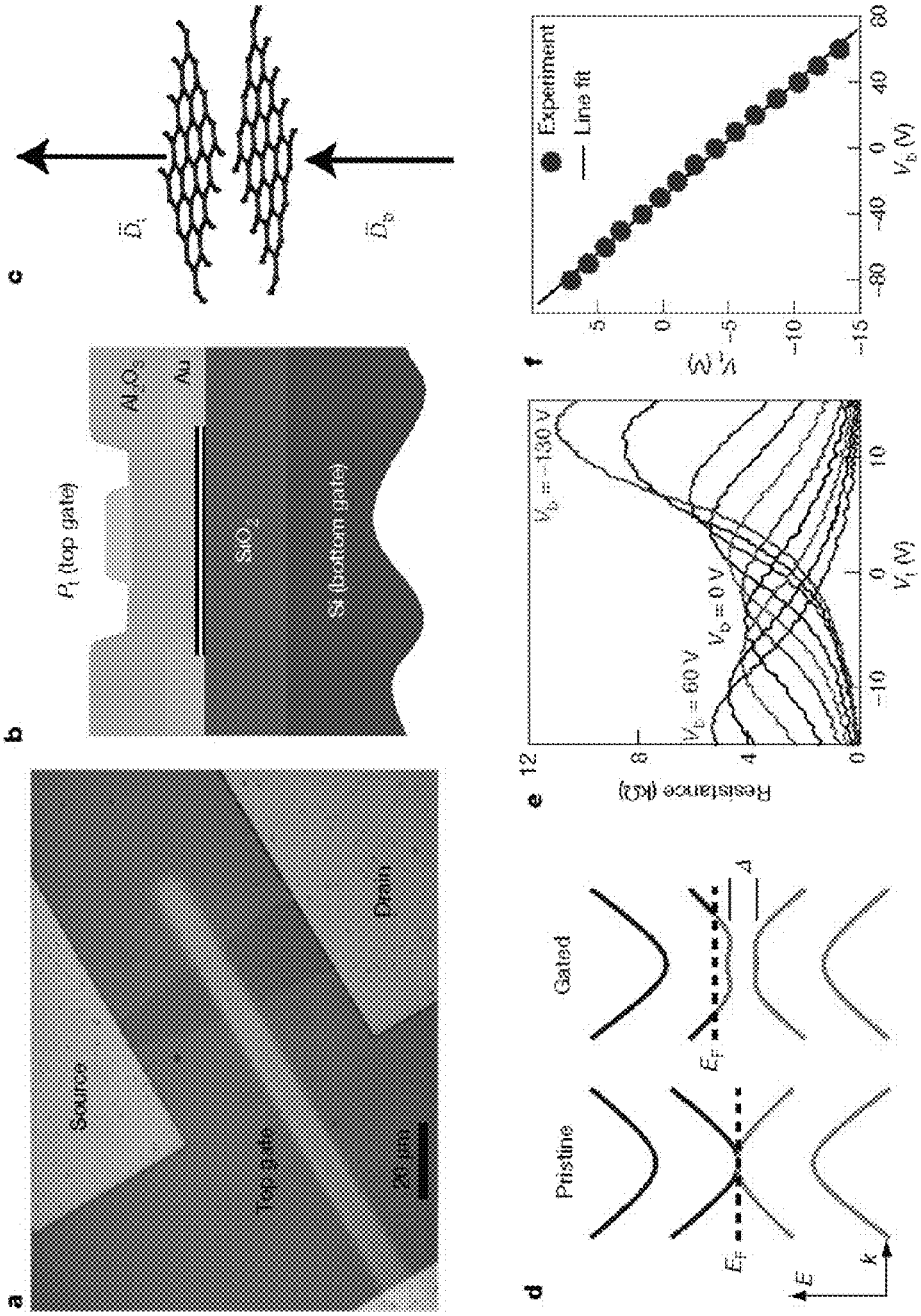
a
Source
Top gate
Drain
10 μm
b
P_t (top gate)
Al_2O_3
Au
SiO_2
Si (bottom gate)
c
$\vec{D}_t$
$\vec{D}_b$
d
Pristine
Gated
E_F
E_F
A
E
k
e
Resistance (kΩ)
V_b = −130 V
V_b = 60 V
V_b = 0 V
V_t (V)
f
Experiment
Line fit
V_t (V)
V_b (V)

Fig. 1