

The Method for Synthesis of Chromium Oxide Nano Particles as Increasing Color Intensity on Industrial Ceramics

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Abstract : Disclosed is a method of preparing a pigmentary chromium oxide nano particles having 50 percent particle size less than about 100nm. According to the disclosed method, a substantially dry solid composition of potassium dichromate and carbon active is heated in CO₂ atmosphere to a temperature of about 600°C for 1hr. Thereafter, the solid Cr₂O₃ product was washed twice with distilled water. The other aim of this study is to assess both the colouring performance and the potential of nano-pigments in the ceramic tile decoration. The rationale consists in nano-pigment application in several ceramics, including a comparison of colour performance with conventional micro-pigments.

Keywords : green chromium oxide, nano particles, colour performances, particle size

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