



(11)

EP 2 073 276 B8

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Bibliography INID code(s) 72

(51) Int Cl.:
H01L 31/0687 ^(2012.01) **H01L 31/0693** ^(2012.01)
H01L 31/0304 ^(2006.01) **H01L 31/18** ^(2006.01)

(48) Corrigendum issued on:
06.03.2019 Bulletin 2019/10

(45) Date of publication and mention
of the grant of the patent:
21.11.2018 Bulletin 2018/47

(21) Application number: **08021551.0**

(22) Date of filing: **11.12.2008**

(54) **EXPONENTIALLY DOPED LAYERS IN INVERTED METAMORPHIC MULTIJUNCTION SOLAR CELLS**

EXPONENTIELL DOTIERTE SCHICHTEN IN INVERTIERTEN METAMORPHEN
MEHRFACHSOLARZELLEN

COUCHES DOPÉES DE MANIÈRE EXPONENTIELLE DANS DES CELLULES SOLAIRES
MULTI-JONCTIONS MÉTAMORPHIQUES INVERSÉES

(84) Designated Contracting States:
DE FR IT

(30) Priority: **13.12.2007 US 956069**

(43) Date of publication of application:
24.06.2009 Bulletin 2009/26

(73) Proprietor: **SolAero Technologies Corp.**
Albuquerque, NM 87123 (US)

(72) Inventors:
• **Stan, Mark A**
Albuquerque
NM 87122 (US)
• **Cornfeld, Arthur**
Sandia Park
NM 87074 (US)
• **Ley, Vance**
Albuquerque, NM 87123 (US)

(74) Representative: **adares Patent- und**
Rechtsanwälte
Reininger & Partner GmbB
Tauentzienstraße 7 b/c
10789 Berlin (DE)

(56) References cited:
EP-A2- 1 863 099 US-A1- 2004 166 681

- **CHUNG B C ET AL: "HIGH-EFFICIENCY ALGAAS SOLAR CELLS GROWN BY METALORGANIC VAPOR PHASE EPITAXY", PHOTOVOLTAIC SPECIALISTS CONFERENCE. LAS VEGAS, SEPT. 26 - 30, 1988; [PHOTOVOLTAIC SPECIALISTS CONFERENCE], NEW YORK, IEEE, US, vol. 1, 26 September 1988 (1988-09-26), pages 486-490, XP000166691,**
- **H. C. HAMAKER: "Computer modeling study of the effects of inhomogeneous doping and/or composition in GaAs solar-cell devices", JOURNAL OF APPLIED PHYSICS, vol. 58, no. 6, 1 January 1985 (1985-01-01), page 2344, XP55033201, ISSN: 0021-8979, DOI: 10.1063/1.335957**

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 2 073 276 B8

- R.J. SOUKUP ET AL: "Limitations of built-in electric field enhancement of minority carrier current collection in GaAs backwall schottky barrier solar cells", SOLAR CELLS, vol. 18, no. 2, 1 August 1986 (1986-08-01) , pages 139-151, XP55033145, ISSN: 0379-6787, DOI: 10.1016/0379-6787(86)90032-3
- KHAN Z R ET AL: "New expression for base transit time in an exponentially doped base bipolar transistor for all levels of injection", MICROELECTRONICS, 2003. ICM 2003. PROCEEDINGS OF THE 15TH INTERNATIONAL CONFERENCE ON CAIRO, EGYPT DEC. 9-11, 2003, PISCATAWAY, NJ, USA, IEEE, 9 December 2003 (2003-12-09), pages 340-343, XP010697485, ISBN: 978-977-05-2010-9
- STREIT D C ET AL: "Effect of exponentially graded base doping on the performance of GaAs/AlGaAs heterojunction bipolar transistors", IEEE ELECTRON DEVICE LETTERS, IEEE SERVICE CENTER, NEW YORK, NY, US, vol. 12, no. 5, 1 May 1991 (1991-05-01), pages 194-196, XP011406118, ISSN: 0741-3106, DOI: 10.1109/55.79553