

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 A1 20190320 (EN)**

Application  
**EP 17796852 A 20170511**

Priority  
• US 201662334895 P 20160511  
• US 2017032189 W 20170511

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)

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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