

The Schrödinger equation in a non-relativistic case is written as:

$$i\hbar \frac{\partial}{\partial t} \Psi(\mathbf{r}, t) = \left[-\frac{\hbar^2}{2m} \nabla^2 + V(\mathbf{r}, t) \right] \Psi(\mathbf{r}, t)$$

And the set of Maxwell's equations in differential form. The magnetic flux (2) through any closed surface is zero, which implies that there are no magnetic monopoles.

$$\nabla \cdot \vec{E} = \frac{\rho}{\epsilon_0} \quad \text{Gauss Law} \quad (1)$$

$$\nabla \cdot \vec{B} = 0 \quad \text{Gauss's law for electricity} \quad (2)$$

$$\nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t} \quad \text{Faraday's law} \quad (3)$$

$$\nabla \times \vec{B} = \mu_0 \vec{J} + \mu_0 \epsilon_0 \frac{\partial \vec{E}}{\partial t} \quad \text{Ampère-Maxwell law} \quad (4)$$