

(19)



(11)

**EP 1 921 690 A3**

(12)

**EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**09.03.2011 Bulletin 2011/10**

(51) Int Cl.:  
**H01L 51/56<sup>(2006.01)</sup> H01L 27/32<sup>(2006.01)</sup>**  
**H01L 51/52<sup>(2006.01)</sup>**

(43) Date of publication A2:  
**14.05.2008 Bulletin 2008/20**

(21) Application number: **07252179.2**

(22) Date of filing: **25.05.2007**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL BA HR MK RS**

(72) Inventors:  
• **Kim, Jongyun**  
**Yongin-si**  
**Gyeonggi-do (KR)**  
• **Choi, Byoungdeog**  
**Yongin-si**  
**Gyeonggi-do (KR)**

(30) Priority: **10.11.2006 KR 20060111298**

(74) Representative: **Granleese, Rhian Jane**  
**Marks & Clerk LLP**  
**90 Long Acre**  
**London**  
**WC2E 9RA (GB)**

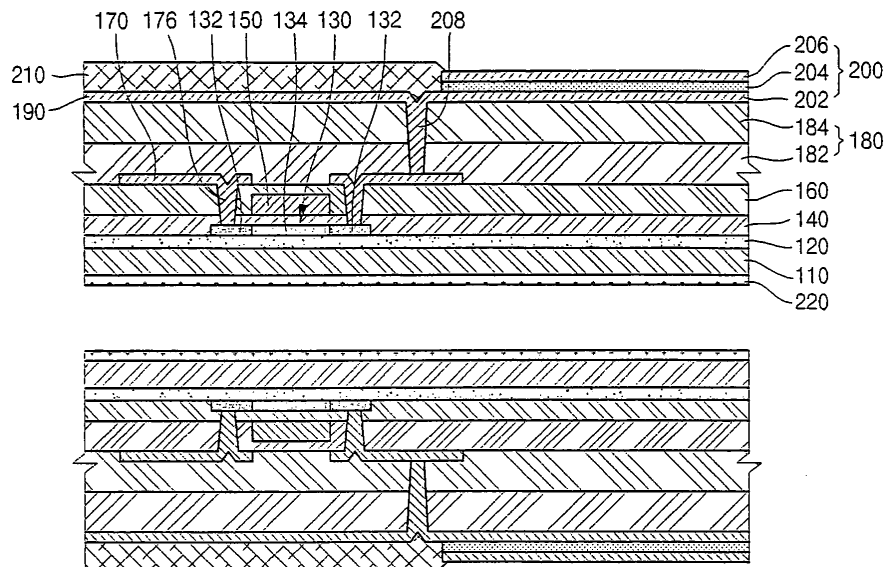
(71) Applicant: **Samsung Mobile Display Co., Ltd.**  
**Suwon-si**  
**Gyeonggi-do (KR)**

(54) **Organic light emitting display and fabrication method thereof**

(57) An organic light emitting display includes: a substrate, a buffer layer arranged on the substrate, a semiconductor layer arranged on the buffer layer, a gate insulating layer arranged on the semiconductor layer, a gate electrode arranged on the gate insulating layer, an

inter-layer dielectric layer arranged on the gate electrode, a source/drain electrode arranged on the inter-layer dielectric layer, an insulating layer arranged on the source/drain electrode, a non-transmissive layer arranged on the insulating layer; and an organic light emitting diode arranged on the insulating layer.

