

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2018/029660

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl. C09K11/06 (2006.01)i, G02B5/20 (2006.01)i, G09F13/20 (2006.01)n

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)

Int.Cl. C09K11/06, G02B5/20, G09F13/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996

Published unexamined utility model applications of Japan 1971-2018

Registered utility model specifications of Japan 1996-2018

Published registered utility model applications of Japan 1994-2018

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CAplus/REGISTRY (STN)

JSTPlus/JMEDPlus/JST7580 (JDreamIII)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2012-212879 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 01 November 2012, claims, paragraphs [0051]-[0075], [0097]-[0112], examples, etc. & US 2012/0242219 A1, claims, paragraphs [0069]-[0093], [0115]-[0131], examples & WO 2012/127990 A1 & CN 103443950 A & KR 10-2014-0033051 A	1-15

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 20 September 2018 (20.09.2018)	Date of mailing of the international search report 09 October 2018 (09.10.2018)
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ZHOU, D. et al., "Host to Guest Energy Transfer Mechanism in Phosphorescent and Fluorescent Organic Light-Emitting Devices Utilizing Exciplex-Forming Hosts", THE JOURNAL OF PHYSICAL CHEMISTRY C, (2014), vol. 118, no. 41, 24006-24012	1-15
A	SHIN, H. et al., "Blue Phosphorescent Organic Light-Emitting Diodes Using an Exciplex Forming Co-host with the External Quantum Efficiency of Theoretical Limit", ADVANCES MATERIALS, (2014), vol. 26, no. 27, pp. 4730-4734	1-15
A	JP 2015-144224 A (IDEMITSU KOSAN CO., LTD.) 06 August 2015, claims, examples, etc. & US 2017/0062731 A1, claims, examples & WO 2015/098975 A1 & EP 2958158 A1 & KR 10-2015-0120447 A & CN 105103326 A	1-15
A	JP 2010-245061 A (IDEMITSU KOSAN CO., LTD.) 28 October 2010, claims, examples, etc. & WO 2009/008348 A1	1-15
A	JP 2015-179809 A (KYUSHU UNIVERSITY) 08 October 2015, claims, examples, etc. & US 2016/0190478 A1, claims, examples & WO 2015/022974 A1 & EP 3035401 A1 & CN 105453294 A & KR 10-2016-0044522 A	1-15
A	WO 2017/122492 A1 (KYUSHU UNIVERSITY) 20 July 2017, claims, examples, etc. & JP 2017-126656 A	1-15
P, X	JP 2018-088521 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 07 June 2018, claims, paragraphs [0089]-[0091], examples, etc. & US 2018/0138416 A1, claims, examples & CN 108075044 A & KR 10-2018-0055740 A	1-15