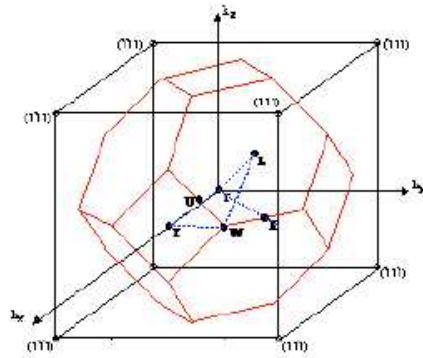


# Free electron bands for fcc structure



$\Gamma$  – center of the BZ

X – [100] intercept;

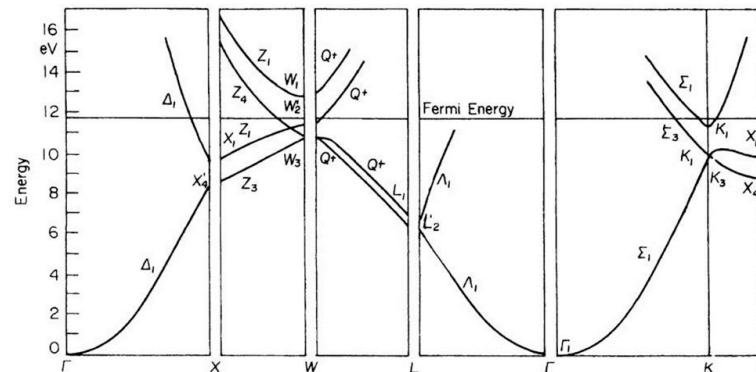
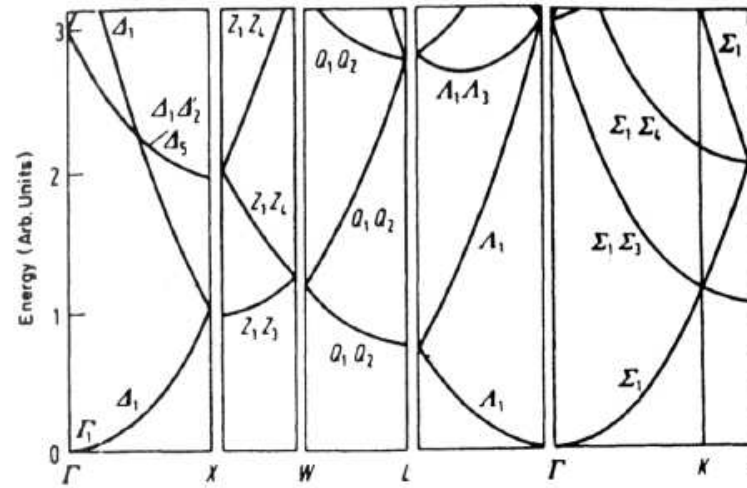
K – [110] intercept;

L – [111] intercept;

$\Gamma$  – X path  $\Delta$

$\Gamma$  – K path  $\Sigma$

$\Gamma$  – L path  $\Lambda$

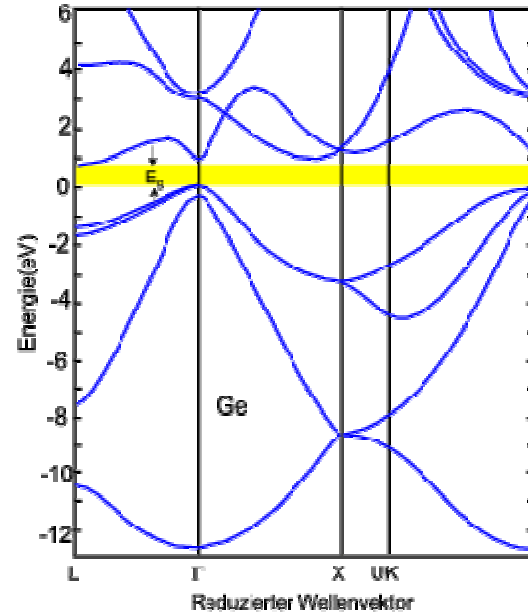
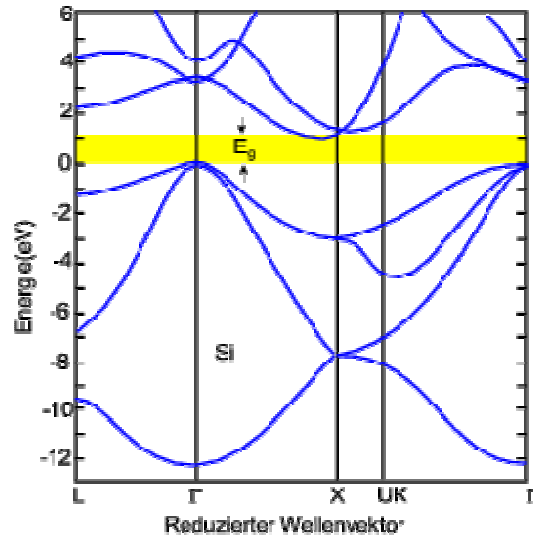


Al  
Z=3

# bandstructure semiconductor

fcc-crystal

Si/Ge

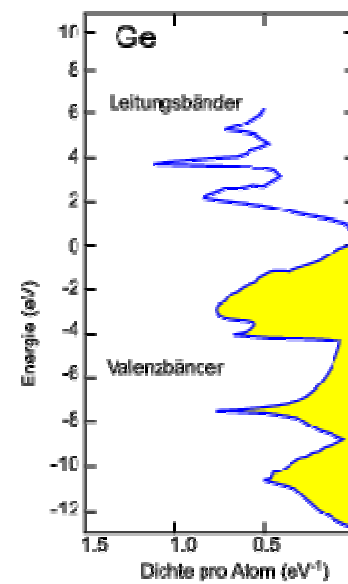
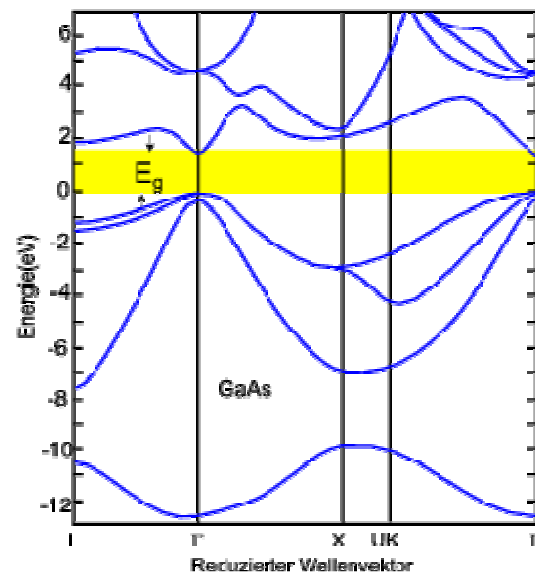


8 electrons  
per unit cell

4 bands occ.

for comparison: Al

GaAs



density of states

