

# Luminescence

**Luminescence** occurs when the intrinsic radiation of a body greatly exceeds its thermal radiation. This radiation must last considerably longer than the duration of the period of this radiation. The essence of luminescence is the return of excited electrons to ground levels. It is associated with emission of excess energy in the form of photons.

Luminescence is usually divided into:

- fluorescence,
- phosphorescence,
- delayed fluorescence.

The essence of luminescence is not necessarily only the excitation of electrons by incident radiation. There is also, for example, sonoluminescence (flashes from collapsing cavities) or chemiluminescence (light production during chemical reactions). The ability of some organisms to produce light is called bioluminescence.



Bioluminescence