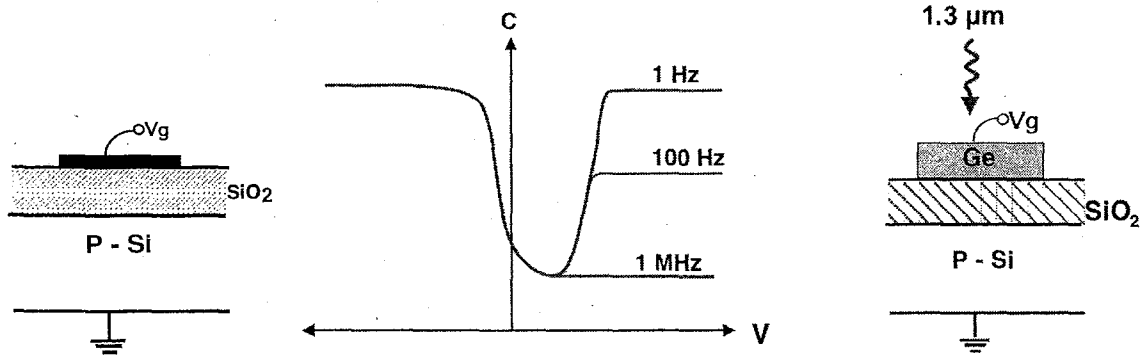
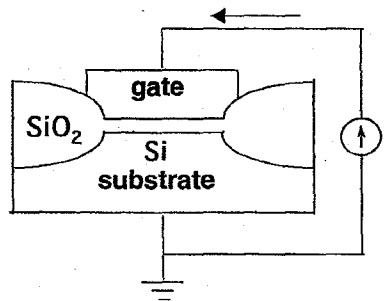


Krishna Saraswat - PhD Quals 2006 Question



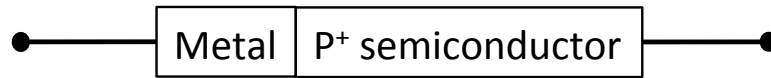
The CV characteristics of Al/ SiO₂/Si MOS capacitor are shown. If the gate electrode is changed to Ge with doping identical to the Si substrate and you illuminate this device with 1.3 μm light what will be the CV characteristics with and without the light?

PhD Quals Question 2006-07
Krishna Saraswat



If the device shown in the figure is connected to a current source what kind of current voltage characteristics would result?

Can light emission take place from a metal/p⁺ semiconductor junction?



From sunrise to sunset is there a change in the energy produced by a solar cell?

Number of photons reduces at sunrise and sunset.

Spectrum changes, more red light at sunrise and sunset.

Temperature increases during mid day.

How will you improve the energy produced during early and late hours of the day?

Multi-junction cell

If an LED is heated at 800C what will be the emission spectrum?