

Title (en)  
NANOPARTICLES

Title (de)  
NANOPARTIKEL

Title (fr)  
NANOPARTICULES

Publication  
**EP 1954632 A1 20080813 (DE)**

Application  
**EP 06818298 A 20061026**

Priority  
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• DE 102005056621 A 20051125

Abstract (en)  
[origin: DE102005056621A1] Modified zinc oxide nano-particles with an average particle size of 3-20 nm (determined by means of particle correlation spectroscopy and/or transmissions electron microscope), whose particle surface is modified with at least a copolymer from at least one monomer with hydrophobic residues and at least one monomer with hydrophilic residues. The zinc oxide nano-particles are obtained by converting nano-particle precursor in an organic solvent to nano-particles and terminating the growth of nano-particles. Modified zinc oxide nano-particles with an average particle size of 3-20 nm (determined by means of particle correlation spectroscopy and/or transmissions electron microscope), whose particle surface is modified with at least a copolymer from at least one monomer with hydrophobic residues and at least one monomer with hydrophilic residues. The zinc oxide nano-particles are obtainable by converting nano-particle precursor in an organic solvent to nano-particles and terminating the growth of nano-particles, if the reaction solution reaches the adsorption edge to the desired value in the ultra violet/visible spectrum, by adding the copolymer. Independent claims are included for: (1) a dispersion containing the nano-particles as well as a polymer or solvents as dispersion medium; (2) an UV-stabilized polymer preparation essentially consisting of at least a polymer, where the polymer contains the nano-particles; and (3) a method for the production of UV-stabilized polymer preparation, comprising mixing a polymer material with nano-particles and/or the dispersion, preferably in an extrusion or a kneading machine.

IPC 8 full level  
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