Nanotechnology to Robotics

Instructor: Phillip Wu

Problem Set 4 Introduction to Quantum Mechanics

Due Week 9 April 15 2023

1. Consider the Planck radiation formula [Beiser Equation 2.4], , generate a plot of this function using Matlab. Make sure to label the plot and provide a legend. Where is the maximum value? Show a properly labeled plot in print out or email.

2. Find the wavelength of the photon that is emitted when a hydrogen atom undergoes a transition from ni=5 to nf=2. Take the value of E1 = 13.6 eV.

3. Please look up the Rydberg constant and write a paragraph about the constant (in the default language of the class).