

Title (en)
METHOD FOR PRODUCING QUINOXALINES

Title (de)
HERSTELLUNGSVERFAHREN FÜR CHINOXALINE

Title (fr)
PROCÉDÉ D'OBTENTION DE QUINOXALINE

Publication
EP 3931184 A1 20220105 (DE)

Application
EP 20712212 A 20200227

Priority
• AT 762019 A 20190227
• EP 2020055176 W 20200227

Abstract (en)
[origin: WO2020174058A1] The invention relates to a method for producing quinoxalines by condensation of optionally substituted o-phenylenediamine with a diketone in accordance with the following reaction mechanism (mechanism 4) wherein: R1, R2 and R3 each independently are hydrogen or a monovalent, saturated, unsaturated or aromatic hydrocarbon group with 1 to 20 carbon atoms, wherein one or more carbon atoms are optionally replaced with heteroatoms, which are each independently selected from O, N, S, F, Cl and Br, and n is an integer from 0 to 4; wherein optionally two groups R1 and/or the groups R2 and R3 are joined to one another and, together with the atoms to which they are bound, form a saturated, unsaturated or aromatic ring, and/or one R1 each of two o-phenylenediamine molecules together stand for a chemical bond and hence form a diaminobenzidine; and wherein the condensation reaction is performed in water as a solvent by heating the reagents under pressure to a reaction temperature > 100°C.

IPC 8 full level
C07D 241/46 (2006.01); **C07D 401/14** (2006.01); **C07D 405/14** (2006.01); **C07D 409/14** (2006.01)

CPC (source: AT EP KR)
C07D 241/38 (2013.01 - EP KR); **C07D 241/40** (2013.01 - AT); **C07D 241/42** (2013.01 - EP KR); **C07D 401/14** (2013.01 - EP KR); **C07D 403/04** (2013.01 - KR); **C07D 405/14** (2013.01 - EP KR); **C07D 409/14** (2013.01 - EP KR)

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)
WO 2020174058 A1 20200903; AT 522210 A1 20200915; AT 522210 B1 20240415; EP 3931184 A1 20220105; KR 20210134668 A 20211110

DOCDB simple family (application)
EP 2020055176 W 20200227; AT 762019 A 20190227; EP 20712212 A 20200227; KR 20217029374 A 20200227