

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 15 85 7224

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 2012/229744 A1 (HATTORI NORIKATSU [JP] ET AL) 13 September 2012 (2012-09-13) * claims; examples; compounds *	1-15	INV. G02F1/1334 G02F1/1337 C09K19/20
E	EP 3 200 022 A1 (NISSAN CHEMICAL IND LTD [JP]) 2 August 2017 (2017-08-02) * claims; examples; compounds *	1-15	C09K19/30 C09K19/56 C09K19/04
			TECHNICAL FIELDS SEARCHED (IPC)
			C09K
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search The Hague		Date of completion of the search 23 April 2018	Examiner Serbetsoglou, A
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			

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

EP 15 85 7224

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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23-04-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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专利名称(译)	液晶显示元件		
公开(公告)号	EP3217212A4	公开(公告)日	2018-05-30
申请号	EP2015857224	申请日	2015-11-06
申请(专利权)人(译)	NISSAN CHEMICAL INDUSTRIES , LTD.		
当前申请(专利权)人(译)	NISSAN CHEMICAL INDUSTRIES , LTD.		
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发明人	HOSAKA, KAZUYOSHI MIKI, NORITOSHI OMURA, HIROYUKI HASHIMOTO, JUN BABA, JUNICHI YOSHIDA, SHOTA		
IPC分类号	G02F1/1334 G02F1/1337 C09K19/04 C09K19/20 C09K19/30 C09K19/54 C09K19/56		
CPC分类号	C09K19/20 C09K19/2007 C09K19/2014 C09K19/3003 C09K19/56 C09K2019/0448 C09K2019/2035 C09K2019/548 G02F1/1334 G02F1/1337 Y10T428/10 Y10T428/1005 Y10T428/1023 C09K19/063		
优先权	2014227294 2014-11-07 JP		
其他公开文献	EP3217212A1 EP3217212B1		
外部链接	Espacenet		

摘要(译)

提供一种液晶显示装置，其中当施加电压时的透明度和施加电压时的散射性良好，液晶层和垂直液晶取向膜之间的粘附性高，并且其寿命甚至在一个恶劣的环境。液晶显示装置具有通过在具有电极的一对基板之间设置含有液晶和可聚合化合物的液晶组合层，并通过紫外线照射装置用紫外线照射和固化该组合物而形成的液晶层，和至少一个基板设置有液晶取向膜以垂直取向液晶，其中紫外线照射装置是能够控制照射光的紫外线照射装置所照射的紫外线的强度和波长以及所述一对基板的表面温度，所述液晶组合物含有式[1]所示的化合物，所述液晶取向膜是由液晶取向处理剂，其含有具有式[2-1]或式[2-2]所示的侧链结构的聚合物。
(X 1是特定的侧链结构; X 2 , X 3 , X 4和X 6各自是单键等; X 5和X 7各自是苯环等; p是来自的整数0至4; X 8为C 1-18烷基等) , (Y 1 , Y 2和Y 3各自为单键; Y 4和Y 5各自为苯环等; n从0到4; Y 6是C 1-18烷基等 , €€ç-Y-7 -Y 8€€€€ [2-2] (Y 7是单键; Y 8是C 8-22烷基 , 等等。) 。

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E	EP 3 200 822 A1 (NISSAN CHEMICAL IND LTD [JP]) 2 August 2017 (2017-08-02) claims; examples; compounds *	1-15		
The applicant's search report has been drafted on the basis of the documents cited in the search report.				
The Hague		Date of completion of the search		Examiner
23 April 2018		Serbetsoglou, A		
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