

## Answer on the question #49079, Chemistry, Physical Chemistry

### Question:

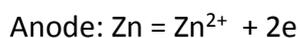
Ni/Ni<sup>2+</sup>//Zn<sup>2+</sup>/Zn system emf increase by addition of dimethylglyoxime in left hand electrode.why?

### Answer:

The electromotive force (EMF) of the electrochemical element depends on the concentrations of oxidizing/reducing particles. This dependence is explained by Nernst equation:

$$E = E^0 - \frac{RT}{nF} \ln[c]$$

The processes that take place in the cell:



$$\text{EMF} = E(\text{cathode}) - E(\text{anode})$$

$$\text{EMF} = E^0 - \frac{RT}{nF} \ln[\text{Ni}^{2+}]$$

One can note, that with decreasing of nickel concentration EMF increases. The addition of dimethylglyoxime will decrease nickel cations concentration:

