Cheatography

Atomic Structure Cheat Sheet

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Subatomic Particles

Particle	Mass	Charge
Electron	$9.1*10^{-31}$kg	$-1.6*10^{-19}$C
Proton	$1.6*10^{-27}$kg	$+1.6*10^{-19}$C
Neutron	$1.6*10^{-27}$kg	Neutral

Energy

$$E = h\nu = \frac{hc}{\lambda}$$

$\mathrm{E} = \text{energy}$

$\mathrm{h} = \text{planck's constant}$

$\nu = \text{frequency}$

$\mathrm{c} = \text{speed of light}$

$\lambda = \text{wavelength}$

Atomic Number

Z is used to denote the *Atomic Number* of an element.

Z= Number of protons in the nucleus

Constants

Constant	Symbol	Value
Planck's Constant	h	$6.6*10^{-34}$Js
Rydberg Constant	R	109678 cm^{-1}

Photoelectric Effect

Photoelectric Effect

(i) $\mathrm{E} = \mathrm{W} + \mathrm{K.E.}$

(ii) $\mathrm{h}\nu = \mathrm{h}\nu_0 + \frac{1}{2}\mathrm{mu}^2$

(iii) $\mathrm{h}\nu = \mathrm{h}\nu_0 + (stopping\ potential) * (charge)$

$\mathrm{h}\nu_0$ *is aka 'threshold energy'*

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