(12) CORRECTED EUROPEAN PATENT APPLICATION

(15) Correction information:

Corrected version no 1 (W1 A1) Corrections, see Bibliography INID code(s) 72

(48) Corrigendum issued on: 01.01.2025 Bulletin 2025/01

(43) Date of publication: **30.10.2024 Bulletin 2024/44**

(21) Application number: 23169898.6

(22) Date of filing: 25.04.2023

(51) International Patent Classification (IPC): H01L 31/18^(2006.01) H01L 31/078^(2012.01)

(52) Cooperative Patent Classification (CPC): H01L 31/1804; H01L 31/078; H10K 30/57; H10K 39/15; H10K 85/50

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated Extension States:

BA

Designated Validation States:

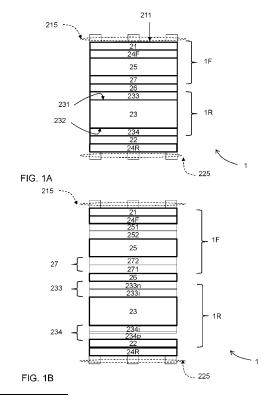
KH MA MD TN

(71) Applicant: Nederlandse Organisatie voor toegepast-natuurwetenschappelijk Onderzoek TNO 2595 DA 's-Gravenhage (NL)

- (72) Inventors:
 - GEERLIGS, Lambert Johan 2595 DA's-Gravenhage (NL)
 - VEENSTRA, Siegfried Christiaan 2595 DA's-Gravenhage (NL)
 - VAN DEN BRUELE, Fiona Joyce 2595 DA's-Gravenhage (NL)
- (74) Representative: V.O.
 P.O. Box 87930
 2508 DH Den Haag (NL)

(54) TANDEM SOLAR CELL AND METHOD OF MANUFACTURING THE SAME

The present disclosure provides a method of manufacturing a tandem solar cell (1) comprising a stack of at least a rear photovoltaic component (1R) and a front photovoltaic component (1F) between a front electrode (215) facing a light entry window (211) and a rear electrode (225). The tandem solar cell (1) to be manufactured therewith is configured to perform a photovoltaic conversion of light received through the light entry window (211) to provide an output voltage between the electrodes. The front photovoltaic component (1F) is configured to convert a first portion of the received light and the rear photovoltaic component (1R) is configured to convert a second portion of the received light that is transmitted by the front photovoltaic component (1F). The stack includes a substrate (23) with a first side (231) facing the light entry window (211) and a second side (232) facing away from the light entry window (211). The method comprises providing (S1) the substrate (23), depositing (S3R, S3B, S3F) functional layers on the substrate (23). In particular the method comprises one or more bilateral deposition steps (S3B) wherein a substance is simultaneously deposited at both sides of the substrate.



EP 4 456 156 A8