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ATOMS

Rutherford's Model

Distance of closest approach $\frac{a}{47.E_0 E}$ where E is the Energy of α -particle at a large distance.

"oh" radius of hydrogen atom

Postulates! (i) Radius of n^{th} orbit, $r_n = \frac{n^2 a_0}{Z}$

Orbital speed, $v = \frac{nh}{2\pi m_e r_n}$

Energy of n^{th} orbit, $E_n = -\frac{13.6}{n^2} \text{ eV}$

Li OTE - -KE = 2TE

Rydberg's constant $R = R_\infty \left(1 - \frac{1}{n^2}\right)$ or $R = \frac{m_e e^4}{8 \epsilon_0^2 h^3 c}$

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