

Title (en)

JUNCTION FORMATION ON WAFER SUBSTRATES USING GROUP IV NANOPARTICLES

Title (de)

SPERRSCHICHTBILDUNG AUF WAFERSUBSTRATEN UNTER VERWENDUNG VON GRUPPE-IV-NANOPARTIKELN

Title (fr)

FORMATION D UNE JONCTION SUR DES PLAQUETTES SUBSTRATS EN UTILISANT DES NANOPARTICULES DU GROUPE IV

Publication

EP 2283514 A1 20110216 (EN)

Application

EP 08873989 A 20080425

Priority

US 2008061611 W 20080425

Abstract (en)

[origin: WO2009131587A1] A method of forming a diffusion region is disclosed. The method includes depositing a nanoparticle ink on a surface of a wafer to form a non-densified thin film, the nanoparticle ink having set of nanoparticles, wherein at least some nanoparticles of the set of nanoparticles include dopant atoms therein. The method also includes heating the non-densified thin film to a first temperature and for a first time period to remove a solvent from the deposited nanoparticle ink; and heating the non-densified thin film to a second temperature and for a second time period to form a densified thin film, wherein at least some of the dopant atoms diffuse into the wafer to form the diffusion region.

IPC 8 full level

H01L 21/225 (2006.01); **H01L 21/20** (2006.01); **H01L 21/336** (2006.01); **H01L 21/8238** (2006.01); **H01L 31/18** (2006.01)

CPC (source: EP)

H01L 21/02532 (2013.01); **H01L 21/02573** (2013.01); **H01L 21/02628** (2013.01); **H01L 21/2256** (2013.01); **H01L 21/2257** (2013.01); **H01L 21/823892** (2013.01); **H01L 29/66651** (2013.01); **H01L 31/1804** (2013.01); **H01L 21/02381** (2013.01); **H01L 21/02488** (2013.01); **Y02E 10/547** (2013.01); **Y02P 70/50** (2015.11)

Citation (search report)

See references of WO 2009131587A1

Designated contracting state (EPC)

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

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

WO 2009131587 A1 20091029; CN 102047389 A 20110504; CN 102047389 B 20130619; EP 2283514 A1 20110216

DOCDB simple family (application)

US 2008061611 W 20080425; CN 200880129407 A 20080425; EP 08873989 A 20080425