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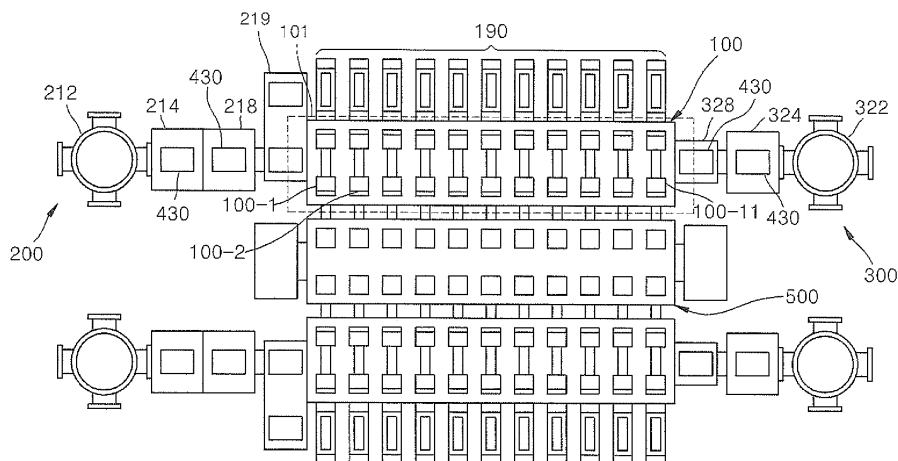
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(54) **Organic layer deposition apparatus, method of manufacturing organic light-emitting display apparatus by using the same, and organic light-emitting display apparatus manufactured by the method**

(57) An organic layer deposition apparatus includes: a conveyer unit (400) including a transfer unit (430) for attaching a substrate (2), a first conveyer unit (410), and a second conveyer unit (420); and a deposition unit (100) including a vacuum chamber (101) and an organic layer deposition assembly (100-1,...,100-11) for depositing an organic layer on the substrate. The organic layer deposition assembly includes: a deposition source (110) for discharging a deposition material; a deposition source nozzle unit (120) including a plurality of deposition source

nozzles; a patterning slit sheet (130) including a plurality of patterning slits that are arranged in a first direction; and a deposition source shutter that moves in the first direction, and selectively blocks the deposition material that is vaporized in the deposition source. The transfer unit moves between the first and second conveyer units. The transfer unit keeps the attached substrate spaced apart from the organic layer deposition assembly while being transferred by the first conveyer unit.

FIG. 1





## EUROPEAN SEARCH REPORT

Application Number  
EP 13 17 2155

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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                    |                                                                                                                                                           |                                                                                                                                                                                                                                                                                       |                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Category                                                                                                                                                                                                                                               | Citation of document with indication, where appropriate, of relevant passages                                                                             | Relevant to claim                                                                                                                                                                                                                                                                     | CLASSIFICATION OF THE APPLICATION (IPC)                  |
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| Y                                                                                                                                                                                                                                                      | * figures *<br>* paragraphs [0005], [0006], [0011], [0030], [0084], [0131], [0155] - [0156] *<br>* claims 16,19 *                                         | 4-11                                                                                                                                                                                                                                                                                  |                                                          |
| X                                                                                                                                                                                                                                                      | US 2010/328197 A1 (LEE JUNG-MIN [KR] ET AL) 30 December 2010 (2010-12-30)<br>* figures 5a,5b,7 *<br>* paragraphs [0008], [0087] - [0107] *<br>* claim 1 * | 12-18                                                                                                                                                                                                                                                                                 |                                                          |
| Y                                                                                                                                                                                                                                                      | JP 2006 016660 A (SHOWA SHINKU KK; KIDO JUNJI) 19 January 2006 (2006-01-19)<br>* figure 1 *<br>* paragraphs [0033] - [0039] *                             | 8-11                                                                                                                                                                                                                                                                                  |                                                          |
| Y                                                                                                                                                                                                                                                      | US 2003/010288 A1 (YAMAZAKI SHUNPEI [JP] ET AL) 16 January 2003 (2003-01-16)<br>* figure 2A *                                                             | 4-7                                                                                                                                                                                                                                                                                   | TECHNICAL FIELDS SEARCHED (IPC)<br><br>C23C<br>H01L      |
| The present search report has been drawn up for all claims                                                                                                                                                                                             |                                                                                                                                                           |                                                                                                                                                                                                                                                                                       |                                                          |
| Place of search<br><b>The Hague</b>                                                                                                                                                                                                                    |                                                                                                                                                           | Date of completion of the search<br><b>11 January 2016</b>                                                                                                                                                                                                                            | Examiner<br><b>De Laere, Ann</b>                         |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                                           | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |                                                          |

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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|----------------|-----------------------------------------------------------------------------------------------------|---------|------------|
| 专利名称(译)        | 有机层沉积设备，通过使用其制造有机发光显示设备的方法，以及通过该方法制造的有机发光显示设备                                                       |         |            |
| 公开(公告)号        | <a href="#">EP2688121A3</a>                                                                         | 公开(公告)日 | 2016-02-17 |
| 申请号            | EP2013172155                                                                                        | 申请日     | 2013-06-14 |
| [标]申请(专利权)人(译) | 三星显示有限公司                                                                                            |         |            |
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| 当前申请(专利权)人(译)  | 三星DISPLAY CO. , LTD.                                                                                |         |            |
| [标]发明人         | CHOI YOUNG MOOK                                                                                     |         |            |
| 发明人            | CHOI, YOUNG-MOOK                                                                                    |         |            |
| IPC分类号         | H01L51/56 C23C14/56 H01L21/67 C23C14/04                                                             |         |            |
| CPC分类号         | H01L51/56 C23C14/24 C23C14/243 C23C14/50 C23C14/568 H01L21/67173 H01L21/67709 H01L21/6776 H01L51/52 |         |            |
| 优先权            | 1020120077361 2012-07-16 KR                                                                         |         |            |
| 其他公开文献         | EP2688121A2                                                                                         |         |            |
| 外部链接           | <a href="#">Espacenet</a>                                                                           |         |            |

# 摘要(译)

一种有机层沉积设备，包括：输送单元（400），包括用于附接基板（2）的转移单元（430），第一输送单元（410）和第二输送单元（420）；沉积单元（100）包括真空室（101）和用于在基板上沉积有机层的有机层沉积组件（100-1，...，100-11）。有机层沉积组件包括：沉积源（110），用于排出沉积材料；沉积源喷嘴单元（120），包括多个沉积源喷嘴；图案化缝隙片（130），包括沿第一方向排列的多个图案化缝隙；沉积源快门沿第一方向移动，并选择性地阻挡在沉积源中蒸发的沉积材料。传送单元在第一和第二传送器单元之间移动。转移单元使附着的基板与有机层沉积组件间隔开，同时由第一输送单元转移。

FIG. 1

