

ORGANIC PHOTOACTIVE MATERIALS FOR POLYMERIC MATRIXS

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Organic derivatives active after irradiation with visible radiation in the wavelength range of 400 to 700 nm can be incorporated into the polymer matrix so that after irradiation with defined light they generate active oxygen forms which effectively protect the surface of these polymeric materials from organic and microbial pollutants. The solution consists in fixing these materials by a procedure specific to the given polymer matrix. The materials can be added in the form of pigments, can be fixed to the polymer matrix by reactive bonding or they are substituted so that they are dissolved in the thermoplastic melt during processing and subsequently homogeneously dispersed throughout the volume of the supporting polymer system. The effectiveness of the protection and its stability was verified both on model pollutants and in the real application environment. Application tests were performed in the environment of thermoplastics, paints and textiles.