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(54) Title: METHOD AND APPARATUS FOR FABRICATING MONOLITHICALLY-INTEGRATED PHOTOVOLTAIC MODULES AND PHOTOVOLTAIC MODULE

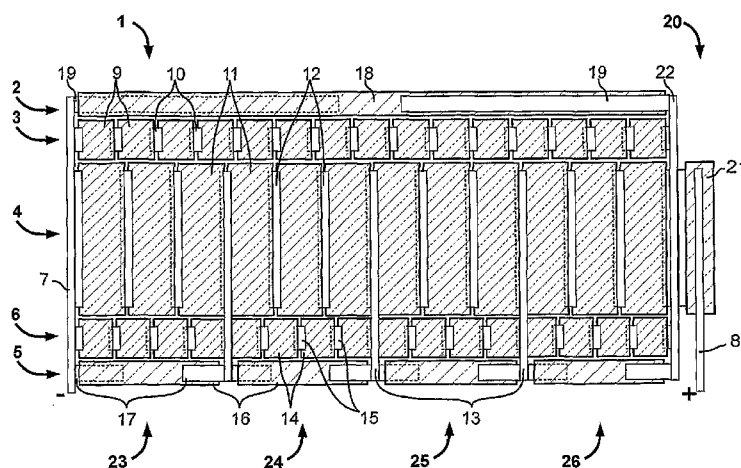


Fig. 1

(57) Abstract: A method and apparatus to fabricate monolithically-integrated photovoltaic modules (1, 50) comprising forming and patterning a film layer (90) into electrically interconnectable area sections (9, 11, 14, 16, 18, 21). The patterning scheme exploits the film layer's spatial properties distribution such as its material percentage composition and/or structure and/or thickness, so as to provide at least two of said area sections (9, 11, 14, 16, 18, 21) with substantially differing compositional and/or structural properties such that at least two components, each comprising at least one of said area sections (9, 11, 14, 16, 18, 21), are provided with substantially differing current-voltage characteristics. The components may comprise interconnected photovoltaic cells with requirement-matched photovoltaic properties and/or monolithically integrated bypass diodes and/or resistors. The invention also relates to a photovoltaic module (1, 50) comprising at least one of these components.



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B. FIELDS SEARCHED		
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Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2008/042682 A2 (APPLIED MATERIALS INC [US]) 10 April 2008 (2008-04-10) abstract; figures 2-8 -----	1-15
X	US 2009/291231 A1 (WIEDER STEPHAN [DE]) 26 November 2009 (2009-11-26) abstract paragraph [0032] - paragraph [0033] paragraph [0076] -----	11
A	WO 2009/029901 A1 (APPLIED MATERIALS INC [US]; BACHRACH ROBERT Z [US]; CHAE YONG-KEE [US]) 5 March 2009 (2009-03-05) the whole document -----	1-15
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<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
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