Assignment - Electrostatics In Electron Ceold) field emission Electrons that leave a cathode will experience the potential due to the image charge in the electrod and also due to the external electric field (E). The external electric field lowers the resultant potential by the amount AM(Eo). If we neglect tunneling and thermonic emission, electrons at the cathod will begin to leave the electrod once the resultant potential hip will be lewer than the election work function (4) in the electrode. Find DM (Eo) -? Determine the threshold value of the electric field (Exp) at which am = 4 Estimate Eth for the copper electrodes. electrodes. Which metals will provide lower the

Cathode

Electroit.

potent
energy

Work

function

Petertroit

Potent
energy

Resultant
Potent
energy
energy
in Cu

Relectroid

Vacuum