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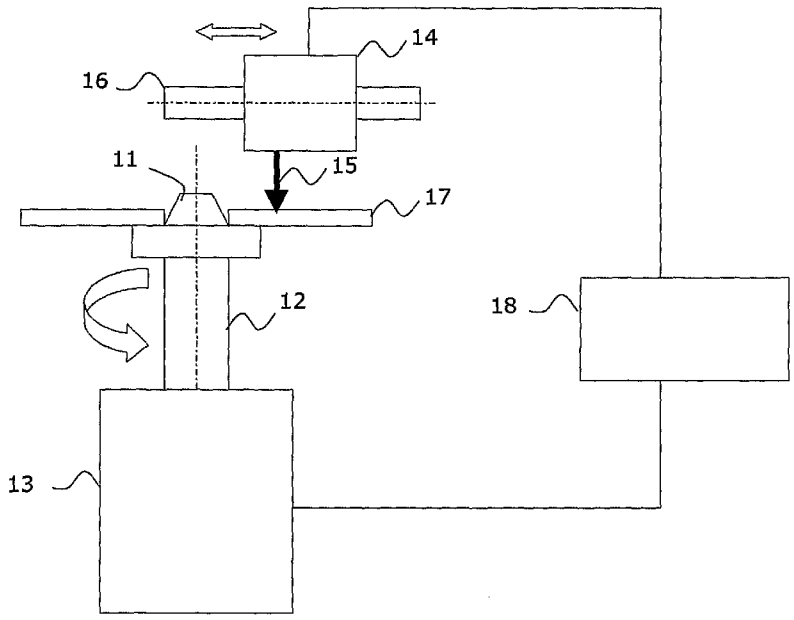

(57) **Abstract:** The present invention relates to the field of thin film solar cells and particularly to an apparatus and method for manufacturing thin film solar cells. At least one material is deposited onto a substrate, whereby the deposited material is heated by means of heating means on a limited area of the deposited material. The substrate and the heating means are continuously moved in relation to each other until a predetermined area of the deposited material is heated, whereby the heated material is cooled in a controlled way, thus, obtaining a desired crystalline structure of the deposited material.

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