

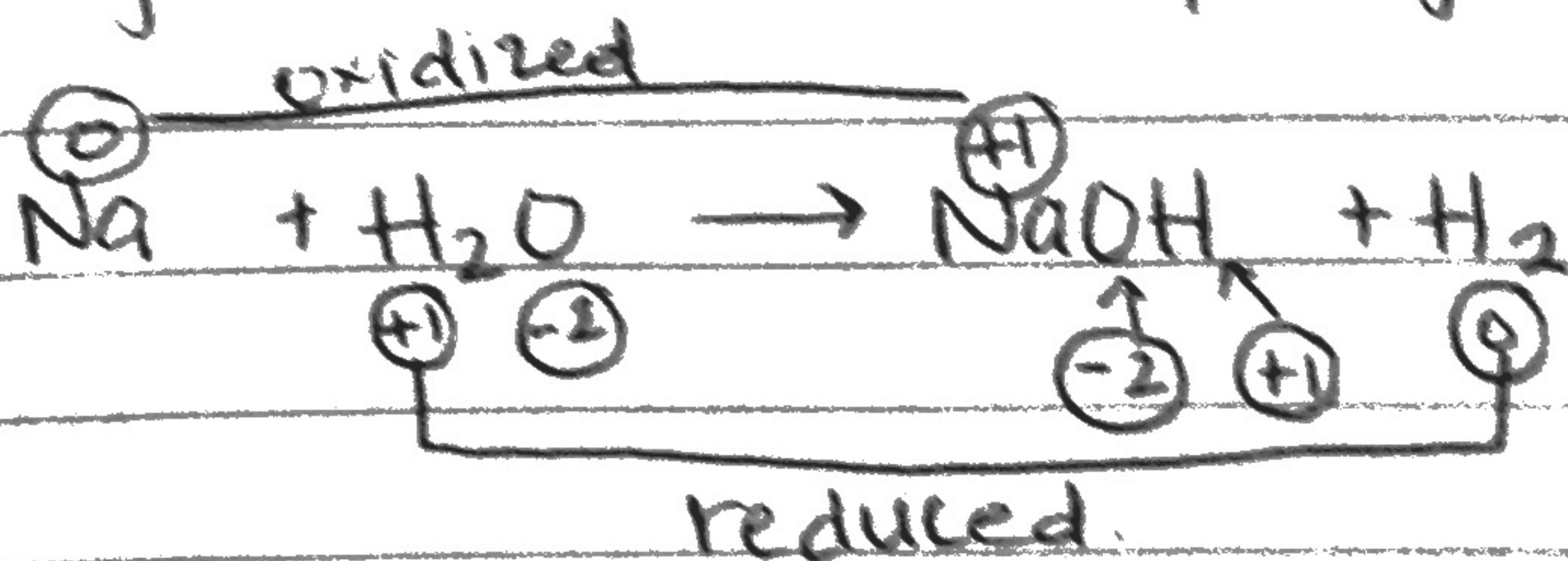
- stable species gets reduced, other one gets oxidized.

