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

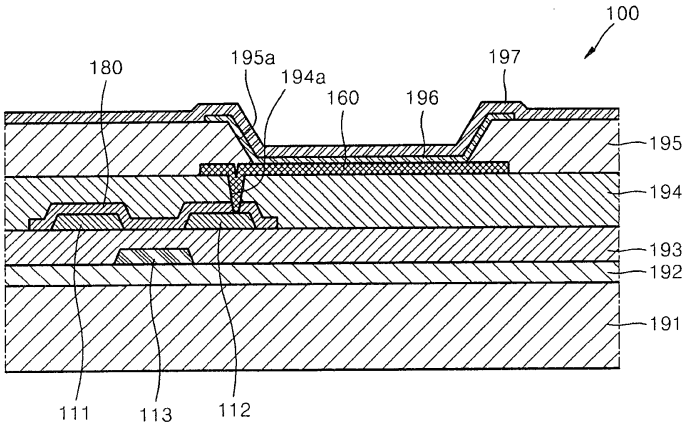
(72) Inventors:
- **Kang, Tae-Min,**
  c/o Samsung SDI Co., Ltd.
  Suwon-si
  Gyeonggi-do (KR)
- **Ahn, Taek**
  Y.P. Lee, Mock & Partners
  Seocho-Gu, Seoul (KR)
- **Suh, Min-Chul,**
  c/o Samsung SDI Co., Ltd.
  Suwon-si
  Gyeonggi-do (KR)

(74) Representative: **Mounteney, Simon James**
Marks & Clerk LLP
90 Long Acre
London
WC2E 9RA (GB)

(54) Organic thin film transistor and organic light emitting display device including the same

(57) There is disclosed an organic thin film transistor comprising a gate electrode (113); a source electrode (111) and a drain electrode (112) insulated from the gate electrode (113); and an organic semiconductor layer (180) insulated from the gate electrode (113) and in contact with the source and drain electrodes (111, 112), wherein the organic semiconductor layer (180) covers each of the source and drain electrodes (111, 112). There is also disclosed an organic light emitting display device incorporating the organic thin film transistor.

FIG. 5



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EUROPEAN SEARCH REPORT

Application Number
EP 07 25 0001

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	FIX W ET AL: "Fast polymer integrated circuits", APPLIED PHYSICS LETTERS, AIP, AMERICAN INSTITUTE OF PHYSICS, MELVILLE, NY, US, vol. 81, no. 9, 26 August 2002 (2002-08-26), pages 1735-1737, XP012033403, ISSN: 0003-6951, DOI: 10.1063/1.1501450 * the whole document *	1-6	INV. H01L51/05 H01L27/32
X	US 2005/285107 A1 (KOO JAE-BON [KR] ET AL) 29 December 2005 (2005-12-29) * paragraph [0062] - paragraph [0064]; figures 8-14 *	7-12	
X	CRONE B ET AL: "LARGE-SCALE COMPLEMENTARY INTERGRATED CIRCUITS BASED ON ORGANIC TRANSISTORS", NATURE, NATURE PUBLISHING GROUP, LONDON, GB, vol. 403, 3 February 2000 (2000-02-03), pages 521-523, XP000929929, ISSN: 0028-0836, DOI: 10.1038/35000530 * figure 1 *	1-6	TECHNICAL FIELDS SEARCHED (IPC) H01L
X A	WO 01/47044 A2 (PLASTIC LOGIC LTD [GB]; SIRRINGHAUS HENNING [GB]; FRIEND RICHARD HENRY) 28 June 2001 (2001-06-28) * figures 7,14 *	1-3 4-6	
X	TZENG K L ET AL: "One-polymer active pixel", APPLIED PHYSICS LETTERS, AIP, AMERICAN INSTITUTE OF PHYSICS, MELVILLE, NY, US, vol. 84, no. 4, 26 January 2004 (2004-01-26), pages 619-621, XP012061943, ISSN: 0003-6951, DOI: 10.1063/1.1644322 * the whole document *	7-12	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	5 January 2012	Königstein, C

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

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 07 25 0001

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6

   Organic thin film transistor (OTFT).

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2. claims: 7-12

   Organic light emitting (OLED) display device

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 07 25 0001

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
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05-01-2012

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		WO 0147044 A2	28-06-2001

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)	有机薄膜晶体管和包括其的有机发光显示装置		
公开(公告)号	EP1804307A3	公开(公告)日	2012-02-15
申请号	EP2007250001	申请日	2007-01-02
[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)	三星移动显示器有限公司.		
[标]发明人	KANG TAE MIN C O SAMSUNG SDI CO LTD AHN TAEK Y P LEE MOCK & PARTNERS SUH MIN CHUL C O SAMSUNG SDI CO LTD		
发明人	KANG, TAE-MIN, C/O SAMSUNG SDI CO., LTD. AHN, TAEK Y.P. LEE, MOCK & PARTNERS SUH, MIN-CHUL, C/O SAMSUNG SDI CO., LTD.		
IPC分类号	H01L51/05 H01L27/32		
优先权	1020060000156 2006-01-02 KR		
其他公开文献	EP1804307A2		
外部链接	Espacenet		

摘要(译)

公开了一种包括栅电极（113）的有机薄膜晶体管;源极电极（111）和漏极电极（112）与栅极电极（113）绝缘;有机半导体层（180）与栅电极（113）绝缘并与源电极和漏电极（111,112）接触，其中有机半导体层（180）覆盖每个源电极和漏电极（111， 112）。还公开了一种包含有机薄膜晶体管的有机发光显示装置。

FIG. 5