

Title (en)

HIGH-THROUGHPUT FORMATION OF SEMICONDUCTOR LAYER BY USE OF CHALCOGEN AND INTER-METALLIC MATERIAL

Title (de)

MIT HOHEM DURCHSATZ ERFOLGENDE BESTÜCKUNG EINER HALBLEITERSCHICHT DURCH VERWENDUNG VON CHALCOGEN UND INTERMETALLISCHEN MATERIALIEN

Title (fr)

FORMATION A HAUT RENDEMENT DE COUCHE SEMI-CONDUTRICE EN UTILISANT UN MATERIAU CHALCOGENE ET INTERMETALLIQUE

Publication

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Application

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- US 36110306 A 20060223
- US 36152206 A 20060223
- US 36149806 A 20060223
- US 36143306 A 20060223
- US 36146406 A 20060223
- US 36152306 A 20060223
- US 39566806 A 20060330
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- US 39543806 A 20060330
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Abstract (en)

[origin: WO2007101136A2] A high-throughput method of forming a semiconductor precursor layer by use of a chalcogen-containing vapor is disclosed. In one embodiment, the method comprises forming a precursor material comprising group IB and/or group IIA particles of any shape. The method may include forming a precursor layer of the precursor material over a surface of a substrate. The method may further include heating the particle precursor material in a substantially oxygen- free chalcogen atmosphere to a processing temperature sufficient to react the particles and to release chalcogen from the chalcogenide particles, wherein the chalcogen assumes a liquid form and acts as a flux to improve intermixing of elements to form a group IB-IIIA-chalcogenide film at a desired stoichiometric ratio. The chalcogen atmosphere may provide a partial pressure greater than or equal to the vapor pressure of liquid chalcogen in the precursor layer at the processing temperature.

IPC 8 full level

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