Lecture 4-15-14

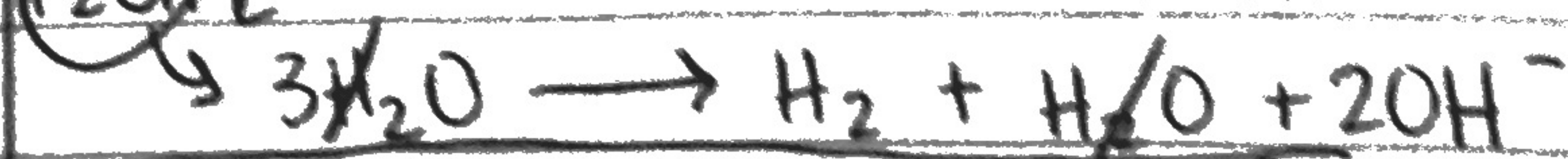
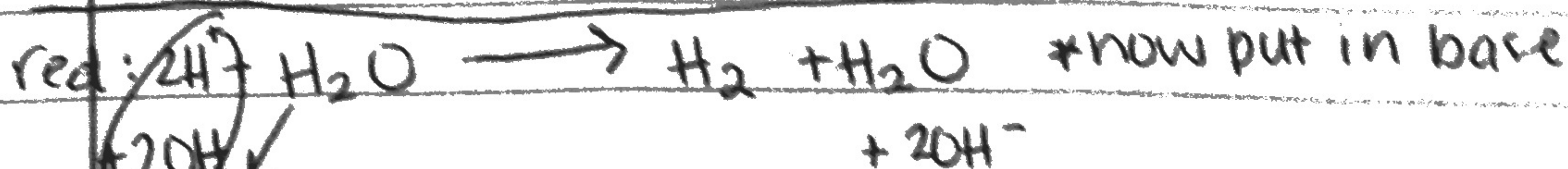
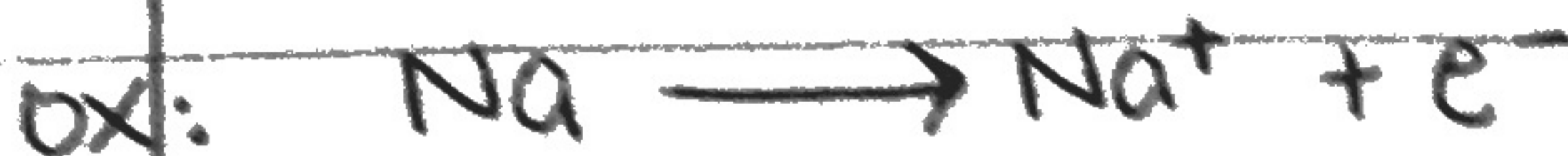
- battery: goes to high energy to low energy until it gets to equilibrium → dead battery.

- bigger the diff b/w ox. & red, the bigger the potential.

- oxidizing agents often have oxygen, reducing agents often has hydrogen.



* balance in base
b/c NaOH = base.



* now add & do full balance rxn.

- bigger difference b/w energy = bigger potential for battery.

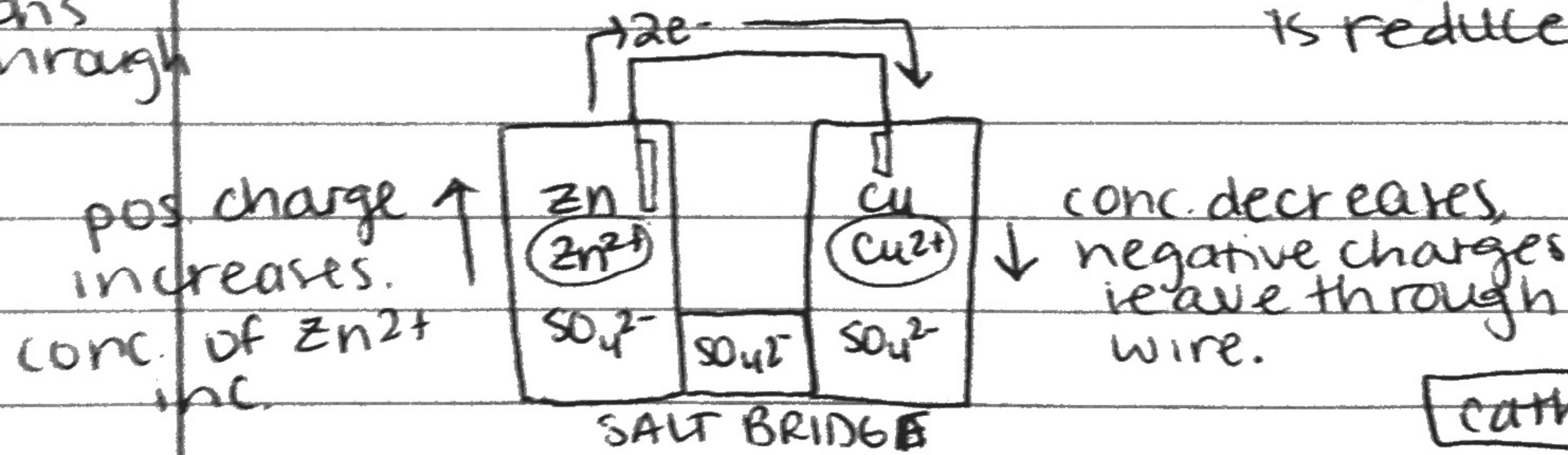
*slide with battery.

