

ELECTROCHEMISTRY

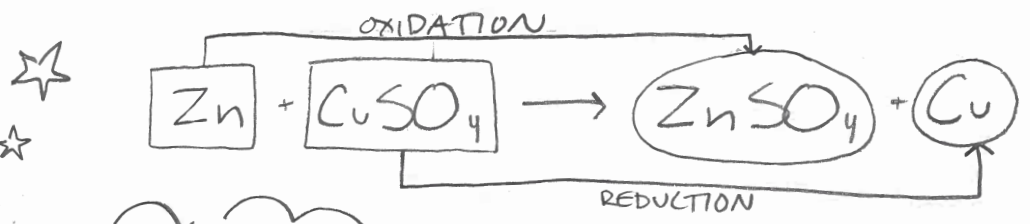


MICHAEL FARADAY

O XIDATION | L OSS of e^-
 R EDUCTION | G AIN of e^-

REDOX REACTIONS

FARADAY'S
 CONSTANT (F) :
 96485 COULOMBS
 PER MOLE e^-

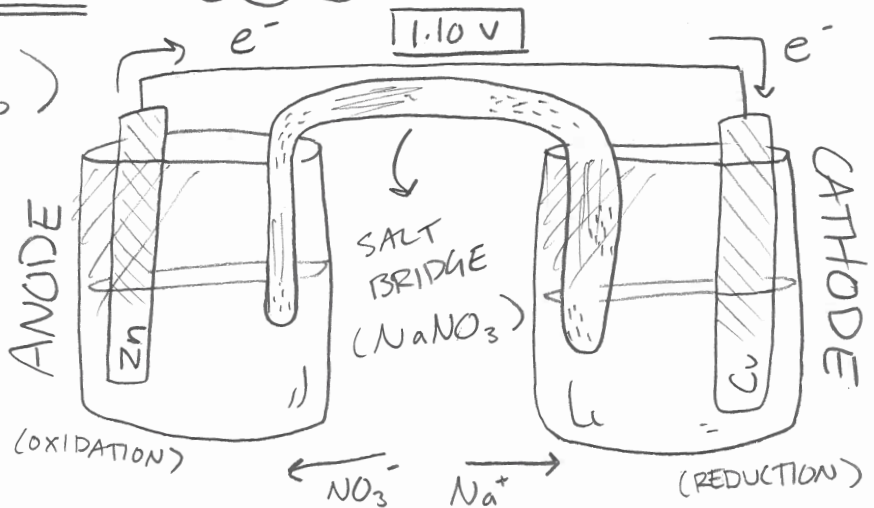


SI UNIT OF ELECTRICAL CHARGE

VOLTAIC CELL

$$E^\circ_{\text{CELL}} = E^\circ_{\text{RED}} + (-E^\circ_{\text{RED}})$$

ANODE CATHODE
 1 M 298 K
 1 atm



VOLTAGE = ELECTRICAL POTENTIAL PER UNIT CHARGE (1 V = J/C)

$$\Delta G = -nFE^\circ$$

Free energy # of mol of e^-

BATTERIES *
 COMMERCIAL BATTERIES ARE SELF-CONTAINED VOLTAIC CELLS!

