Title (en)

MUTABLE COMPOSITION AND METHODS OF USE THEREOF

Title (de)

VERÄNDERBARE KOMPOSITION UND IHRE VERWENDUNGSMETHODEN

Title (fr)

COMPOSITION MUTABLE ET SES PROCEDES D'UTILISATION

Publication

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Application

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Abstract (en)

[origin: WO9504955A1] A colored composition which includes a colorant and an ultraviolet radiation transorber. The colorant, in the presence of the ultraviolet radiation transorber, is adapted, upon exposure of the transorber to ultraviolet radiation, to be mutable. The ultraviolet radiation transorber is adapted to absorb ultraviolet radiation and interact with the colorant to effect the irreversible mutation of the colorant. By way of example, the colored composition can be incorporated into a toner adapted to be utilized in an electrophotographic process. The toner includes the colorant, ultraviolet radiation transorber, and a carrier. The carrier can be a polymer, and the toner may contain a charge carrier. The ultraviolet radiation in general will have wavelengths of from about 100 to about 375 nanometers. Especially useful ultraviolet radiation is incoherent, pulsed ultraviolet radiation produced by a dielectric barrier discharge excimer lamp. In another embodiment, the colored composition which comprises a colorant and an ultraviolet radiation transorber may also contain a molecular includant having a chemical structure which defines at least one cavity. Each of the colorant and ultraviolet radiation transorber is associated with the molecular includant. In some embodiments, the colorant is at least partially included within a cavity of the molecular includant and the ultraviolet radiation transorber is associated with the molecular includant outside of the cavity. In other embodiments, the ultraviolet radiation transorber is covalently coupled to the molecular includant.

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