

Glowing Mushrooms

Have you ever ventured into the forest at night and saw glowing mushrooms on top of some wood surfaces? The glow or greenish lights from bioluminescent mushrooms come from a light-emitting substance called luciferin. Luciferin interacts with oxygen and a bigger protein molecule called luciferase, creating a chemical energy that is eventually released in the form of cold light. This light is emitted at a wavelength of 520–530 nm. It is continuous and occurs only in living cells. In the dark tropical rainforest, bioluminescent mushrooms offer a natural glow to trekkers which guides them in their journey.

Beneath closed forest canopies, or when it is dark, the fruit bodies of these fungi glow. The light from the mushroom cap, and even from the mushroom gill attract grazing animals especially insects and arthropods. Normally, the mushroom cap glows, but in certain fungi such as *Armillaria mellea*, the bottom part of the mushroom or gill glows. There are more than 75 species of bioluminescent mushrooms found in tropical and temperate countries. The most common ones are from Agaricales or Basidiomycota order and the Xylariales of Ascomycota order.

Mushroom lovers adapt this bioluminescent mushroom concept to be used in their daily lives such as for bedroom LED night light with mushrooms made of silicone, glass or even marbles, creating a romantic, pleasurable and relaxing atmosphere. It is indeed a therapeutic experience. Now we can enjoy the bioluminescent mushroom in our homes. No need to trudge into the forests at night!

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