

Luminescence

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The emission of certain visible wavelengths of light from a substance other than thermal process, which are used as diagnostic determination of gemstones. It is caused by the emission of photons, when an excited atom within the substance returns to the ground state. It is a general term, in which the phosphorescence; the phenomenon continues after the energy source is removed and fluorescence; the phenomenon ceases as soon as the source of the energy is distinguished. Both are particular cases of cold light luminescence. The phenomenon luminescence is very useful in gemology for identification, while some gemstones luminescence with different characteristic colors, when irradiated with short-wave ultraviolet, long-wave ultraviolet, or X-rays.

See Alexandrite Tsarstone collectors guide, Definition of Luminescence, <http://www.alexandrite.net/viewpage.html?id=GG-097-00005> (The emission of certain visible wavelengths of light from a substance other than thermal process, which are used as diagnostic determination of gemstones. It is caused by the emission of photons, when an excited atom within the substance returns to the ground state. It is a general term, in which the phosphorescence; the phenomenon continues after the energy source is removed and fluorescence; the phenomenon ceases as soon as the source of the energy is distinguished. Both are particular cases of cold light luminescence. The phenomenon luminescence is very useful in gemology for identification, while some gemstones luminescence with different characteristic colors, when irradiated with short-wave ultraviolet, long-wave ultraviolet, or X-rays.) (as of).