

Energy in Photons Demonstration Worksheet

Discussion Questions

1. Describe what happened in this demonstration.
2. Explain why the phosphorescent strip only glowed in the blue and violet regions upon being covered with the entire demonstrator card?
3. What is the difference between intensity and energy of light, and how does it relate to this demonstration?
4. In phosphorescence, a photon is absorbed by a substance when a light shines on it. The photon is transferred to an electron, which becomes “excited” and jumps to a higher energy level. It then slowly works its way down to its ground state, first moving to a slightly lower excited state. Another photon is released when the electron moves from the second excited state to its ground state. Explain how this process produces phosphorescence’s characteristic “afterglow.”
5. Phosphorescence requires an exciting source to occur. What was the exciting source in this demonstration?