

Thermoelectric effect

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See Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva305.pdf
www.wbabin.net/saraiva/saraiva306.pdf
www.wbabin.net/saraiva/saraiva307.pdf
www.wbabin.net/saraiva/saraiva328.pdf
www.wbabin.net/sthan/saraiva347.pdf

The thermoelectric effect is not well explained.
All the SI units are correct.
The neutrino is the magnetic monopole.

For some metals:

$$\Delta V = (\mu_{R1} - \mu_{R2})\mu_0\Delta T$$

ΔV -- Voltage; μ_R -- Relative permeability; μ_0 -- Vacuum permeability;
 ΔT -- Temperature.

The permeability is an inverse density:

$$\mu_0 = \frac{1}{\rho} \approx \frac{x_e^3}{m_e}$$

ρ -- Density; x_e -- Electron Compton wavelength; m_e -- Electron mass.

$$\mu = \frac{R}{c} = \frac{Q_m}{Q_e c} = \frac{nh}{2q_e^2 c}$$

$$\mu_0 = \frac{nh}{2q_e^2 c} \quad \Leftrightarrow \quad n = 4\alpha$$

R – Resistance; c – Light speed; Q_m -- Magnetic charge; Q_e -- Electric charge;
h – Planck constant; q_e -- Electron charge; α -- Fine structure constant.

Seebeck coefficient:

$$S_B = \mu = \frac{5 k_B}{2 q_e} ; \quad \frac{k_B}{q_e} = \frac{\mu_0}{2\alpha}$$

$$\Leftrightarrow \quad k_B q_e c = h$$

k_B -- Boltzmann constant.

Number of magnetic and electric charges:

$$\frac{n_m}{n_e} = \frac{4}{137} ; \quad q_m = \Phi_0$$

q_m -- Elementary magnetic charge; Φ_0 -- Magnetic flux quantum.

Some Seebeck coefficients:

$$\text{Iron -- } 1.9 \times 10^{-5}$$

$$\text{Aluminum -- } 3.5 \times 10^{-6}$$

$$\text{Carbon -- } 3.0 \times 10^{-6}$$

$$\text{Copper -- } 6.5 \times 10^{-6}$$

$$\text{Lead -- } 4.0 \times 10^{-6}$$

$$\mu_0 \text{ -- } 1.26 \times 10^{-6}$$