

Title (en)

ENCAPSULATION OF ACTIVE SUBSTANCES AND/OR MICRO-ORGANISMS IN A LAMELLAR MATERIAL

Title (de)

VERKAPSELUNG VON WIRKSTOFFEN UND / ODER MIKROORGANISMEN IN EINEM LAMELLAREN MATERIAL

Title (fr)

ENCAPSULATION DE SUBSTANCES ACTIVES ET/OU DE MICROORGANISMES DANS UN MATERIAU LAMELLAIRE

Publication

**EP 3743377 A1 20201202 (FR)**

Application

**EP 19709998 A 20190122**

Priority

- FR 1850504 A 20180123
- FR 2019050140 W 20190122

Abstract (en)

[origin: CA3088222A1] The present invention relates to a process for encapsulating a compound selected from the group consisting of at least one active substance, at least one micro-organism and their mixtures in a hybrid organic-inorganic material having a lamellar 2:1 structure, this material having the following general formula:  $Nax[(Mg_3)(Al_x(RSi)_4-x)O_{8+x}(OH)_2]$  (I), the process comprising the following steps: (a) sol-gel synthesis of the hybrid organic-inorganic material having a lamellar 2:1 structure in the presence of the compound; (b) recovery of the compound encapsulated in the material of general formula (I). The invention further relates to the compound encapsulated in a hybrid organic-inorganic material having a 2:1 lamellar structure of general formula (I), a composition comprising this compound and its use in plant fertilisation, nutrition, growth stimulation and/or prophylaxis and/or the improvement of physical, chemical and/or biological properties of the soil or a plant cultivation substrate.

IPC 8 full level

**C01B 33/22** (2006.01); **C05G 3/60** (2020.01)

CPC (source: EP US)

**C01B 33/22** (2013.01 - EP); **C05D 9/00** (2013.01 - EP); **C05D 9/02** (2013.01 - EP US); **C05F 11/08** (2013.01 - EP US); **C05F 11/10** (2013.01 - EP US); **C05G 3/60** (2020.02 - EP US); **C05G 3/80** (2020.02 - EP US); **C05G 5/35** (2020.02 - US)

Citation (search report)

See references of WO 2019145636A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**FR 3077067 A1 20190726**; **FR 3077067 B1 20220610**; BR 112020014279 A2 20201208; CA 3088222 A1 20190801; EP 3743377 A1 20201202; US 11649196 B2 20230516; US 2021032178 A1 20210204; WO 2019145636 A1 20190801; ZA 202004541 B 20221026

DOCDB simple family (application)

**FR 1850504 A 20180123**; BR 112020014279 A 20190122; CA 3088222 A 20190122; EP 19709998 A 20190122; FR 2019050140 W 20190122; US 201916964122 A 20190122; ZA 202004541 A 20200722