## Chemie

## **Der Blei-Akkumulator**

## **Entladevorgang**

Negativer Pol (Anode, Oxidation):

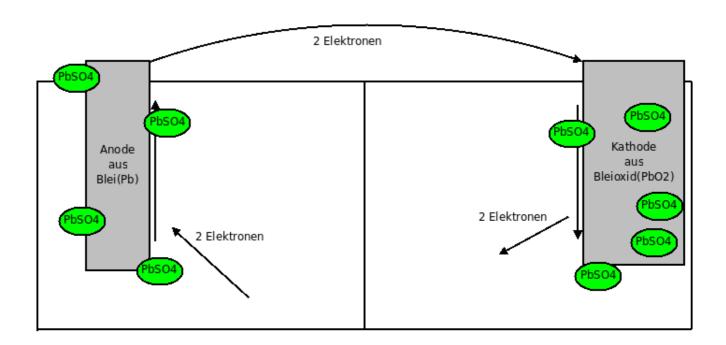
$$Pb + SO_4^{2-} \rightarrow PbSO_4 + 2e^-$$

Positiver Pol (Kathode, Reduktion):

$$PbO_2 + SO_4^{2-} + 4H_3O^+ + 2e^- \rightarrow PbSO_4 + 6H_2O$$

Gesamtreaktion:

$$Pb + PbO_2 + 2H_2SO_4 \rightarrow 2PbSO_4 + 2H_2O$$



## Ladevorgang

Negativer Pol (Anode, Oxidation):

$$PbSO_4 + 2e^- \rightarrow Pb + SO_4^{2-}$$

Positiver Pol (Kathode, Reduktion):

$$PbSO_4 + 6H_2O \rightarrow PbO_2 + SO_4^{2-} + 4H_3O^+ + 2e^-$$

Gesamtreaktion:

$$2PbSO_4 + 2H_2O \rightarrow Pb + PbO_2 + 2H_2SO_4$$

