



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
26.10.2016 Bulletin 2016/43

(51) Int Cl.:
H01L 27/32 (2006.01)

(43) Date of publication A2:
11.06.2014 Bulletin 2014/24

(21) Application number: **13193031.5**

(22) Date of filing: **15.11.2013**

(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 MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(72) Inventors:
• **Xiong, Zhiyong**
201201 Shanghai (CN)
• **Zhao, Bengang**
201201 Shanghai (CN)

(30) Priority: **07.12.2012 CN 201210526005**

(74) Representative: **Wilson, Gary**
HGF Limited
Delta House
50 West Nile Street
Glasgow G1 2NP (GB)

(71) Applicant: **Shanghai Tianma Micro-electronics Co., Ltd.**
Pudong New District
Shanghai 201201 (CN)

(54) **Active matrix organic light emitting diode panel and method for manufacturing the same**

(57) The invention discloses an active matrix organic light emitting diode panel (200) and a method for manufacturing the same. The active matrix organic light emitting diode panel includes: a substrate (201), an organic film (204) formed on the substrate, and a plurality of red (2081), green (2082) and blue organic light emitting diodes (2083) formed on the organic film. A recess (207)

or protrusion is formed in the organic film in a region corresponding to the blue organic light emitting diode (2083). The blue organic light emitting diode is formed on the recess or protrusion, and the surface area of the recess or protrusion is larger than the area of the surface where the red (2081) or green organic light emitting diodes (2082) contacts the organic film.

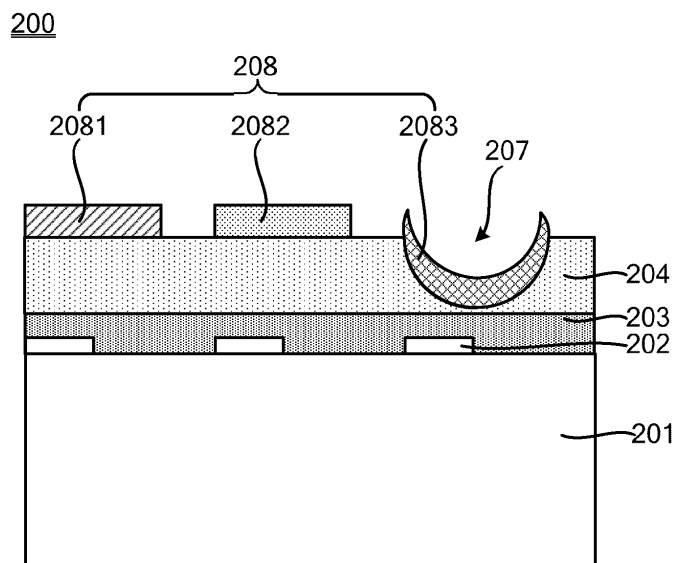


Fig. 11



EUROPEAN SEARCH REPORT

Application Number
EP 13 19 3031

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 2003/052597 A1 (SAKURAI HIROYUKI [JP]) 20 March 2003 (2003-03-20) * figures * * paragraphs [0007], [0041], [0047], [0049], [0056] *	1-15	INV. H01L27/32
Y	US 2008/211385 A1 (KIM SANG-YEOL [KR] ET AL) 4 September 2008 (2008-09-04) * figures 3,4,8a,8b * * paragraphs [0006], [0009], [0010], [0042] - [0049] *	1-15	
Y	US 2012/091439 A1 (NISHIYAMA SEIJI [JP] ET AL) 19 April 2012 (2012-04-19) * paragraph [0170] *	8-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01L
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 September 2016	Examiner De Laere, Ann
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

 1
EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 13 19 3031

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

15-09-2016

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003052597 A1	20-03-2003	KR 20030025185 A	28-03-2003
		TW 589922 B	01-06-2004
		US 2003052597 A1	20-03-2003

US 2008211385 A1	04-09-2008	KR 20080069076 A	25-07-2008
		US 2008211385 A1	04-09-2008

US 2012091439 A1	19-04-2012	CN 102449767 A	09-05-2012
		JP 5462257 B2	02-04-2014
		KR 20130044118 A	02-05-2013
		US 2012091439 A1	19-04-2012
		WO 2012017494 A1	09-02-2012

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	有源矩阵有机发光二极管面板及其制造方法		
公开(公告)号	EP2741334A3	公开(公告)日	2016-10-26
申请号	EP2013193031	申请日	2013-11-15
[标]申请(专利权)人(译)	上海天马微电子有限公司		
申请(专利权)人(译)	上海天马微电子有限公司.		
当前申请(专利权)人(译)	上海天马微电子有限公司.		
[标]发明人	XIONG ZHIYONG ZHAO BENANG		
发明人	XIONG, ZHIYONG ZHAO, BENANG		
IPC分类号	H01L27/32		
代理机构(译)	WILSON , GARY		
优先权	201210526005.9 2012-12-07 CN		
其他公开文献	EP2741334A2 EP2741334B1		
外部链接	Espacenet		

摘要(译)

本发明公开了一种有源矩阵有机发光二极管面板 (200) 及其制造方法。有源矩阵有机发光二极管面板包括：基板 (201)，形成在基板上的有机膜 (204)，以及形成的多个红色 (2081)，绿色 (2082) 和蓝色有机发光二极管 (2083) 在有机电影上。在有机膜中的与蓝色有机发光二极管 (2083) 对应的区域中形成凹陷 (207) 或突起。蓝色有机发光二极管形成在凹部或突起上，并且凹部或突起的表面积大于红色 (2081) 或绿色有机发光二极管 (2082) 接触有机膜的表面的面积。。

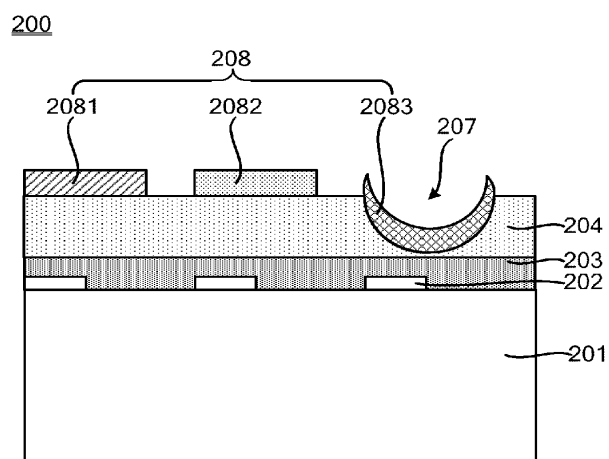


Fig. 11