

Title (en)

METHOD FOR PRODUCING AN OPTOELECTRONIC SEMICONDUCTOR CHIP, AND SUCH A SEMICONDUCTOR CHIP

Title (de)

VERFAHREN ZUM HERSTELLEN EINES OPTOELEKTRONISCHEN HALBLEITERCHIPS UND DERARTIGER HALBLEITERCHIP

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE PUCE SEMICONDUCTRICE OPTOÉLECTRONIQUE ET CETTE PUCE SEMICONDUCTRICE

Publication

EP 2643859 A1 20131002 (DE)

Application

EP 11773460 A 20111021

Priority

- DE 102010052727 A 20101126
- EP 2011068476 W 20111021

Abstract (en)

[origin: WO2012069262A1] The invention relates to a method for producing an optoelectronic semiconductor chip (10) with a semiconductor layer stack (1) based on the material system AlInGaP. A growth substrate (2) is provided that has a silicon surface. A compressively relaxed buffer layer stack (3) is applied on the growth substrate (2). The semiconductor layer stack (1) is grown on the buffer layer stack (3) in a metamorphic epitaxial manner. The semiconductor layer stack (1) has an active layer that is provided for generating radiation. The invention further relates to a semiconductor chip (10) produced by means of such a method.

IPC 8 full level

H01L 33/00 (2010.01); **H01S 5/02** (2006.01); **H01S 5/323** (2006.01); **H01S 5/343** (2006.01)

CPC (source: EP KR US)

H01L 21/02381 (2013.01 - EP US); **H01L 21/02461** (2013.01 - EP US); **H01L 21/02463** (2013.01 - EP US); **H01L 21/02505** (2013.01 - EP US); **H01L 21/02543** (2013.01 - EP US); **H01L 21/20** (2013.01 - KR); **H01L 33/00** (2013.01 - KR); **H01L 33/0066** (2013.01 - EP US); **H01L 33/12** (2013.01 - KR); **H01L 33/26** (2013.01 - US); **H01S 5/02** (2013.01 - KR); **H01L 33/0093** (2020.05 - EP US); **H01L 33/12** (2013.01 - EP US); **H01L 2924/0002** (2013.01 - EP US); **H01L 2933/0091** (2013.01 - EP US); **H01S 5/3201** (2013.01 - EP US); **H01S 2301/173** (2013.01 - EP US)

Citation (search report)

See references of WO 2012069262A1

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

DOCDB simple family (publication)

DE 102010052727 A1 20120531; **DE 102010052727 B4 20190131**; CN 103222072 A 20130724; CN 103222072 B 20160608; EP 2643859 A1 20131002; JP 2013545312 A 20131219; KR 101470780 B1 20141208; KR 20130098407 A 20130904; TW 201232817 A 20120801; TW I523264 B 20160221; US 2013328101 A1 20131212; US 9093604 B2 20150728; WO 2012069262 A1 20120531

DOCDB simple family (application)

DE 102010052727 A 20101126; CN 201180056609 A 20111021; EP 11773460 A 20111021; EP 2011068476 W 20111021; JP 2013540282 A 20111021; KR 20137015964 A 20111021; TW 100139073 A 20111027; US 201113883782 A 20111021