List of activities for spending energy in photon in einstein's photo electric equation

- Eject of electron from metal surface
- Provide kinetic energy to the ejected electron

Expression of energy of photon with respect to kinetic energy

$$E = hf = \phi_0 + \frac{1}{2}mv_m^2$$

Expression of work function of with respect to energy of photon

$$\phi_0 = hf_0$$

Derivation for expression of einstein's photo electric equation in terms of difference in frequencies

- $$hf = hf_0 + \frac{1}{2}mv_m^2$$
- $$hf - hf_0 = \frac{1}{2}mv_m^2$$
- $$h(f - f_0) = \frac{1}{2}mv_m^2$$

Expression of einstein's photo electric equation in terms of difference in frequencies

$$h(f - f_0) = \frac{1}{2}mv_m^2$$

Derivation of einstein's photo electric equation in terms of difference in wavelength

- $$h(f - f_0) = \frac{1}{2}mv_m^2$$
- $$f = \frac{c}{\lambda}$$

- $$h(\frac{c}{\lambda} - \frac{c}{\lambda_0}) = \frac{1}{2}mv_m^2$$
- $$hc(\frac{1}{\lambda} - \frac{1}{\lambda_0}) = \frac{1}{2}mv_m^2$$

Expression of einstein's photo electric equation in terms of difference in wavelength

- $$hc(\frac{1}{\lambda} - \frac{1}{\lambda_0}) = \frac{1}{2}mv_m^2$$

Expression of einstein's photo electric equation in terms of stopping potential

- $$hc(\frac{1}{\lambda} - \frac{1}{\lambda_0}) = eV_0$$