

Color change

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There are four major methods of changing the colors of gemstones. These are surface painting or foiling the back, oiling, coating, impregnating, staining of porous stones, heat treatment, and irradiation by particles of atomic size and X-rays. The color change by X-ray treatment is temporary usually after some time reverts to its original color. Significant difference in color change can be seen in some gemstones when studied under different lighting conditions such as alexandrite a chromium, highly dichroic, rare variety of chrysoberyl with emerald green-blue in natural daylight or under many fluorescence rays, reddish-brown to deep violet red by artificial light, due to its unusual absorption properties. Frequently called alexandrite effect. This effect can be seen in corundum, spinel, tourmaline and garnet. Synthetic alexandrite and synthetic sapphire with color change are made; simulated glasses with color change are produced.

See Alexandrite Tsarstone collectors guide, Definition of Color change, <http://www.alexandrite.net/viewpage.html?id=GG-088-00008> (There are four major methods of changing the colors of gemstones. These are surface painting or foiling the back, oiling, coating, impregnating, staining of porous stones, heat treatment, and irradiation by particles of atomic size and X-rays. The color change by X-ray treatment is temporary usually after some time reverts to its original color. Significant difference in color change can be seen in some gemstones when studied under different lighting conditions such as alexandrite a chromium, highly dichroic, rare variety of chrysoberyl with emerald green-blue in natural daylight or under many fluorescence rays, reddish-brown to deep violet red by artificial light, due to its unusual absorption properties. Frequently called alexandrite effect. This effect can be seen in corundum, spinel, tourmaline and garnet. Synthetic alexandrite and synthetic sapphire with color change are made; simulated glasses with color change are produced.) (as of).