

ENHANCED SEMICONDUCTOR COMPONENT

Third Patent Portfolio Investment Company

Initial Bidding Guidance: Please inquire

With an early priority date from 2007, this portfolio is directed to methods for a novel semiconductor component, in which polycrystalline semiconductor layers are industrially produced in a far simpler and time efficient manner than those grown on an epitaxy substrate. More specifically, the substrate comprises a surface having at least one polycrystalline layer of a semiconductor material on at least a part of the surface, wherein the polycrystalline layer contains a plurality of diffusely distributed crystal nuclei. Importantly, the application of the semiconductor layer of the component does not require a vacuum to be produced; instead a protective gas atmosphere is sufficient.

Also disclosed, is a method for producing the component using an aerosol or a suspension composed of crystal nuclei and a fluid in the form of a liquid or a gas to be applied onto the substrate. The desired semiconductor material is then chemically bonded within the fluid. After the application of the aerosol or the emulsion onto the substrate, the formed layer is thermally treated to generate the polycrystalline layer. During this process, the chemical substance which contains the semiconductor material is caused to release the semiconductor material in atomic form so that it can deposit around the crystal nuclei in crystalline form.

Earliest Priority Date: 10-18-2007

Representative Claim: US 8,354,673 – Claim #1

A semiconductor component comprising a substrate having a surface and at least one polycrystalline layer of a semiconductor material on at least a part of the surface, wherein the polycrystalline layer contains a plurality of diffusely distributed crystal nuclei and is formed by a process comprising applying a suspension composed of the crystal nuclei and a fluid selected from the group consisting of liquids and gases to form a fluid layer of the suspension and thermally treating the fluid layer of the suspension after application thereof, and wherein the substrate comprises a textile sheet fabric.

Contact:

For more information on the assets available for sale in this portfolio, contact Michelle Tyler.

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TECHNOLOGY

SEMICONDUCTORS

NOVELTY

METHOD AND PROCESS OF PRODUCING A NOVEL SEMICONDUCTOR COMPONENT, IN WHICH POLYCRYSTALLINE SEMICONDUCTOR LAYERS ARE INDUSTRIALLY PRODUCED WITHOUT THE NEED FOR A VACUUM

IMPORTANCE

A VALUABLE PORTFOLIO FOR COMPANIES PRODUCING SOLAR CELLS, FLAT PANEL DISPLAYS, AND OTHER ELECTRONIC DEVICES

NUMBER OF ASSETS

27

PATENTS (11)

US 8,354,673
CN 101939819
CN 102224616
DE 102008054187
DE 502009006220
EP 2308086
EP 2338190
FR 2338190
GB 2338190
IT 2338190
KR 101366119

APPLICATIONS (16)

US 13/054,220
US 13/125,178
CA 20082702781
CN 20098136229
DE 20071050288
DE 20081033217
DE 20081047955
DE 201210112954
EP 20080785186
EP 20120187207
IN 291/CHENP/2011
JP 20100529245
JP 20110532605
KR 20107008743
KR 20117010707
PCT/EP2013/77582