

Title (en)
HIGH GROWTH RATE DEPOSITION FOR GROUP III/V MATERIALS

Title (de)
ABLAGERUNG VON GRUPPE-III/V-MATERIALIEN MIT HOHER WACHSTUMSRATE

Title (fr)
DÉPÔT À TAUX DE CROISSANCE ÉLEVÉ POUR MATÉRIAUX DU GROUPE III/V

Publication
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Application
EP 20804988 A 20200513

Priority
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• US 2020032676 W 20200513

Abstract (en)
[origin: WO2020232123A1] Aspects of the disclosure relate to processes for epitaxial growth of III-V compound of (Al)GaInP material at high rates, such as about 8 $\mu\text{m/hr}$, 10 $\mu\text{m/hr}$, 20 $\mu\text{m/hr}$, 30 $\mu\text{m/hr}$, 40 $\mu\text{m/hr}$, and 8-120 $\mu\text{m/hr}$ deposition rates,. The high growth-rate deposited (Al)InGaP materials or films may be utilized in solar, semiconductor, or other electronic device applications. The Group III/V materials may be formed or grown on a sacrificial layer disposed on or over the support substrate during a chemical vapor deposition process. Subsequently, the Group III/V materials may be removed from the support substrate during an epitaxial lift off (ELO) process. The Group III/V materials are thin films of epitaxially grown layers containing gallium aluminum indium phosphide, gallium indium phosphide, derivatives thereof, alloys thereof, or combinations thereof.

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