A METHOD AND A SYSTEM FOR FABRICATING PHOTOVOLTAIC DEVICES ON VARIABLY-SIZED SUBSTRATES

ABSTRACT

An automated system for fabricating a solar energy device is described. The automated system comprises a computer for providing automated control of the system; and a substrate carrier and a vacuum chamber operationally coupled to the computer. The vacuum chamber comprises at least one heating element for uniformly heating the substrate; a coating head assembly comprising a vaporising chamber for sublimating a photovoltaic material to form a photovoltaic material vapour and an expansion chamber fluidly coupled to the vaporising chamber for receiving the photovoltaic material vapour; and a deposition chamber for uniformly depositing the photovoltaic material vapour on the substrate. The computer is configured to control the heating element, the vaporising chamber, and a speed of the substrate carrier so as to determine a position of the substrate in relation to the expansion chamber such that the photovoltaic material vapour is uniformly deposited on a predetermined portion of the substrate.

[FIG. 1]