

ABSTRACT

**NANOSTRUCTURED FORMS AND LAYERS AND METHOD FOR
PRODUCING THEM USING STABLE WATER-SOLUBLE PRECURSORS**

A process for preparing a composition for producing nanostructured mouldings and layers comprises contacting an aqueous and/or alcoholic sol of a compound of an element selected from silicon and metals of the main groups and transition groups of the Periodic Table with species possessing hydrolysable alkoxy groups and comprising at least one organically modified alkoxysilane or a precondensate derived therefrom, under conditions which lead to (further) hydrolysis of the species, and subsequent removal of the alcohol formed and any alcohol already present originally. The process is characterized in that the alcohol is removed in an amount such that the residual alcohol content of the composition is not more than 20% by weight.