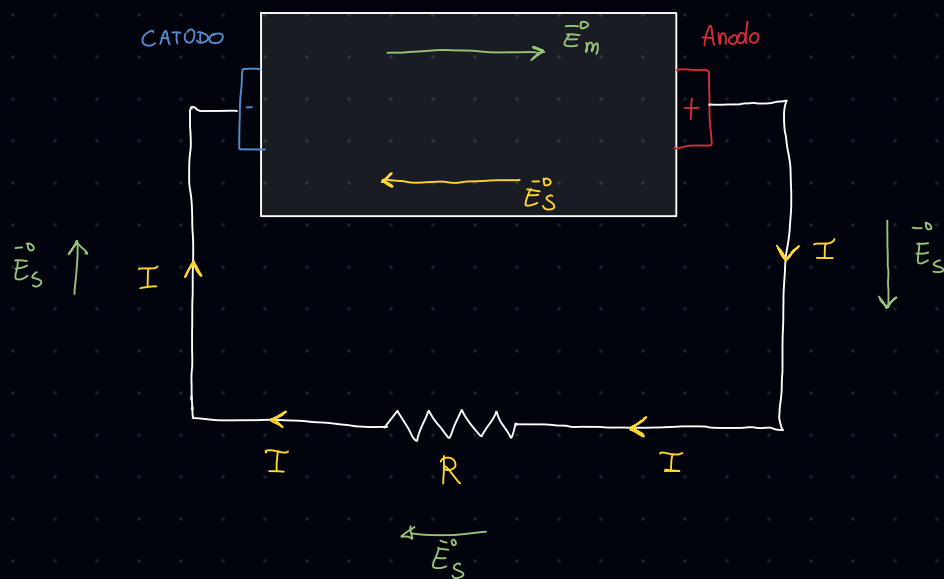


Forza elettromotrice



$$L_{\vec{E}} = \int_A^B \vec{E}_S \cdot d\vec{e} = \oint_{A=B} \vec{E}_S \cdot d\vec{e} = 0 \quad \text{Deve esserci un campo NON CONSERVATIVO}$$

CONSERVATIVI

$$\rightarrow L_{\text{tot}} = \oint \vec{E} \cdot d\vec{e} = \cancel{\oint_A^B \vec{E}_S \cdot d\vec{e}} + \cancel{\oint_A^B \vec{E}_S \cdot d\vec{e}} + \int_B^A \vec{E}_m \cdot d\vec{e}$$

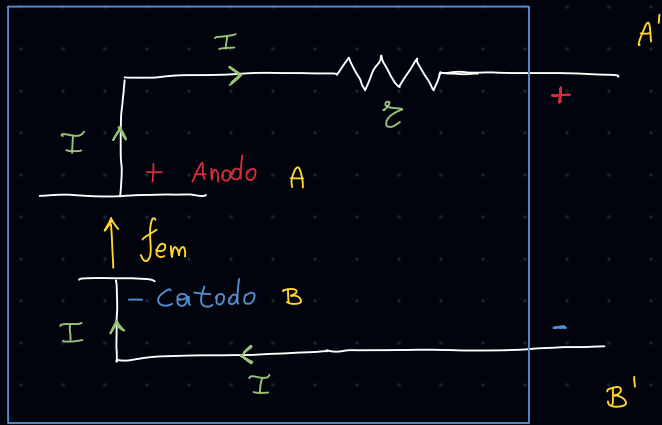
$$\Rightarrow L = \int_B^A \vec{E}_m \cdot d\vec{e} \quad (1) \quad \text{Definiamo } f_{em} = \frac{L}{q} \Rightarrow L = q \cdot f_{em}$$

Forza em

$$\Rightarrow L = q \cdot \int_B^A \vec{E}_m \cdot d\vec{e}$$

Lavoro che il campo em compie per spostare la carica q da B ad A

Generatore



Legge di Ohm $V_A - V_B = R \cdot I$

$$\boxed{V_{A'} - V_{B'}} = (V_A - V_B) - R \cdot I \quad (2)$$

Gen NON Id.

Dalla (1) $f_{em} = \Delta V$

$$\Rightarrow \underline{\Delta V' = f_{em} - R \cdot I} \quad (a)$$

$$\Delta V' = \boxed{f_{em} - z \cdot I = R \cdot I} \Rightarrow f_{em} = R \cdot I + z \cdot I \Rightarrow \underline{f_{em} = I(R + z)} \quad (b)$$

$$\underline{I = \frac{f_{em}}{R + z}} \quad c \quad \Delta V = R \cdot I \Rightarrow I = \frac{\Delta V}{R} \Rightarrow \frac{\Delta V}{R} = \frac{f_{em}}{R + z} \Rightarrow \underline{\Delta V = \frac{f_{em} \cdot R}{R + z}} \quad d$$

Se $z = 0 \Rightarrow \Delta V = \frac{f_{em} \cdot \cancel{R}}{\cancel{R}} \Rightarrow f_{em} = \Delta V$