

Title (en)

METHOD FOR PRODUCING AND CLASSIFYING POLYCRYSTALLINE SILICON

Title (de)

VERFAHREN ZUR HERSTELLUNG UND KLASSIFIZIERUNG VON POLYKRISTALLINEM SILICIUM

Title (fr)

PROCÉDÉ DE PRODUCTION ET DE CLASSIFICATION DE SILICIUM POLYCRISTALLIN

Publication

**EP 3947280 A1 20220209 (DE)**

Application

**EP 19829497 A 20191217**

Priority

EP 2019085569 W 20191217

Abstract (en)

[origin: WO2021121558A1] The invention relates to a method for producing and classifying polycrystalline silicon, comprising the following steps: - making a polycrystalline silicon rod by introducing a reaction gas, which contains, in addition to hydrogen, silane and/or at least one halosilane, into a reaction chamber of a vapour deposition reactor, wherein the reaction chamber contains at least one heated filament rod, on which silicon is deposited forming the polycrystalline silicon rod, - removing the silicon rod from the reactor, - where necessary comminuting the silicon rod to obtain silicon fragments, - creating at least one two-dimensional and/or three-dimensional image of at least one sub-region of the silicon rod or of at least one silicon fragment and selecting at least one analysis region for each created image, - generating at least two surface structure characteristics for each analysis region by means of image processing methods, wherein each surface structure characteristic is generated using another image processing method, - combining the surface structure characteristics to form a morphology characteristic. The silicon rods or the silicon fragments are classified in accordance with the morphology characteristic and provided for various further processing steps.

IPC 8 full level

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