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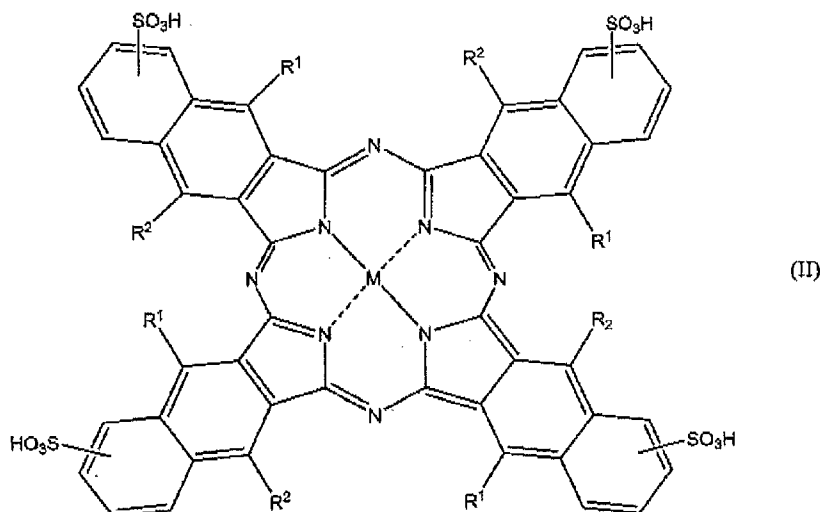
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(54) Title: IMPROVEMENTS IN INK FORMULATIONS COMPRISING GALLIUM NAPHTHALOCYANINES



(57) Abstract: There is provided an aqueous formulation comprising an IR-absorbing naphthalocyanine dye of formula (II); or a salt form thereof, wherein: M is Ga(A¹); A¹ is an axial ligand selected from -OH, halogen, -OR³, -OC(O)R⁴ or -O(CH₂CH₂O)_eR⁶ wherein e is an integer from 2 to 10 and R⁶ is H, C₁₋₈ alkyl or C(O)C₁₋₈ alkyl; R¹ and R² may be the same or different and are selected from hydrogen or C₁₋₂ alkoxy; R³ is selected from C₁₋₂ alkyl, C₅₋₁₂ aryl, C₅₋₁₂ arylalkyl or Si(R^x)(R^y)(R^z); R⁴ is selected from C₁₋₁₂ alkyl, C₅₋₁₂ aryl or C₅₋₁₂ arylalkyl; and R^x, R^y and R^z may be the same or different and are selected from C₁₋₁₂ alkyl, C₅₋₁₂ aryl, C₅₋₁₂ arylalkyl, C₁₋₁₂ alkoxy, C₁₋₁₂ aryloxy or C₅₋₁₂ arylalkoxy. The formulation has a pH in the range of 3.5 to 7 and is particularly suitable for use as an IR- absorbing inkjet ink, providing compatibility with known CMYK, inks together with an optimally red-shifted λ_{max}

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