



(51) International Patent Classification:
H01L 27/142 (2006.01) **H01L 31/18** (2006.01)

(21) International Application Number:
PCT/EP2008/067692

(22) International Filing Date:
17 December 2008 (17.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
07123962.8 21 December 2007 (21.12.2007) EP
08101700.6 18 February 2008 (18.02.2008) EP

(71) Applicant (for all designated States except US): **HELIANTHOS B.V.** [NL/NL]; Westervoortsedijk 71, NL-6827 AV Arnhem (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SPORTEL, Edwin Peter** [NL/NL]; Keltenveld 19, NL-6846 CE Arnhem (NL).

(74) Agents: **HESELINK, Dinah Elisabeth** et al.; Overschiestraat 180, NL-1062 XK Amsterdam (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,

CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

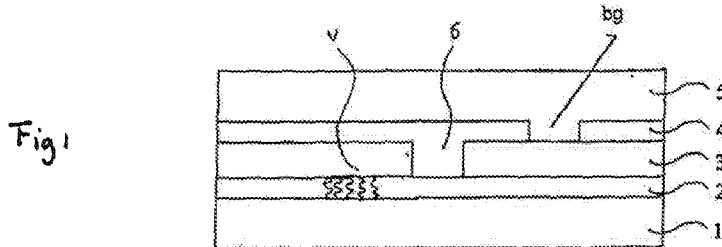
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
17 September 2009

(54) Title: METHOD FOR PROVIDING A SERIES CONNECTION IN A SOLAR CELL SYSTEM



(57) Abstract: The present invention pertains to a process for providing a series connection in a solar cell system comprising the provision of a solar cell, system comprising a transparent conductive oxide layer, a photovoltaic layer, and a back electrode, wherein the system is divided into at least two individual cells wherein the transparent conductive oxide layer of one cell is connected through a conductive interconnect with the back electrode of an adjacent cell, and the transparent conductive oxide layer is provided with an insulating interrupt, on one side of the interconnect and the back electrode is provided with an interrupt on the other side or the interconnect, the process being characterised in that the interrupt in the transparent conductive oxide layer is provided through vitrification of the transparent conductive oxide layer. A solar cell system provided with a series connection wherein the interrupt in the TCO layer is made up of a vitrified section of the TCO is also claimed.

