Method for producing photocatalytically active clinker

The invention relates to a method for producing photocatalytically active clinker.

Photocatalysis in this context means reactions in which a catalyst is brought into an excited state by the exposure to light of a suitable wavelength, which state enables the catalysis of various degradation reactions of different organic molecules. The catalyst in such reactions returns to the initial state and can be reexcited by light.

A number of construction materials in which the photocatalytic phenomenon is utilized are already known, with titanium dioxide in the anatase form being used in the first place. European Patent EP 1 535 886 discloses a hydraulic binder containing titanium dioxide together with additives and water in the form of photocatalytic particles, at least 5% by weight of the titanium dioxide particles having anatase structure. In the hydraulic binder according to EP 1 535 886, anatase portions of the titanium dioxide phase of up to 70% are, moreover, provided, the balance of the titanium dioxide primarily comprising rutile. In that hydraulic binder, the share of the anatase form in the total amount of the present titanium dioxide is thus extremely important for its photocatalytic action such that the selection and sourcing of suitable titanium dioxide is problematic.

It is, therefore, the object of the present invention to provide a method that enables the production of photocatalytically active clinker, and hence photocatalytically active cement, in which titanium dioxide can be used irrespectively of its origin and anatase content. To solve this object, the method according to the invention essentially consists in that TiO_2-containing materials are reacted to calcium titanates, particularly $CaTiO_3$,