

Energy of a Photon: $E = hf$

Universal Wave Equation (light): $c = \lambda f$
 $(c = \lambda \nu)$

Photoelectric Effect Equation:

$$E_{kmax} = hf - W$$

also: $E_{kmax} = \frac{1}{2}mv^2$

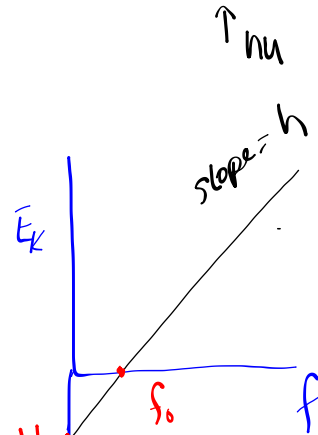
$$E_{kmax} = eV_0$$

$$W = hf_0$$

stopping potential

ex: $V_0 = 3.0V$

$E_{kmax} = 3.0eV$



Same #
different units

Momentum of a photon: $p = \frac{h}{\lambda}$

deBroglie wavelength: $\lambda = \frac{h}{mv}$

Hydrogen Atom Energy Level: $E_n = -\frac{13.6}{n^2} eV$

Energy of electron transition: $\Delta E = E_f - E_i$

If $\Delta E < 0$ (emission)
 $\Delta E > 0$ (absorption)