Copper getting bigger, Al getting smaller.
Cu conc. dec, Al conc. inc.

- more active metal = higher in energy

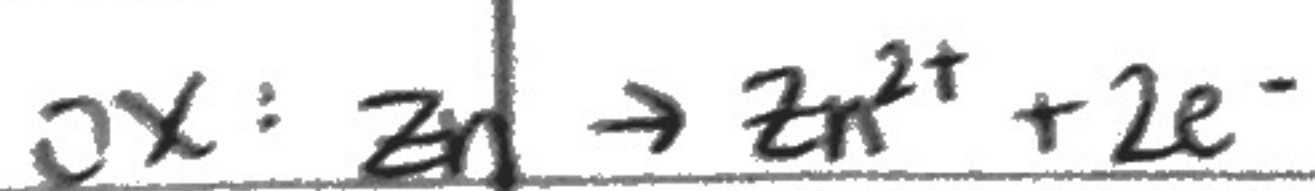
Zn is high energy, Cu lower; Zn is oxidized, Cu is reduced.

electrons flow through wires.



cathode: red rxn
red: $Cu^{2+} + 2e^- \rightarrow Cu$

Anode: ox rxn



metal that sticks on this side, where ox happens.

Zn turning into ions; going in soln.

Cu^{2+} picks up electrons and turns into Cu.

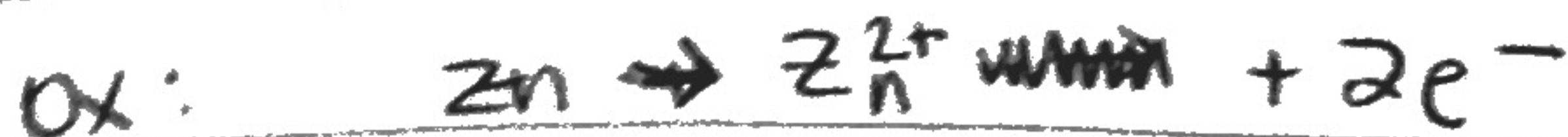
where electrons come out. leave anode \rightarrow Cathode.

- electrodes going to cathode, since sulfate is counter ion, it will move to anode to counter the pos. charge build up.

AN OX

RED CAT

POTATO CLOCK:



acid red

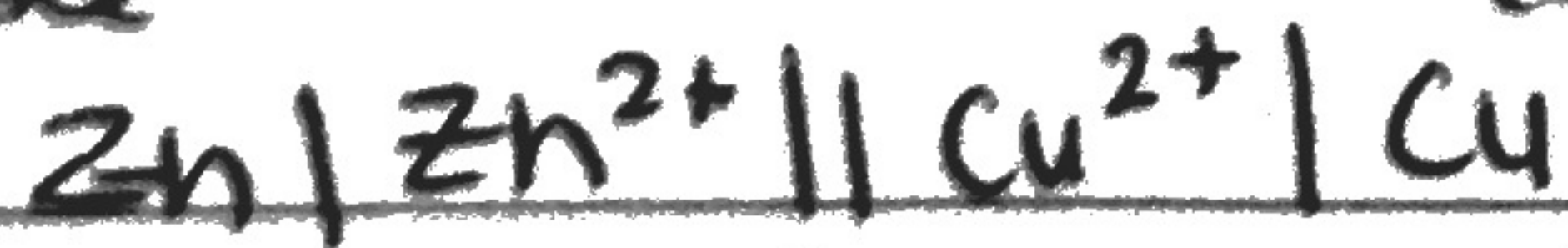


|| = salt bridge

| = show diff. compds of each $\frac{1}{2}$ rxn.

anode

cathode



'oxidation' 'reduction'