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(54) Title: SOFT SPACERS FOR SHINGLED SOLAR CELL PANELS

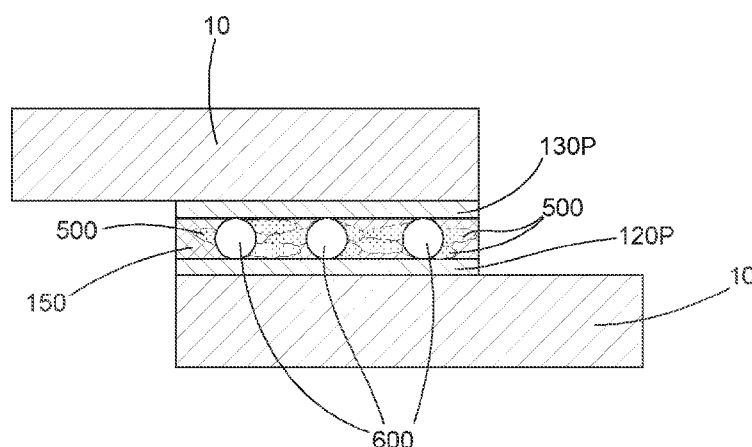


FIG. 7

(57) Abstract: A high efficiency configuration for a solar cell module comprises solar cells arranged in an overlapping shingled manner and conductively bonded to each other in their overlapping regions to form super cells, which may be arranged to efficiently use the area of the solar module. Solar cells are conductively bonded to each other with electrically conductive adhesive comprising soft spacers. The use of soft spacers in the electrically conductive adhesive mitigates against solar cells cracking when pressure is applied to the solar module or panel.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG2023/050304

A. CLASSIFICATION OF SUBJECT MATTER**H01L 31/048 (2014.01) H01L 31/05 (2014.01) C09J 9/02 (2006.01)**

According to International Patent Classification (IPC)

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H01L, C09J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

FAMPAT: photovoltaic, solar, shingle, stack, adhesive, tape, paste, solder, spacer, separator, soft, flexible, elastic, sphere, block, piece, plate, flake, Young's,

太阳, 光伏, 屋顶板, 瓦, 叠瓦, 覆瓦, 搭叠, 粘结, 浆料, 胶, 分隔, 间隔, 垫, 隔, 定位, 柔, 软, 弹性, 小球, 薄片, 碎片, 杨氏模量 and similar relevant terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 212934635 U (TAIZHOU LONGI SOLAR TECH CO LTD) 9 April 2021 Para. [0067]-[0070] of the machine translation	1-20
A	US 2013/0306143 A1 (YAMADA TAKAYUKI, ET AL.) 21 November 2013 Whole document	
A	DE 4030713 A1 (TELEFUNKEN SYSTEMTECHNIK) 2 April 1992 Whole document of the machine translation	

 Further documents are listed in the continuation of Box C. See patent family annex.***Special categories of cited documents:**

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG2023/050304**C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 104263303 A (CHINESE ACAD TECH INST PHYSICS) 7 January 2015 Whole document of the machine translation	
A	CN 109705745 A (JIANGSU RUIDE NEW ENERGY TECH CO LTD) 3 May 2019 Whole document of the machine translation	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SG2023/050304

Note: This Annex lists known patent family members relating to the patent documents cited in this International Search Report. This Authority is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CN 212934635 U	09/04/2021	NONE	
US 2013/0306143 A1	21/11/2013	WO 2012/057076 A1 JP 2012099569 A TW 201230354 A CN 103283034 A	03/05/2012 24/05/2012 16/07/2012 04/09/2013
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