(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 112 694 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
30.11.2011 Bulletin 2011/48

(43) Date of publication A2:
28.10.2009 Bulletin 2009/44

(21) Application number: **09251172.4**

(22) Date of filing: **24.04.2009**

(51) Int Cl.:
H01L 27/32 *(2006.01)* *H01L 21/77* *(2006.01)*

(84) Designated Contracting States:
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 SE SI SK TR
Designated Extension States:
AL BA RS

(30) Priority: **24.04.2008 KR 20080038255**

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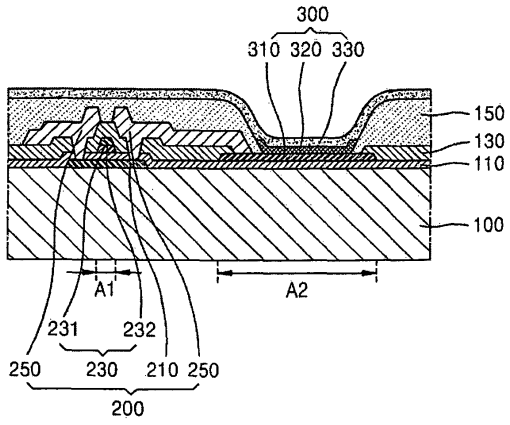
(54) Organic light emitting display device and method of manufacturing the same

(57) A organic light emitting display device includes a thin film transistor (TFT) having a gate electrode (230), a source electrode (250) and a drain electrode (250) which are insulated from the gate electrode (230), and a semiconductor layer (210) which is insulated from the gate electrode (230) and which contacts each of the source electrode (250) and the drain electrode (250); and a pixel electrode (310) electrically connected to one of the source electrode (250) and the drain electrode (250). The gate electrode (230) is made up of a first conductive layer (231) and a second conductive layer (232) on the first conductive layer (231), and the pixel electrode (310) is formed of the same material as the first conductive layer (231) of the gate electrode (230) and situated on the same layer (110) as the first conductive layer (231) of the gate electrode (230).

FIG. 2J



EP 2 112 694 A3

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EUROPEAN SEARCH REPORT

Application Number
EP 09 25 1172

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	US 2003/151049 A1 (HOTTA KAZUSHIGE [JP] ET AL) 14 August 2003 (2003-08-14) * paragraphs [0003], [0037] - [0042], [0151] - [0170]; figures 23a-23i *	1-16	INV. H01L27/32 ADD. H01L21/77
X	JP 2002 107762 A (SHARP KK) 10 April 2002 (2002-04-10) * paragraphs [0016], [0024] - [0027]; figures 1-6 *	1-6,8-16	
X	US 2006/147650 A1 (PARK YONG I [KR] PARK YONG IN [KR]) 6 July 2006 (2006-07-06)	1-7	
A	* figures * * paragraphs [0027] - [0031], [0036] - [0037], [0046] - [0048] *	8-16	
X	KR 2004 0037889 A (SAMSUNG SDI CO LTD) 8 May 2004 (2004-05-08)	1-4,7	
A	* the whole document *	5,6,8-16	

TECHNICAL FIELDS SEARCHED (IPC)

H01L

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	24 October 2011	De Laere, Ann

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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EPO FORM 1503 03.82 (P04C01)

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24-10-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003151049 A1	14-08-2003	JP 4021194 B2	12-12-2007
		JP 2003203919 A	18-07-2003
		TW 565724 B	11-12-2003
JP 2002107762 A	10-04-2002	NONE	
US 2006147650 A1	06-07-2006	CN 1798458 A	05-07-2006
		JP 4490885 B2	30-06-2010
		JP 2006190640 A	20-07-2006
		KR 20060078573 A	05-07-2006
KR 20040037889 A	08-05-2004	NONE	

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)	有机发光显示装置及其制造方法		
公开(公告)号	EP2112694A3	公开(公告)日	2011-11-30
申请号	EP2009251172	申请日	2009-04-24
[标]申请(专利权)人(译)	三星显示有限公司		
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IPC分类号	H01L27/32 H01L21/77		
CPC分类号	H01L27/3248 H01L27/124 H01L27/1288 H01L29/4908 H01L2227/323		
优先权	1020080038255 2008-04-24 KR		
其他公开文献	EP2112694A2		
外部链接	Espacenet		

摘要(译)

有机发光显示装置包括薄膜晶体管（TFT），其具有与栅电极（230）绝缘的栅电极（230），源电极（250）和漏电极（250），以及半导体层（210）与栅电极（230）绝缘并且与源电极（250）和漏电极（250）中的每一个接触;像素电极（310）与源电极（250）和漏电极（250）之一电连接。栅电极（230）由第一导电层（231）和第一导电层（231）上的第二导电层（232）构成，像素电极（310）由与第一导电层（231）相同的材料形成栅电极（230）的导电层（231）位于与栅电极（230）的第一导电层（231）相同的层（110）上。

FIG. 2J