

Title (en)
METHOD FOR PREPARING A TRANSPARENT POLYMER MATERIAL COMPRISING A THERMOPLASTIC POLYCARBONATE AND SURFACE-MODIFIED MINERAL NANOPARTICLES

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES TRANSPARENTEN POLYMER MATERIALS MIT EINEM THERMOPLASTISCHEN POLYCARBONAT UND OBERFLÄCHENMODIFIZIERTE MINERALISCHE NANOPARTIKEL

Title (fr)
PROCÉDÉ DE PRÉPARATION D'UN MATÉRIAU POLYMÈRE TRANSPARENT COMPRENANT UN POLYCARBONATE THERMOPLASTIQUE ET DES NANOPARTICULES MINÉRALES MODIFIÉES EN SURFACE

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Application
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Abstract (en)
[origin: WO2009074554A1] The present invention relates to a method for preparing a transparent polymer material comprising the following steps: i. obtaining composite nanoparticles comprising mineral nanoparticles at least partially coated with at least one monomer and/or with at least one polymer capable of promoting the physicochemical interactions at the interface between the mineral nanoparticles and a thermoplastic polycarbonate matrix, wherein said mineral nanoparticles are surface-modified with said monomer and/or said polymer, either directly by grafting or indirectly by adsorption of the monomer and/or of the polymer at the surface of said mineral nanoparticles, or by means of a coupling agent chosen from a chlorosilane or an organosilane comprising a functional group capable of reacting via a radical route, and ii. mixing the composite nanoparticles, obtained in step i, with the thermoplastic polycarbonate matrix in the molten state, so as to obtain said transparent polymer material.

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Citation (search report)
See references of WO 2009074554A1

Citation (examination)
ANONYMOUS: "Adsorption - Wikipédia", 9 October 2017 (2017-10-09), XP055418802, Retrieved from the Internet <URL:https://fr.wikipedia.org/wiki/Adsorption> [retrieved on 20171025]

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