

## 2. Stationary currents and magnetic field

Ohm's law

$$\underline{j} = \sigma \underline{E}$$

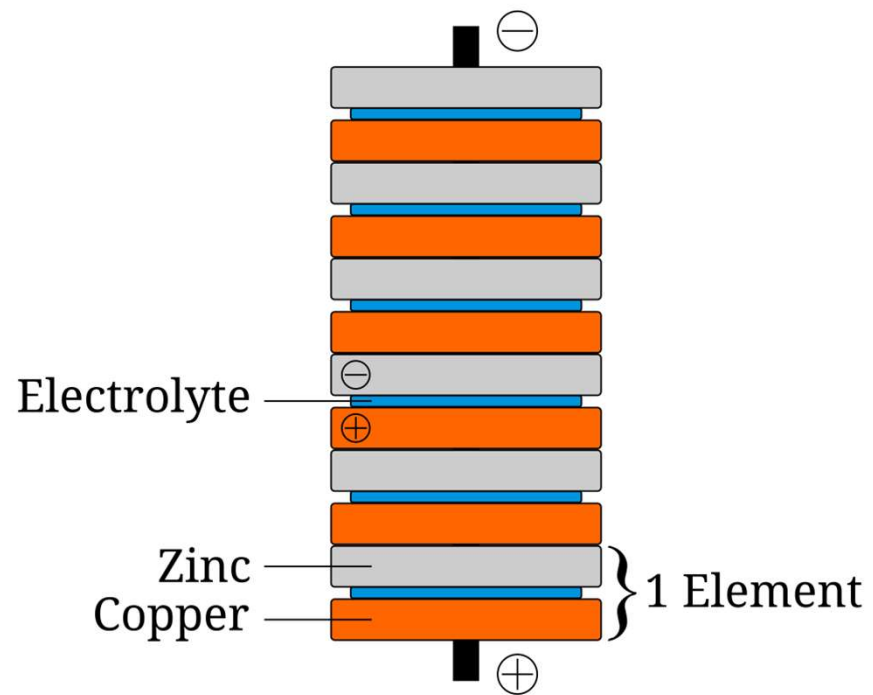
$$\Delta U^a(b) = \frac{l}{\sigma A} I = RI$$



**Georg Simon Ohm**

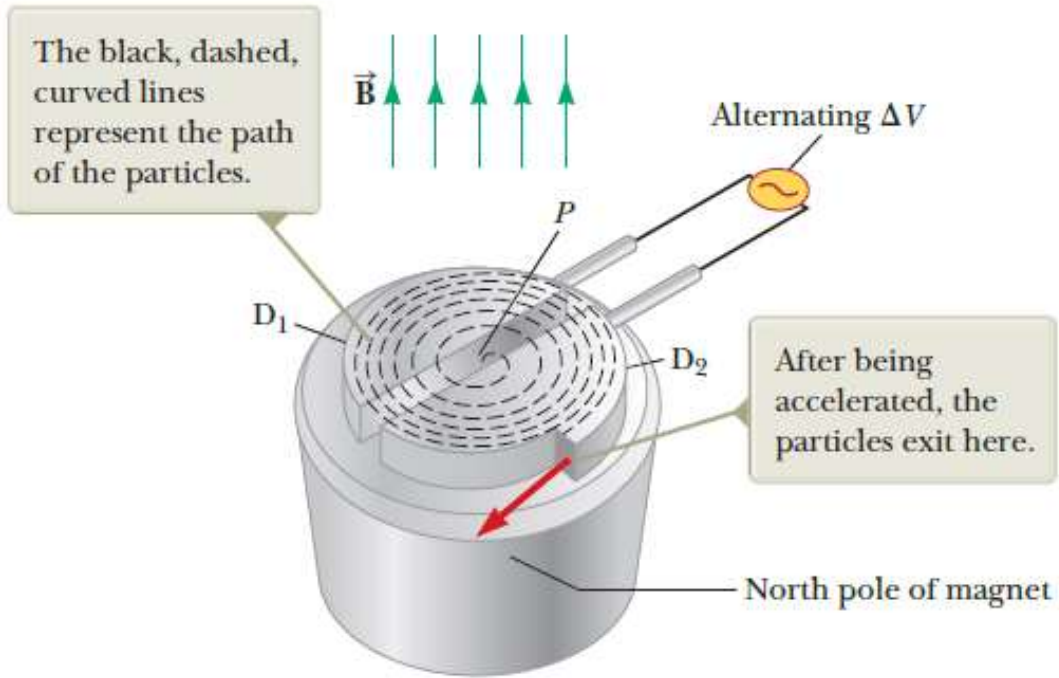
*German physicist (1789–1854)*  
Ohm, a high school teacher and later a professor at the University of Munich, formulated the concept of resistance and discovered the proportionalities expressed in Equations 26.6 and 26.7.

# First electrochemical battery: Voltaic pile



Alessandro Volta

# Cyclotron (20 MeV)



a



b

# Synchrotron (LHC, 6.8 TeV)