FIG. 4j



**EP 1 921 690 A3**



EUROPEAN SEARCH REPORT

Application Number  
EP 07 25 2179

DOCUMENTS CONSIDERED TO BE RELEVANT				
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X	EP 1 482 572 A1 (SONY CORP [JP]) 1 December 2004 (2004-12-01)	1-16,20	INV. H01L51/56 H01L27/32 H01L51/52	
Y	* paragraphs [0024] - [0037], [0056] - [0058]; figure 1 *	17-19		
X	US 2005/067945 A1 (NISHIKAWA RYUJI [JP] ET AL) 31 March 2005 (2005-03-31)	1-20		
X	* paragraphs [0019] - [0031], [0034] *			
X	EP 1 596 637 A1 (FUJITSU LTD [JP] FUJIFILM CORP [JP]) 16 November 2005 (2005-11-16)	1-13,15,16,20		
Y	* paragraphs [0016] - [0025], [0038], [0043], [0044] *	17-19		
X	US 2004/259283 A1 (KOO JAE-BON [KR] ET AL) 23 December 2004 (2004-12-23)	1-16,20		
Y	* paragraphs [0032] - [0043]; figure 2a *	17-19		
X	US 2002/134979 A1 (YAMAZAKI SHUNPEI [JP] ET AL) 26 September 2002 (2002-09-26)	1-9,11-13,15,16,20		TECHNICAL FIELDS SEARCHED (IPC)
Y	* paragraphs [0034], [0035], [0044], [0055] - [0059], [0104], [0105], [0116], [0124]; figure 1 *	17-19		H01L
Y	US 2003/104753 A1 (GRAFF GORDON LEE [US] ET AL) 5 June 2003 (2003-06-05)	17-19		
	* paragraphs [0009], [0020], [0023], [0040] - [0043] *			
The present search report has been drawn up for all claims				
Place of search The Hague		Date of completion of the search 31 January 2011	Examiner Welter, Steve	
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		

EPO FORM 1503 03.02 (P04C01)

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

EP 07 25 2179

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.

31-01-2011

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1482572	A1	01-12-2004	CN 1575057 A	02-02-2005
			JP 2005011793 A	13-01-2005
			KR 20040103405 A	08-12-2004
			US 2005007015 A1	13-01-2005
-----				
US 2005067945	A1	31-03-2005	CN 1604706 A	06-04-2005
			JP 4497881 B2	07-07-2010
			JP 2005108736 A	21-04-2005
			KR 20050031964 A	06-04-2005
			TW 235015 B	21-06-2005
-----				
EP 1596637	A1	16-11-2005	WO 2004075607 A1	02-09-2004
			JP 4343850 B2	14-10-2009
			US 2005162082 A1	28-07-2005
-----				
US 2004259283	A1	23-12-2004	NONE	
-----				
US 2002134979	A1	26-09-2002	NONE	
-----				
US 2003104753	A1	05-06-2003	US 6573652 B1	03-06-2003
-----				

专利名称(译)	有机发光显示器及其制造方法		
公开(公告)号	<a href="#">EP1921690A3</a>	公开(公告)日	2011-03-09
申请号	EP2007252179	申请日	2007-05-25
[标]申请(专利权)人(译)	三星斯笛爱股份有限公司		
申请(专利权)人(译)	三星SDI CO. , LTD.		
当前申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
[标]发明人	KIM JONGYUN CHOI BYOUNGDEOG		
发明人	KIM, JONGYUN CHOI, BYOUNGDEOG		
IPC分类号	H01L51/56 H01L27/32 H01L51/52 H01L51/50 H05B33/10		
CPC分类号	H01L51/56 H01L27/3272 H01L51/003 H01L51/0097 H01L51/5209 H01L2251/5315 H01L2251/566 Y02E10/549		
优先权	1020060111298 2006-11-10 KR		
其他公开文献	EP1921690A2		
外部链接	<a href="#">Espacenet</a>		

摘要(译)

一种有机发光显示器，包括：基板，设置在基板上的缓冲层，设置在缓冲层上的半导体层，设置在半导体层上的栅极绝缘层，设置在栅极绝缘层上的栅极，相互连接设置在栅电极上的层间电层，设置在层间电层上的源/漏电极，设置在源/漏电极上的绝缘层，设置在绝缘层上的非透光层；以及设置在绝缘层上的有机发光二极管。

