

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2019/047389

A. CLASSIFICATION OF SUBJECT MATTER H01L 29/786(2006.01)i; H01L 21/336(2006.01)i FI: H01L29/78 618E; H01L29/78 618B; H01L29/78 618A According to International Patent Classification (IPC) or to both national classification and IPC																	
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) H01L29/786; H01L21/336																	
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched <table border="0" style="width: 100%;"> <tr> <td style="width: 80%;">Published examined utility model applications of Japan</td> <td style="text-align: right;">1922-1996</td> </tr> <tr> <td>Published unexamined utility model applications of Japan</td> <td style="text-align: right;">1971-2020</td> </tr> <tr> <td>Registered utility model specifications of Japan</td> <td style="text-align: right;">1996-2020</td> </tr> <tr> <td>Published registered utility model applications of Japan</td> <td style="text-align: right;">1994-2020</td> </tr> </table>			Published examined utility model applications of Japan	1922-1996	Published unexamined utility model applications of Japan	1971-2020	Registered utility model specifications of Japan	1996-2020	Published registered utility model applications of Japan	1994-2020							
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)																	
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category*</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>WO 2018/061969 A1 (SHARP CORP.) 05.04.2018 (2018-04-05) paragraphs [0041]-[0118], fig. 1, 4</td> <td style="text-align: center;">1-8</td> </tr> <tr> <td style="text-align: center;">X Y</td> <td>JP 2018-190949 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 29.11.2018 (2018-11-29) paragraphs [0053]-[0324], fig. 5, 18</td> <td style="text-align: center;">1-3, 6-8 4, 5</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>JP 2016-74580 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 12.05.2016 (2016-05-12) paragraph [0595]</td> <td style="text-align: center;">4, 5</td> </tr> <tr> <td style="text-align: center;">A</td> <td>WO 2009/157535 A1 (IDEMITSU KOSAN CO., LTD.) 30.12.2009 (2009-12-30)</td> <td style="text-align: center;">1-8</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	WO 2018/061969 A1 (SHARP CORP.) 05.04.2018 (2018-04-05) paragraphs [0041]-[0118], fig. 1, 4	1-8	X Y	JP 2018-190949 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 29.11.2018 (2018-11-29) paragraphs [0053]-[0324], fig. 5, 18	1-3, 6-8 4, 5	Y	JP 2016-74580 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 12.05.2016 (2016-05-12) paragraph [0595]	4, 5	A	WO 2009/157535 A1 (IDEMITSU KOSAN CO., LTD.) 30.12.2009 (2009-12-30)	1-8
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Date of the actual completion of the international search 07 February 2020 (07.02.2020)		Date of mailing of the international search report 18 February 2020 (18.02.2020)															
Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer Telephone No.															

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Information on patent family members

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Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
WO 2018/061969 A1	05 Apr. 2018	US 2019/0326443 A1 paragraphs [0050]- [0126], fig. 1, 4C CN 109791949 A	
JP 2018-190949 A	29 Nov. 2018	US 2018/0076231 A1 paragraphs [0109]- [0380], fig. 5A-1- B-3, 18 WO 2018/047067 A1 TW 201826509 A CN 109643735 A KR 10-2019-0045930 A	
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