

Title (en)

SOL-GEL PROCESS FOR SYNTHESISING A LUMINESCENT MATERIAL WITH GENERAL FORMULATION: AXBYFZ:MN

Title (de)

SOL-GEL-VERFAHREN ZUR SYNTHESE EINES LUMINESZIERENDEN MATERIALS MIT ALLGEMEINER FORMULIERUNG: AXBYFZ:MN

Title (fr)

PROCEDE SOL-GEL DE SYNTHESE D'UN MATERIAU LUMINESCENT DE FORMULATION GENERALE: AXBYFZ:MN

Publication

**EP 3374466 A1 20180919 (FR)**

Application

**EP 16809984 A 20161110**

Priority

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- FR 2016052938 W 20161110

Abstract (en)

[origin: WO2017081428A1] The invention relates to a sol-gel process for synthesising a luminescent material with general formulation: AxByFz:Mn, wherein A is an element of group 1, 2, 4, NR4 or a combination of elements belonging to said groups, with R=H or an alkyl chain or a combination of chains, B being an element of group 5, 6, 13, 14 and  $0 < x \leq 5$ ,  $0 < y \leq 2$ ,  $5 \leq z \leq 7$ , characterised in that it includes at least the following steps: a) producing a liquid precursor (2, 3) in an alcohol solution by mixing metal reagents (1), selected among metal salts such as halogenides, nitrates, hydrides, amidides, acetates, carbonates or alkoxides, with manganese, the mixture being made at pH < 8; b) obtaining a solid precursor (5, 6) from the liquid precursor (2, 3) obtained in step a), by eliminating (4) the solvent; c) crystallising (7, 70) the solid precursor (5, 6) obtained in step b), by thermal treatment in fluorinated atmosphere; and d) retrieving the fluorescent crystalline powder (8) obtained at the end of step c).

IPC 8 full level

**C09K 11/61** (2006.01)

CPC (source: EP KR US)

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See references of WO 2017081428A1

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