

Title (en)
III-V CHIP PREPARATION AND INTEGRATION IN SILICON PHOTONICS

Title (de)
III-V-CHIP-HERSTELLUNG UND INTEGRATION IN SILICIUMPHOTONIK

Title (fr)
PRÉPARATION ET INTÉGRATION DE PUCES III-V DANS UNE PHOTONIQUE DE SILICIUM

Publication
EP 3455911 A4 20200415 (EN)

Application
EP 17796852 A 20170511

Priority
• US 201662334895 P 20160511
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Abstract (en)
[origin: CN109417266A] A composite semiconductor laser is made by securing a III-V wafer to a transfer wafer. A substrate of the III-V wafer is removed, and the III-V wafer is etched into a plurality of chips while the III-V wafer is secured to the transfer wafer. The transfer wafer is singulated. A portion of the transfer wafer is used as a handle for bonding the chip in a recess of a silicon device. The chip is used as a gain medium for the semiconductor laser.

IPC 8 full level
H01S 5/02 (2006.01); **H01S 5/02375** (2021.01)

CPC (source: EP US)
G02B 6/122 (2013.01 - EP); **G02B 6/136** (2013.01 - EP US); **G02B 6/4201** (2013.01 - US); **H01L 24/03** (2013.01 - US); **H01S 5/02257** (2021.01 - US); **H01S 5/0236** (2021.01 - US); **H01S 5/02375** (2021.01 - EP US); **G02B 2006/12097** (2013.01 - EP US); **H01S 5/0217** (2013.01 - EP); **H01S 5/0234** (2021.01 - EP); **H01S 5/0237** (2021.01 - EP); **H01S 2301/176** (2013.01 - EP)

Citation (search report)
• [X] US 2008219309 A1 20080911 - HATA MASAYUKI [JP], et al
• [A] US 2015229108 A1 20150813 - STEIGERWALD DAN [US], et al
• [A] US 9209596 B1 20151208 - MCLAURIN MELVIN [US], et al
• See references of WO 2017197132A1

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)
CN 109417266 A 20190301; CN 109417266 B 20210507; EP 3455911 A1 20190320; EP 3455911 A4 20200415

DOCDB simple family (application)
CN 201780043053 A 20170511; EP 17796852 A 20170511