

Title

Subtitle

Author

Your school, lecture, class, organization, etc...

Summary

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1. Demonstration

Schrödinger Equation is as the following.

$$\hat{E}\psi = \hat{\mathcal{H}}\psi \quad [\text{Eq. 1.1}]$$

\hat{E} is the energy operator, which indicates the total energy of the object. $\hat{\mathcal{H}}$ is the Hamiltonian operator which indicates the sum of the potential energy and the kinetic energy.

$$\hat{E} = i\hbar \frac{\partial}{\partial t}, \quad \hat{\mathcal{H}} = \hat{T} + \hat{V}$$

$$\hat{T} = -\frac{\hbar^2}{2m} \cdot \frac{\partial}{\partial x^2}, \quad \hat{V} = V(x)$$

$$i\hbar \frac{\partial \psi}{\partial x} = \left(-\frac{\hbar^2}{2m} \nabla^2 + V(x) \right) \psi \quad [\text{Eq. 1.2}]$$

[Eq. 1.2] is the ultimate expansion form of the equation, and its expression is simplified by the use of the dell operator which indicates the second derivatives in all axes. The solution of the Schrödinger equation is the state function (or the wave function) ψ .

2. Capabilites

All capabilites come from the LaTeX packages you install. Using xelatex as the compiler, and setting the main font which has the characters will make it able to use unicode characters.

You may also be able to draw graphs and musical stoffs by adding the corresponding packages. You can easily obtain the package names by simply writing the syntax and running the makepdf.bat without the needed package. The error message will show you what package you need to compile the document properly.

2.1. Unicode characters test

우와 뽀로로다! 道吾善自 是吾賊 道吾惡自 是吾師 我爱上海冰淇淋! 大阪に行ってみたい!
Πρεκрасный Санкт-Петербург Ξεσκεπαζω την ψυχοφθρα βδελυγμια