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(54) Title: METHODS FOR FORMING AND USES OF TITANIA-COATED INORGANIC PARTICLES

(57) Abstract: The present disclosure relates to a method of forming a titania-coated inorganic particle comprising the steps of: (a) agitating a mixture of inorganic particle and organic solvent; (b) adding titania precursor, such as titanium alkoxide, dropwise into the mixture of step (a) under agitation; and (c) adding catalyst to the mixture of step (b) thereby converting said titania precursor to titania which then forms a coating on said inorganic particle; wherein steps (a) to (c) are performed at neutral pH and ambient temperature. In a preferred embodiment, the inorganic particle is a hollow glass bead and the catalyst is tap, distilled or deionized water. The titania coated particle may be used in reflective coatings for thermal insulation applications, antimicrobial coatings or UV-shielding for packing applications.



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