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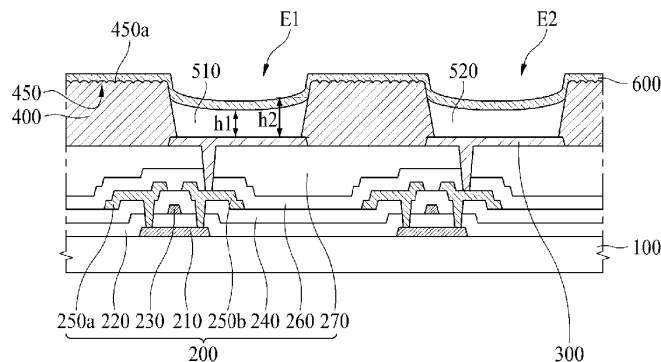
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(54) **ELECTROLUMINESCENCE DISPLAY APPARATUS**

(57) Disclosed is an electroluminescence display apparatus. The electroluminescence display apparatus includes a substrate (100), a bank (400) provided to define a plurality of emission areas (E1, E2) on the substrate, and a first light emitting layer (510) provided in a first emission area E1 of the plurality of emission areas, and

a second light emitting layer (520) provided in a second emission area (E2) of the plurality of emission areas (E1, E2). An anti-spread part (450) is provided on an upper surface of the bank (400) disposed between the first light emitting layer (510) and the second light emitting layer (520).

FIG. 2



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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 2 819 173 A1 (SAMSUNG DISPLAY CO LTD [KR]) 31 December 2014 (2014-12-31)	1,2,9,10	INV. H01L27/32 H01L51/00
Y	* paragraph [0028] - paragraph [0056]; figures 5,10 *	8,12-14, 16	
X	US 2012/049210 A1 (TAKAGI KAZUNARI [JP]) 1 March 2012 (2012-03-01)	1,2, 8-10,16	
Y	* paragraph [0044] - paragraph [0078]; figures 1-4, 10 *	12-14	
X	WO 2015/152085 A1 (SUMITOMO CHEMICAL CO [JP]) 8 October 2015 (2015-10-08)	1,2,8-10	
Y	* figure 9 *	8,12-14, 16	
Y	US 2016/079323 A1 (CHOI DAE JUNG [KR] ET AL) 17 March 2016 (2016-03-17)	8,12-14, 16	
	* paragraph [0026] - paragraph [0084]; figures 1-3 *		
X	US 2013/099221 A1 (KAWAMURA HIROSHI [JP] ET AL) 25 April 2013 (2013-04-25)	1,3-11, 16	TECHNICAL FIELDS SEARCHED (IPC)
Y	* paragraph [0077] - paragraph [0156]; figures 1-3, 7-10 *	12-15	H01L
X	WO 2009/029045 A1 (AGENCY SCIENCE TECH & RES [SG]; SUMITOMO CHEMICAL CO [JP] ET AL.) 5 March 2009 (2009-03-05)	1,3,4, 9-11	
	* page 30 - page 41; figures 1-6 *		
X	EP 0 989 778 A1 (SEIKO EPSON CORP [JP]) 29 March 2000 (2000-03-29)	1-11,16	
Y	* paragraphs [0072] - [0085], [0133] - [0141]; figures 1,2,6,8-10 *	12-15	
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	* paragraph [0037] - paragraph [0049]; figures 1-4 *		

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The present search report has been drawn up for all claims

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Place of search Munich	Date of completion of the search 13 September 2019	Examiner Bernabé Prieto, A
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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.

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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):

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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.

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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:

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see sheet B

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

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

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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:

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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:

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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
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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:

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1. claims: 1, 2(completely); 8-10, 12-14, 16(partially)

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An electroluminescence display apparatus comprising:
 a substrate (100);
 a bank (400) provided to define a plurality of emission areas (E1, E2) on the substrate; and
 a first light emitting layer (510) provided in a first emission area (E1) of the plurality of emission areas, and a second light emitting layer (520) provided in a second emission area (E2) of the plurality of emission areas, wherein an upper portion of the bank (400) disposed between the first light emitting layer (510) and the second light emitting layer (520) comprises an anti-spread part, wherein the anti-spread part is more hydrophobic than a lower portion of the bank (400).

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2. claims: 1, 3-7, 11, 15(completely); 8-10, 12-14, 16(partially)

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An electroluminescence display apparatus comprising:
 a substrate (100);
 a bank (400) provided to define a plurality of emission areas (E1, E2) on the substrate; and
 a first light emitting layer (510) provided in a first emission area (E1) of the plurality of emission areas, and a second light emitting layer (520) provided in a second emission area (E2) of the plurality of emission areas, wherein an upper portion of the bank (400) disposed between the first light emitting layer (510) and the second light emitting layer (520) comprises an anti-spread part, wherein the anti-spread part (450) comprises a plurality of grooves (450a) extending in a first direction along a boundary between the first light emitting layer (510) and the second light emitting layer (520).

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ANNEX TO THE EUROPEAN SEARCH REPORT
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专利名称(译)	电致发光显示装置		
公开(公告)号	EP3509109A3	公开(公告)日	2019-10-23
申请号	EP2018211646	申请日	2018-12-11
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG DISPLAY CO. , LTD.		
当前申请(专利权)人(译)	LG DISPLAY CO. , LTD.		
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发明人	RYOO, TAEKUNG BAE, KYOUNGJI GEE, HYUK-CHAN KWAK, JINAH KIM, SEJIN KIM, SUNGMOO		
IPC分类号	H01L27/32 H01L51/00		
CPC分类号	H01L27/3244 H01L51/0003 H01L51/5012 H01L27/3223 H01L27/3246 H01L51/0005 H01L51/5036 H01L51/5206 H01L51/5221		
优先权	1020170172532 2017-12-14 KR		
其他公开文献	EP3509109A2		
外部链接	Espacenet		

摘要(译)

公开了一种电致发光显示装置。该电致发光显示设备包括基板(100)，被设置为在基板上限定多个发光区域(E1, E2)的堤(400)以及设置在第一发光区域E1中的第一发光层(510)。在多个发射区域(E1, E2)的第二发射区域(E2)中设置第二发光层(520)。在位于第一发光层(510)与第二发光层(520)之间的隔堤(400)的上表面设有防扩散部(450)。

FIG. 2

